

DRAFT
Environmental Impact Report
Arroyo Lago Residential Project
County of Alameda, California
State Clearinghouse Number 2023050339

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACCWP	Alameda County Clean Water Program
ACDEH	Alameda County Department of Environmental Health
ACE	Altamont Corridor Express
ACF	Advanced Clean Fleets
ACFD	Alameda County Fire Department
AChP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACP	Alternative Compliance Plan
ACPWA	Alameda County Public Works Agency
AD	<i>anno domini</i>
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AF	acre-feet
AFY	acre-feet/year
AIA	Airport Influence Area
AIC	Archaeological Information Center
AICUZ	Air Installation Compatibility Use Zone
AIRFA	American Indian Religious Freedom Act
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AOC	Area of Concern
APCD	Air Pollution Control District
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
ARB	California Air Resources Board
ARPA	Archaeological Resources Protection Act
ASCE	American Society of Civil Engineers
AST	aboveground storage tank

Acronyms and Abbreviations

ASTM	American Society for Testing and Materials International
ATCM	Airborne Toxic Control Measures
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BAU	business-as-usual
Bay Area	San Francisco Bay Area
BC	before Christ
BCDC	Bay Conservation and Development Commission
BCE	before Common Era
BCF	billion cubic feet
BCF/year	billion cubic feet per year
bgs	below ground surface
BMP	Best Management Practice
BMR	below market rate
BTU	British thermal unit
BVOC	biogenic volatile organic compound
c/mve	collisions per million vehicles entering
C ² ES	Center for Climate and Energy Solution
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal Water	California Water Service
Cal/EPA	California Environmental Protection Agency
Cal/OES	California Governor’s Office of Emergency Services
Cal/OSHA	California Occupational Health and Safety Administration
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CA-MUTCD	California Manual on Uniform Traffic Control Devices
CAP	Climate Action Plan
Carl Moyer Program	Carl Moyer Memorial Air Quality Standards Attainment Program+
CARP	Alameda’s Climate Action and Resiliency Plan
CBC	California Building Standards Code
CBG	Carlson, Barbee & Gibson, Inc.
CBTP	Community-Based Transportation Plan
CCCC	California Climate Change Center
CCR	California Code of Regulations

CDBG	Community Development Block Grant
CDF	California Department of Finance
CDFW	California Department of Fish and Wildlife
CE	Common Era
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Program
CMA	Congestion Management Agency
CMP	Congestion Management Plan
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNPSEI	CNPS Electronic Inventory
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
COA	Condition of Approval
CPHI	California Points of Historical Interest
CPUC	California Public Utilities Code
CRA	Cultural Resources Assessment
CREC	Controlled Recognized Environmental Condition
CRHR	California Register of Historical Resources
CTC	Alameda County Transportation Commission
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel

Acronyms and Abbreviations

dba/DD	A-weighted decibels per each doubling of the distance
DBH	diameter at breast height
DD	doubling of the distance
DNL	Day-Night Level
DOC	California Department of Conservation
DPM	diesel particulate matter
DSRSD	Dublin San Ramon Services District
DTSC	California Department of Toxic Substances Control
du	dwelling unit
du/acre	dwelling unit per acre
DUSD	Dublin Unified School District
DWR	California Department of Water Resources
EBDA	East Bay Dischargers Authority
EBRPD	East Bay Regional Park District
ECAP	East County Area Plan
EDD	California Employment Development Department
EFZ	Earthquake Fault Zone
EIA	United States Energy Information Administration
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EKI	EKI Environment & Water, Inc.
EMFAC	Emissions Factors mobile source emissions model
EMT	Emergency Medical Technician
ENGEO	ENGEO Incorporated
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
EPSP	East Pleasanton Specific Plan
EQ Zapp	California Earthquake Hazards Zone Application
ESL	Environmental Screening Limit
EV	electric vehicle
EVSE	electric vehicle supply equipment
FAA	Federal Aviation Administration
FAR	floor area ratio
FCS	FirstCarbon Solutions
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration

FIRM	Flood Insurance Rate Map
FRAP	Fire and Resource Assessment Program
FTA	Federal Transit Administration
GHAD	Geologic Hazard Abatement District
GHG	greenhouse gas
gpm	gallons per minute
GPS	Global Positioning System
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWh	gigawatt-hours
GWh/y	gigawatt-hours per year
GWP	global warming potential
H ₂ S	hydrogen sulfide
HAP	Hazardous Air Pollutant
HCD	California Department of Housing and Community Development
HCFC	hydrochlorofluorocarbon
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HDM	Highway Design Manual
HDR	High Density Residential
HFC	hydrofluorocarbon
HI	hazard index
HMBP	Hazardous Materials Business Plans
HOA	Homeowner's Association
HOV/HOT	High Occupancy Vehicle/High Occupancy Toll
HRA	Health Risk Assessment
HREC	Historical Recognized Environmental Concern
HRI	California Historic Resources Inventory
HSC	California Health and Safety Code
HUD	United States Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
HWCL	Hazardous Waste Control Law
IBC	International Building Code
ICC	International Code Council
I-G-40	General Industrial 40,000 Square Foot Minimum Lot
IOU	investor-owned utility
IPCC	United Nations Intergovernmental Panel on Climate Change
IS/MND	Initial Study/Mitigated Negative Declaration

Acronyms and Abbreviations

ISO	Independent System Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
IWMP	Integrated Waste Management Plan
JADU	Junior Accessory Dwelling Unit
kW	kilowatts
LAFCo	Local Agency Formation Commission
LARPD	Livermore Area Recreation and Park District
LAVQAR	Livermore-Amador Valley Quarry Area Reclamation
LAVTA	Livermore-Amador Valley Transit Authority
LAVWMA	Liver-Amador Valley Water Management Agency
LCFS	Low Carbon Fuel Standard
L _{dn}	day/night average sound level
LDR	Low Density Residential
LED	light-emitting diode
Legacy	Legacy Pleasanton Land, LLC
L _{eq}	equivalent sound level
LEV	Low Emission Vehicle
LHMP	Local Hazard Mitigation Plan
LID	Low Impact Development
L _{max}	maximum noise level
L _{min}	minimum noise level
LOS	Level of Service
LPA	Large Parcel Agriculture
LPFD	Livermore-Pleasanton Fire Department
LPG	liquefied petroleum gas LRA Local Responsibility Area
LSE	load-serving entities
LU	land use
LUST	Leaking Underground Storage Tank
LV	vibration velocity
LVJUSD	Livermore Valley Joint Unified School District
LWRP	Livermore Water Reclamation Plant
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goals
MDR	Medium Density Residential
mgd	million gallons per day
MHESD	Mountain House Elementary School District

MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
mph	miles per hour
MPO	Metropolitan Planning Organization
MRP	Municipal Regional Stormwater Permit
MRZ	Mineral Resource Zone
MT	metric tons
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
MW	megawatt
MWD	Metropolitan Water District of Southern California
MXD	mixed-use development
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCHRP	National Cooperative Highway Research Program
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NF ₃	nitrogen trifluoride
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHM	Natural History Museum of Los Angeles County
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NOAA Fisheries	National Marine Fisheries Service
NOC	Notice of Completion
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPDWR	National Primary Drinking Water Regulation
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTR	National Toxics Rule
NWIC	Northwest Information Center

Acronyms and Abbreviations

O ₃	ozone
OAL	Office of Administrative Law
OEHHA	California Office of Environmental Health Hazard Assessment
OHSES	Alameda County Office of Homeland Security and Emergency Services
OHWM	ordinary high water mark
ONAC	Federal Office of Noise Abatement and Control
OPR	California Governor’s Office of Planning and Research
Ordinance	Model Water Efficient Landscape Ordinance
OSHA	Occupational Safety and Health Administration
OWTS	On-site Wastewater Treatment Systems
PAM	Public Access Map
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PFAS	polyfluoroalkyl substances
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PGS	Pleasanton Garbage Service, Inc.
Phase I ESA	Phase I Environmental Site Assessment
Plan Bay Area	Plan Bay Area 2050: A Vision for the Future
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 micrometers in diameter
PMDB	Project Management and Development Branch
PM _x	particulate matter
ppb	parts per billion
ppm	parts per million
PPS	Pleasanton Paratransit Service
ppt	parts per trillion
PPV	peak particle velocity
PRC	Public Resources Code
PUD	Planned Unit Development
PUSD	Pleasanton Unified School District
PV	photovoltaics
PVC	polyvinyl chloride
R-1	Single-Family Residential
RCRA	Resource Conservation and Recovery Act of 1976
REC	recognized environmental concern
Recology	Integrated Resource Recovery Company
RecycleSmart	Central Contra Costa County Solid Waste Authority

REL	Reference Exposure Level
RHNA	Regional Housing Needs Allocation
RMP	Risk Management Plan
rms	root mean square
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWTF	Regional Wastewater Treatment Facility
RWQCB	Regional Water Quality Control Board
SARA Title III	Emergency Planning and Community Right-to-Know Act
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SCU	Santa Clara Unit
SF ₆	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SFO	San Francisco International Airport
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act
SGSD	Sunol Glen School District
SIP	State Implementation Plan
SMARA	California Surface Mining and Reclamation Act of 1975
SMO	County Surface Mining Ordinance
SMP	Surface Mining Permit
SO ₂	sulfur dioxide
SOI	Sphere of Influence
SORE	Small Off-Road Engine
South Coast AQMD	South Coast Air Quality Management District
SO _x	sulfur oxides
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SRA	State Responsibility Area
State Water Board	California State Water Resources Control Board
SWE	Water Supply Evaluation
SWITRS	Statewide Integrated Traffic Records System
SWP	State Water Project

Acronyms and Abbreviations

SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
TAZ	traffic analysis zone
TCM	Transportation Control Measures
TDM	Transportation Demand Management
TDS	total dissolved solids
TDV	Time Dependent Valuation
TEA-21	Transportation Equity Act for the 21 st Century
Tg	teragram
therms/y	therms per year
TIA	Traffic Impact Assessment
TIS	Traffic Impact Study
TISG	Transportation Impact Study Guide
TMA	Transportation Management Association
TMDL	Total Maximum Daily Load
TOD	Transit Oriented Development
TOS	Traffic Operation Study
TWA	Tri-Valley Wastewater Authority
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UFC	Uniform Fire Code
UNFCCC	United Nations Framework Convention on Climate Change
Update	First Update to the Scoping Plan
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UTV	utility terrain vehicle
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
Valley Air District	San Joaquin Valley Air Pollution Control District
VdB	vibration levels
VDECS	Verified Diesel Emission Control Strategies
VHFHSZ	Very High Fire Hazard Severity Zone

VMT	Vehicle Miles Traveled
VOC	volatile organic compounds
VRAP	Voluntary Remedial Action Program
WDR	Waste Discharge Requirements
WELO	Water Efficient Landscape Ordinance
WETA	Water Emergency Transportation Authority
WM	Water Management
WQMP	Water Quality Management Plan
WSA	Water Supply Assessment
WSDOT	Washington State Department of Transportation
WWTP	Wastewater Treatment Plant
ZEV	Zero-Emission Vehicle

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EXECUTIVE SUMMARY

Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Arroyo Lago Residential Project (State Clearinghouse No. 2023050339). This document is prepared in conformance with CEQA (Public Resources Code [PRC] § 21000, *et seq.*) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, § 15000, *et seq.*).

The purpose of this Draft EIR is to inform decision-makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from the implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

Project Summary

Project Location

The project site is located directly east of the City of Pleasanton city limits between Lake I of the Zone 7 Chain of Lakes north of the project site and Cope Lake to east of the project site (Exhibit 2-2a). The project site does not currently have a street address but can be accessed north of the eastern end of Busch Road. The site is within the unincorporated County but is also within the City of Pleasanton's Sphere of Influence (SOI). Presently, the project site is vacant with no structures or existing development. An informal access road travels from the southeast corner of the project site, across the site, and to the northwest corner along the western boundary of the site.

The project site consists of three Assessor's Parcel Numbers (APNs)—APN 946-4634-1 (the residential site), as well as APN 946-4634-2 and APN 946-1350-3-10 (the off-site improvements) (Exhibit 2b). Specifically, the project site is located within the *Livermore, California* United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map (Latitude 37° 40' 38.28" North; Longitude 121° 51' 22.68" West).

Project Description

The 330 Land Company (project applicant) proposes to construct 194 market-rate single-family homes with approximately 25 percent (49 homes) designed as Accessory Dwelling Units (ADU), a 0.7-acre centrally located park, and approximately 0.5 mile of designated public walking trails on an approximately 26.6-acre site. The proposed project would also include internal roadways and two driveways to facilitate access and circulation within the project site.

Additionally, the proposed project would include off-site infrastructure to support the proposed development, including an approximately 1-acre sewer treatment plant, an approximately 0.4-acre water storage and booster pump facility, an approximately 2.5-acre recycled water storage facility

with an approximately 10- to 15-foot depth, approximately 8.5 acres of agricultural irrigation recycled water spray fields, and two bioretention areas with treatment areas sized at approximately 0.9-acre and 0.03-acre, respectively.

Refer to Chapter 2, Project Description, for a complete description of the proposed project.

Project Objectives

The underlying purpose of the proposed project is to contribute to the County's housing inventory by developing vacant, underutilized property in a manner consistent with the goals, programs and policies of the County's General Plan, and State law.

The objectives of the proposed project are to:

- Contribute additional housing opportunities consistent with the County's Housing Element¹ and its Sixth Cycle Regional Housing Needs Assessment (RHNA) approved by the Association of Bay Area Governments (ABAG).¹
- Develop the project site in accordance with applicable, objective County land use regulations.
- Further preservation of open space by providing for the compact and orderly development of sites adjacent to existing development.
- Generate new, additional property tax revenues.
- Provide a range of professionally designed housing options, including single-family homes and affordable Accessory Dwelling Units.
- Create a walkable, outdoor environment, by providing open space, parks, and walking trails for both private and public use, allowing both existing and new residents to take advantage of the development.
- Ensure adequate utility infrastructure exists, including sewer, water, and storm drain, to accommodate the development.
- Promote the efficient use of water and energy through incorporation of water and energy conservation measures.

Significant Unavoidable Adverse Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Greenhouse Gas Emissions and Conflict with Plan, Policy, or Regulation that Reduces Emissions:** As discussed in Section 3.7, Greenhouse Gas Emissions, of the Draft EIR, the proposed project would have a significant and unavoidable impact because it does not demonstrate a 15 percent reduction in resident VMT as required by BAAQMD thresholds and

¹ At the time this Draft EIR was prepared, the County's Updated Housing Element and the Sixth Cycle Regional Housing Needs Assessment (RHNA) are currently under review. Any future changes to the County's Updated Housing Element and RHNA is expected to be minimal and would not result in significant changes to the analysis.

it is not consistent with other BAAQMD design elements requiring the incorporation of an all-electric design. Therefore, the proposed project would satisfy one of the four design elements as outlined in the BAAQMD GHG threshold Criterion A at the time of project construction, and thus, result in significant and unavoidable impacts even with mitigation incorporated.

- **Cumulative GHG Emissions Impacts:** The proposed project would emit new GHG emissions in conjunction with other projects within the Air Basin. As discussed above, the proposed project would have a significant and unavoidable GHG impact and, thus, would be considered to have a cumulatively significant impact as well. Therefore, the proposed project's contribution would be cumulatively considerable and, thus, significant in and of itself.
- **Conflict with CEQA Guidelines Section 15064.3, Subdivision (b):** As detailed in Section 3.16, Transportation, the residents of the proposed project would be expected to generate 29.9 VMT per capita daily which is greater than the threshold of 25.9 VMT per capita, or 15 percent below the average VMT per capita for the Alameda County East Planning Area (which includes Dublin, Pleasanton, Livermore, and surrounding unincorporated areas). Implementing a variety of countermeasures would be expected to result in a reduction of VMT between 4.2 to 5.7 percent only. As a result, the proposed project would result in a significant and unavoidable impact without sufficient mitigation available.
- **Substantially increase hazards due to geometric design feature or incompatible hours:** As detailed in Section 3.16, Transportation, of the Draft EIR, the proposed project would have a significant and unavoidable impact related to queuing at the intersections of Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue. This impact could be addressed by retiming the traffic signals at these intersections; however, because these signals are located within the City of Pleasanton and the City is not the lead agency for the proposed project, implementation of mitigation measures that would retime these the traffic signals at Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue to accommodate queues associated with trips anticipated to be generated by the proposed project has been deemed unenforceable, and therefore cannot be implemented as part of the proposed project.
- **Cumulative VMT Impacts:** As detailed in Section 3.16, Transportation, of the Draft EIR, the proposed project, in conjunction with other past, present, and reasonably foreseeable projects, would have a cumulatively significant impact related to VMT. Cumulative projects in the nine-county MTC may generate new VMT, which would be added to the roadway network. All cumulative projects would be required to comply with County and local ordinances, General Plan policies that address VMT, as well as mitigate their fair share of impacts related to VMT. Nonetheless, cumulative projects would have a potentially significant impact related to VMT. Further, VMT, by definition, is cumulative. The proposed project would contribute to an increase in VMT, and that increase would be considered significant and unavoidable. Therefore, the proposed project would have a cumulatively considerable contribution to VMT. As such, the proposed project, in conjunction with other planned and approved projects, would result in a significant and unavoidable cumulative impact with respect to VMT.

Summary of Project Alternatives

Below is a summary of the alternatives to the proposed project considered in Section 6, Alternatives to the Proposed Project.

Alternative 1: No Project, No Build Alternative

Under the No Project, No Build Alternative (Alternative 1), the proposed project would not be constructed. The project site would remain closed, vacant, and no development of any kind would occur. No land use activities would occur.

Alternative 2: Annexation into the City of Pleasanton Alternative

Under the Annexation into the City of Pleasanton Alternative (Alternative 2), the residential component of the proposed project would remain the same as the proposed project, except that the site would be annexed into the City of Pleasanton (City). Under this alternative, the proposed project would connect to the City's utility systems (e.g., water, sanitary sewer), eliminating the need to construct certain off-site improvements under the proposed project, including the water storage and booster pump facility, sewer treatment plant, recycled water storage facility, agricultural spray fields.

Alternative 3: Mixed Use Alternative

Under the Mixed-Use Alternative (Alternative 3), the proposed project would remain in the County of Alameda's (County) jurisdiction and all off-site improvements as proposed under the proposed project would remain, but the residential component would have a reduced number of residential units, a total of 95 single family homes with 25 percent containing deed-restricted accessory dwelling units (ADUs) (24 homes), and the rest of the project site would include neighborhood retail/commercial uses consistent with the ECAP MDR designation. Therefore, the residential component under this Alternative would total approximately 13 acres and the neighborhood commercial uses would total approximately 13 acres.

Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the lead agency, including issues raised by agencies and the public, and it must also address issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

A Notice of Preparation (NOP) for the proposed project was issued on May 12, 2023. The NOP describing the original concept for the project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period extending from May 12, 2023, through June 12, 2023. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Aesthetics, Light, and Glare
- Air Quality
- Land Use and Planning
- Mineral Resources

- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

Disagreement Among Experts

This Draft EIR contains substantial evidence to support all the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions, although the County of Alameda is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide the standards for treating disagreement among experts. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the public and decision-makers to make an informed judgment about the environmental consequences of the proposed project.

Potentially Controversial Issues

Below is a list of potentially controversial issues that may be raised during the public review and hearing process of this Draft EIR:

- Air Quality
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Public Services
- Transportation
- Utilities and Service Systems

It is also possible that evidence will be presented during the 45-day, statutory Draft EIR public review period that may create disagreement. Decision-makers would consider this evidence during the public hearing process.

In rendering a decision on a project where there is disagreement among experts, the decision-makers are not obligated to select the most environmentally preferable viewpoint. Decision-makers are vested with the ability to choose whatever viewpoint is preferable and need not resolve a dispute among experts. In their proceedings, decision-makers must consider comments received concerning the adequacy of the Draft EIR and address any objections raised in these comments. However, decision-makers are not obligated to follow any directives, recommendations, or suggestions presented in comments on the Draft EIR, and can certify the Final EIR without needing to resolve disagreements among experts.

Public Review of the Draft EIR

Upon completion of the Draft EIR, the County of Alameda filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (PRC § 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies,

other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at the County of Alameda offices and the Pleasanton Library. The addresses for each location is provided below during regular business hours:

Alameda County Community Development Agency Planning Department 224 West Winston Avenue, Room 111 Hayward, CA 94544 510.670.5322	Pleasanton Library 400 Old Bernal Road Pleasanton, CA 94566 925.931.3400
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The Draft EIR is also available for review at the following websites:
<https://www.acgov.org/cda/planning/landuseprojects/currentprojects.htm> and
<https://ceqanet.opr.ca.gov/Project/2023050339>. Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Aubrey Rose, AICP, Planner III
Alameda County Community Development Agency
Planning Department
224 West Winton Avenue, Room 111
Hayward, CA 94544
Phone: 510.670.5322
Email: aubrey.rose@acgov.org

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the County of Alameda on the project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the project.

Executive Summary Matrix

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table ES-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1). Conditions of approval are not included in Table ES-1.

Table ES-1: Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.1—Aesthetics, Light, and Glare		
Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.	None required.	N/A
Impact AES-2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.	None required.	N/A
Impact AES-3: The proposed project would not, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, the project would not conflict with applicable zoning and other regulations governing scenic quality.	None required.	N/A
Impact AES-4: The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	None required.	N/A
Cumulative Impact: The proposed project would have a less than significant cumulative impact on aesthetics, light, and glare.	None required.	N/A
Section 3.2—Air Quality		
Impact AIR-1: The proposed project could conflict with or obstruct implementation of the applicable air quality plan.	MM AIR-1: Implement BAAQMD Best Management Practices to Control Dust During Construction The following dust control measures, as recommended by the Bay Area Air Quality Management District (BAAQMD), shall be included in the design of the proposed project and implemented during construction: <ul style="list-style-type: none"> All exposed non-paved surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and access roads) shall be watered at least two times 	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>per day and/or non-toxic soil stabilizers shall be applied to exposed non-paved surfaces.</p> <ul style="list-style-type: none"> ● All haul trucks transporting soil, sand, or other loose material off-site shall be covered and/or shall maintain at least 2 feet of freeboard. ● All visible mud or dirt tracked 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. ● Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes, as required by the California Airborne Toxics Control Measure (ATCM) Title 13, Section 2485 of California Code of Regulations. Clear signage regarding idling restrictions shall be provided for construction workers at all access points. ● All construction equipment shall be maintained and properly tuned in accordance with the manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. ● The prime construction contractor shall post a publicly visible sign with the telephone number and person to contact regarding dust complaints. The construction contractor shall take corrective action within 48 hours. The BAAQMD’s and the County’s phone numbers shall also be visible to ensure compliance with applicable regulations. 	
<p>Impact AIR-2: The proposed project could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.</p>	<p>Implement MM AIR-1.</p>	<p>Less than significant impact.</p>
<p>Impact AIR-3: The proposed project could expose sensitive receptors to substantial pollutant concentrations.</p>	<p>MM AIR-3: The following measure shall be implemented during mass grading, paving, and building construction phases of construction to reduce potential exposure of diesel particulate matter (DPM) and particulate matter less than 2.5 micrometers in diameter (PM2.5) emissions to nearby sensitive receptors:</p>	<p>Less than significant impact.</p>

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> • Prior to the issuance of any demolition, grading, or building permits (whichever occurs earliest), the project applicant and/or construction contractor shall prepare a construction operations plan that, during construction activities, requires all off-road equipment with engines greater than 50 horsepower to meet particulate matter emissions standards for Tier 4 interim engines. The construction contractor shall maintain records documenting its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information shall include, but are not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number. The project applicant and/or construction contractor shall submit the construction operations plan and records of compliance to the County. 	
<p>Impact AIR-4: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.</p>	None required.	N/A
<p>Cumulative Impact: The proposed project would have a less than significant cumulative impact on air quality with incorporation of mitigation.</p>	Implement MM AIR-1 and MM AIR-3 .	Less than significant impact.
<p>Section 3.3—Biological Resources</p>		
<p>Impact BIO-1: The proposed project could 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 United States Fish and Wildlife Service.</p>	<p>MM BIO-1a: Burrowing Owl</p> <ul style="list-style-type: none"> • To avoid potential impacts to active burrowing owl nests and adult owls, a qualified Biologist shall conduct protocol-level burrowing owl surveys in accordance with the California Department of Fish and Wildlife (CDFW) 2012 Staff Report. • If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season (March 15 to September 1), a no-activity zone will be established by a qualified Biologist. The no-activity zone shall be large enough to avoid nest abandonment and shall, at a minimum, be a 250-foot radius from the nest. • If the burrowing owls are present at the site during the nonbreeding period, a qualified Biologist shall establish a no-activity zone of at least 150 feet. 	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> ● If an effective no-activity zone cannot be established in either case, an experienced burrowing owl Biologist shall develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitive and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls. <p>MM BIO-1b: Protection of Active Bird Nests (includes pre-construction survey and implementation of avoidance buffer, if found).</p> <ol style="list-style-type: none"> 1. Removal of trees shall be limited to only those necessary to construct the proposed project as reflected in the relevant project approval documents. 2. If the proposed project requires vegetation to be removed during the nesting season (February 1 to August 31), pre-construction surveys shall be conducted no more than 7 days prior to the start of ground or vegetation disturbance (including tree removal) to determine whether or not active nests are present. 3. If an active nest is located during pre-construction surveys, a qualified Biologist shall determine an appropriately sized avoidance buffer based on the species and anticipated disturbance level. (The California Department of Fish and Wildlife [CDFW] recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors.) A qualified Biologist shall delineate the avoidance buffer using Environmentally Sensitive Area fencing, pin flags, and/or yellow caution tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently. No construction activities or construction foot traffic is allowed to occur within the avoidance buffer(s). 4. The qualified Biologist shall monitor the active nest during construction activities and modify the protection zone accordingly to prevent project-related nest disturbance, until the young have fledged. 	
<p>Impact BIO-2: The proposed project could have a substantial adverse effect on any riparian habitat or</p>	<p>MM BIO-2a: Avoidance and Minimization of Indirect Temporary Impacts to Water Quality and Riparian Vegetation (Design Option B)</p>	<p>Less than significant impact.</p>

Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.</p>	<p>The project applicant shall obtain a Construction General Permit from the Regional Water Quality Control Board (RWQCB) if Design Option B is selected. The applicant shall ensure that the project Civil Engineer prepares all required stormwater planning documents consistent with the requirements of the RWQCB (e.g., a Storm Water Pollution Prevention Plan [SWPPP] that complies with current National Pollutant Discharge Effluent Standards [NPDES]; Best Management Practices [BMPs] to control the pollutants in stormwater runoff; and/or a Storm Water Management Plan [SWMP]) shall be developed and integrated into the project plan.</p> <p>MM BIO-2b: Avoidance and Minimization of Indirect Permanent Impacts to Water Quality and Riparian Vegetation (Design Option B) Prior to construction the applicant shall install silt fencing including the placement of straw wattles between all construction areas and the adjacent drainage swales to avoid impacts to water quality by grading and construction if Design Option B is selected. A qualified Biologist shall be on-site to monitor the installation of fencing. Fencing shall be in place and regularly maintained during project implementation.</p> <p>The project applicant shall install post-construction stormwater management measures and establish a long-term maintenance plan. This requirement is intended to ensure that the post-construction conditions at the Study Area do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream and downstream. Specifically, the discharger shall demonstrate compliance with the post-construction standards set forth in the General Permit.</p>	
<p>Impact BIO-3: The proposed project would not have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.</p>	<p>None required.</p>	<p>N/A</p>
<p>Impact BIO-4: The proposed project could 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 wildlife nursery sites.</p>	<p>Implement MM BIO-1a and MM BIO-1b.</p>	<p>Less than significant impact.</p>

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-5: The proposed project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Implement MM BIO-1a , MM BIO-1b . If Design Option B is selected, implement MM BIO-2a and MM BIO-2b .	Less than significant impact.
Impact BIO-6: The proposed project could conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.	Implement MM BIO-1a , MM BIO-1b . If Design Option B is selected, implement MM BIO-2a and MM BIO-2b .	Less than significant impact.
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to biological resources with mitigation incorporated.	Implement MM BIO-1a , MM BIO-1b . If Design Option B is selected, implement MM BIO-2a and MM BIO-2b .	Less than significant impact.
Section 3.4—Cultural Resources and Tribal Cultural Resources		
Impact CUL-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.	None required.	N/A
Impact CUL-2: The proposed project could cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	MM CUL-2a: Prior to the initiation of construction activities, all construction personnel directly involved with project-related ground disturbance within the residential project site and off-site improvement areas, both west and east of El Charro Road, attend a “tailgate” Worker Environmental Awareness Program (WEAP) training for archaeological resources. The training should include visual aids, a discussion of applicable laws and statutes relating to archaeological resources, types of resources that may be found within the limit of disturbance areas, and procedures to be followed in the event such resources are encountered. The training should be conducted by an Archaeologist who meets the Secretary of the Interior’s Professional Qualification Standards for archaeology. FirstCarbon Solutions (FCS) recommends that a qualified Archaeologist who meets the Secretary of Interior’s Professional Qualification Standards for Archaeology be present to monitor during the clearing and grubbing phases of ground disturbance within the limit of disturbance areas east of El Charro Road to check for the inadvertent exposure of cultural materials. In the event exposed soils indicate cultural materials may be present, this may be followed by regular	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>or periodic archaeological monitoring as determined by the Archaeologist, but full-time archaeological monitoring is not recommended at this time.</p> <p>MM CUL-2b: In the event that buried cultural resources are discovered during construction, operations shall stop within a 100-foot radius of the find and a qualified Archaeologist shall be consulted to determine whether the resource requires further study. The qualified Archaeologist shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines Section 15064.5. Potentially significant cultural resources consist of, but are not limited to, stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.</p> <p>If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the Archaeological Monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.</p> <p>No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency where they would be afforded long-term preservation to allow future scientific study.</p>	
<p>Impact CUL-3: The proposed project could disturb human remains, including those interred outside of formal cemeteries.</p>	<p>MM CUL-3: In the event of an accidental discovery or recognition of any human remains, Public Resource Code Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:</p> <ol style="list-style-type: none"> 1. There shall be no further excavation or disturbance of the site where human remains are discovered and/or any nearby area reasonably 	<p>Less than significant impact.</p>

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>suspected to overlie adjacent human remains until the County Coroner is contacted to determine whether the remains are Native American and if an investigation of the cause of death is required. If the Coroner determines the remains to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in Public Resources Code Section 5097.98, or</p> <p>2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project area in a location not subject to further subsurface disturbance:</p> <ul style="list-style-type: none"> ● The NAHC is unable to identify a most likely descendant, or the most likely descendant failed to make a recommendation within 48 hours after being notified by the commission. ● The descendant identified fails to make a recommendation; or ● The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner. 	
<p>Impact CUL-4: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).</p>	<p>Implement MM CUL-2a, MM CUL-2b, and MM CUL-3.</p>	<p>Less than significant impact.</p>
<p>Impact CUL-5: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource determined by the lead agency, in its discretion and supported by substantial evidence, to be</p>	<p>Implement MM CUL-2a, MM CUL-2b, and MM CUL-3.</p>	<p>Less than significant impact.</p>

Impacts	Mitigation Measures	Level of Significance After Mitigation
significance pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.		
Cumulative Impact: The proposed project would have a less than significant cumulative impact on cultural resources and tribal cultural resources with mitigation incorporated.	Implement MM CUL-2a , MM CUL-2b , and MM CUL-3 .	Less than significant impact.
Section 3.5—Energy		
Impact ENER-1: The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	None required.	N/A
Impact ENER-2: The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	None required.	N/A
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to energy.	None required.	N/A
Section 3.6—Geology and Soils		
<p>Impact GEO-1: The proposed project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:</p> <ul style="list-style-type: none"> i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking. iii) Seismic-related ground failure, including liquefaction. iv) Landslides. 	<p>MM GEO-1: Design-Level Geotechnical Study</p> <p>Prior to issuance of building and grading permits, an updated design-level geotechnical exploration and assessment shall be performed by a qualified Geotechnical Engineer. The design-level exploration and reporting shall include (but would not be limited to) the following items:</p> <ul style="list-style-type: none"> ● Hollow-stem auger borings, including matched-pair borings. ● Soil sample collection at depths relevant to building-specific foundation design. ● Laboratory testing, including (but not limited to) moisture content, unit weight, gradation, Atterberg Limits, strength, consolidation, and corrosivity testing. ● Design-level assessment of geologic and geotechnical hazards, including (but not limited to) the following: 	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> - Characterization of subsurface conditions. - Consolidation of compressible soil based on in situ structural loading. • Design recommendations for foundation system design. • Design-level subexcavation, ground improvement, and/or surcharging recommendations. • Foundation constructability recommendations. • Design-level earthwork and improvement design and construction recommendations. • Design-level features required for landslides. <p>The recommendations included in the Design-Level Geotechnical Report shall be implemented during construction activities, including grading and excavation.</p>	
<p>Impact GEO-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.</p>	<p>None required.</p>	<p>N/A</p>
<p>Impact GEO-3: The proposed project could be located on a geological 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.</p>	<p>Implement MM GEO-1.</p>	<p>Less than significant impact.</p>
<p>Impact GEO-4: The proposed project could be located on expansive soil, creating substantial direct or indirect risks to life or property.</p>	<p>Implement MM GEO-1.</p>	<p>Less than significant impact.</p>
<p>Impact GEO-5: The proposed project would not 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.</p>	<p>None required.</p>	<p>N/A</p>
<p>Impact GEO-6: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.</p>	<p>MM GEO-6: Prior to the start of any ground-disturbing activity, a qualified paleontologist meeting Society of Vertebrate Paleontology (SVP) standards and best practices shall be retained to prepare and conduct a project-wide Worker Environmental Awareness Program (WEAP) training. The WEAP shall contain unanticipated discovery measures to be followed in the event</p>	<p>Less than significant impact.</p>

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>that paleontological resources are encountered while the qualified Paleontologist or qualified Paleontological Monitor is not present (i.e., during excavations within the first 6 feet below the existing grade). The WEAP shall be conducted by a qualified environmental trainer, under the supervision of a qualified Paleontologist. In the event construction crews are phased in, additional training shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the proposed project site and the procedures to be followed if they are found.</p> <p>Paleontological monitoring shall be conducted by a qualified Paleontological Monitor meeting SVP standards and best practices, under the supervision of the qualified Paleontologist. Monitoring would be required for excavations at the project site that exceed 6 feet below the existing grade east of El Charro Road, in previously undisturbed deposits. Full-time monitoring shall be required for all excavation into previously undisturbed Pleistocene-age deposits. If earth-disturbing construction-related activities uncover any paleontological resources (i.e., bones or teeth), those activities shall be diverted at least 15 feet away from the discovery until a qualified Paleontologist is brought on-site to assess the find for possible salvage, consistent with the standards and best practices set by the SVP. Construction workers shall not attempt to remove such finds. Depending on the conditions encountered, full-time monitoring can be reduced to part-time inspections or ceased entirely if determined adequate by the qualified Paleontologist.</p> <p>In the event that paleontological resources are encountered while monitoring is not occurring (i.e., during excavations within the first 6 feet below the existing grade), excavations within 50 feet of the find shall be temporarily halted or diverted until the qualified Paleontologist can assess the find and determine its significance. Depending on the conditions encountered, monitoring activities may be increased at the discretion of the qualified Paleontologist if he or she deems it appropriate. The qualified Paleontologist may spot check the excavation on an intermittent basis and recommend whether the depth of required monitoring should be revised based on his/her observations.</p>	

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>The qualified Paleontologist shall document the discovery as needed and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. Salvaged fossils should be deposited in an appropriate repository (i.e., University of California Museum of Paleontology [UCMP]), where they will be properly curated and made available for future research. The qualified Paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the discovery. If the applicant determines that avoidance is not feasible, the qualified Paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery.</p> <p>The plan shall be submitted to the appropriate repository and to the County for review and approval prior to implementation. The applicant shall adhere to the recommendations in the approved plan.</p>	
<p>Cumulative Impact: The proposed project would have a less than significant cumulative impact related to geology and soils with mitigation incorporated.</p>	<p>Implement MM GEO-1 and MM GEO-6.</p>	<p>Less than significant impact.</p>
<p>Section 3.7—Greenhouse Gas Emissions</p>		
<p>Impact GHG-1: The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.</p>	<p>MM GHG-1: Prior to issuance of building permits, the project applicant shall provide documentation (e.g., site plan) to the County to demonstrate that the proposed residential units would include pre-wiring so that each building is ready for a future retrofit to all-electric (e.g., such that electric space heating, water heating, drying, and cooking appliances could be installed.</p>	<p>Significant and unavoidable impact.</p>
<p>Impact GHG-2: The proposed project would conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.</p>	<p>MM GHG-2: Prior to issuance of building permits, the applicant shall provide documentation to the County to demonstrate purchase of carbon offsets that reduce the project’s greenhouse gas (GHG) emissions due to natural gas use, which is estimated to be 478 metric tons carbon dioxide equivalent (MT CO₂e), if no other on-site measures are implemented to further reduce emissions. Based on estimated project life of 30 years, total credits needed to offset emissions below the applicable thresholds would be 14,341 MT CO₂e for the life of the proposed project (or a reduced</p>	<p>Significant and unavoidable impact.</p>

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>amount estimated based on implementation of other measures or preparation of refined emission modeling).</p> <p>The project developer or its designee may purchase and retire carbon credits that have been issued by a recognized and reputable, accredited carbon registry in a quantity equal to the operational GHG emissions from natural gas use. For an offset to be considered viable, it must exhibit “permanence.” To adequately reduce emissions of GHGs, carbon offsets must be able to demonstrate the ability to counterbalance GHG emissions over the lifespan of a project or “in perpetuity.”</p> <p>The purchase of GHG credits through voluntary participation in an approved registry must meet the following criteria:</p> <ul style="list-style-type: none"> ● Real—represent reductions actually achieved (not based on maximum permit levels), ● Additional/Surplus—not already planned or required by regulation or policy (i.e., not double counted), ● Quantifiable—readily accounted for through process information and other reliable data, ● Enforceable—acquired through legally-binding commitments/agreements, ● Validated—verified through accurate means by a reliable third party, and ● Permanent—will remain as GHG reductions in perpetuity. 	
<p>Cumulative Impact: The proposed project would have a significant and unavoidable cumulative impact related to GHG emissions.</p>	<p>Implement MM GHG-1 and MM GHG-2.</p>	<p>Significant and unavoidable impact.</p>
<p>Section 3.8—Hazards and Hazardous Materials</p>		
<p>Impact HAZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.</p>	<p>None required.</p>	<p>N/A</p>
<p>Impact HAZ-2: The proposed project would not create a significant hazard to the public or the environment through reasonable foreseeable upset and accident</p>	<p>None required.</p>	<p>N/A</p>

Impacts	Mitigation Measures	Level of Significance After Mitigation
conditions involving the likely release of hazardous materials into the environment.		
Impact HAZ-3: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None required.	N/A
Impact HAZ-4: The proposed project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; however, as a result, it would not create a significant hazard to the public or the environment.	None required.	N/A
Impact HAZ-5: 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, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area.	None required.	N/A
Impact HAZ-6: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required.	N/A
Impact HAZ-7: The proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	None required.	N/A
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to hazards and hazardous materials.	None required.	N/A
Section 3.9—Hydrology and Water Quality		
Impact HYD-1: The proposed project would not violate any water quality standards or waste discharge	None required.	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
requirements or otherwise substantially degrade surface or ground water quality.		
Impact HYD-2: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	None required.	N/A
Impact HYD-3: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.	None required.	N/A
Impact HYD-4: The proposed project could be located in a flood hazard zone, tsunami, or seiche zone, or risk release of pollutants due to project inundation.	None required.	N/A
Impact HYD-5: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	None required.	N/A
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to hydrology and water quality with mitigation incorporated.	None required.	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.10—Land Use and Planning		
Impact LAND-1: The proposed project would not physically divide an established community.	None required.	N/A
Impact LAND-2: The proposed project would not 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.	None required.	N/A
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to land use and planning.	None required.	N/A
Section 3.11—Mineral Resources		
Impact MIN-1: The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.	None required.	N/A
Impact MIN-2: The proposed project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other local land use plan.	None required.	N/A
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to mineral resources.	None required.	N/A
Section 3.12—Noise		
Impact NOI-1: The proposed project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	MM NOI-1: Implementation of the following multi-part mitigation measure is required to reduce potential construction-period noise impacts: Prior to issuance of construction permits, the following language shall be included, verbatim, in the general notes section of all the civil plan construction documents.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> ● The construction contractor shall ensure that all equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment. ● The construction contractor shall ensure that unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes) is prohibited. ● The construction contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists. ● At all times during project grading and construction, the construction contractor shall ensure that stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from adjacent residences. ● The construction contractor shall ensure that the construction staging areas shall be located to create the greatest feasible distance between the staging area and noise-sensitive receptors nearest the project site. ● The construction contractor shall ensure that all on-site construction activities, including the operation of any tools or equipment used in construction, drilling, repair, alteration, grading, or demolition work, are limited to between the hours of 7:00 a.m. to 7:00 p.m. on any day except Saturday or Sunday, or 8:00 a.m. to 5:00 p.m. on Saturday or Sunday. 	
<p>Impact NOI-2: The proposed project would not result in generation of excessive groundborne vibration or groundborne noise levels.</p>	None required.	N/A
<p>Impact NOI-3: The proposed project would not expose people residing or working in the project area to excessive noise levels 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 public airport or public use airport.</p>	None required.	N/A
<p>Cumulative Impact: The proposed project would have a less than significant cumulative impact related to noise.</p>	None required.	N/A
<p>Section 3.13—Population and Housing</p>		

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact POP-1: The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	None required.	N/A
Impact POP-2: The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction or replacement housing elsewhere.	None required.	N/A
Cumulative Impact: the proposed project would have a less than significant cumulative impact related to population and housing.	None required.	N/A
Section 3.14—Public Services		
Impact PUB-1: The proposed project would not 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.	None required.	N/A
Impact PUB-2: The proposed project could 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 police protection.	None required.	Less than significant impact.
Impact PUB-3: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered	None required.	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
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 schools.		
Impact PUB-4: The proposed project would not 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 parks.	None required.	N/A
Impact PUB-5: The proposed project would not 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 other public facilities.	None required.	N/A
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to public services.	None required.	Less than significant impact.
Section 3.15—Recreation		
Impact REC-1: The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	None required.	N/A
Impact REC-2: The proposed project would include recreational facilities but would not require the construction or expansion of recreational facilities which	None required.	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
might have an adverse physical effect on the environment.		
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to recreation.	None required.	N/A
Section 3.16—Transportation and Traffic		
Impact TRANS-1: The proposed project would not conflict with a program plan, ordinance, or policy of the circulation system, including transit, roadway, bicycle and pedestrian facilities.	None required.	N/A
Impact TRANS-2: The proposed project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	MM TRANS-2a: Prior to project operation, the proposed project would implement traffic calming elements on all of the street improvements included in the proposed project. MM TRANS-2b: Prior to project operation, the proposed project would construct approximately 1,000 feet of off-site sidewalk improvements and bicycle lane improvements along Busch Road, which would connect to existing facilities on Busch Road and Ironwood Drive.	Significant and unavoidable impact.
Impact TRANS-3: The proposed project could substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	None available.	Significant and unavoidable impact.
Impact TRANS-4: The proposed project would not result in inadequate emergency access.	None required.	N/A
Cumulative Impact: The proposed project would have a significant and unavoidable cumulative impact related to transportation.	Implement MM TRANS-2a and MM TRANS-2b .	Significant and unavoidable impact.
Section 3.17—Utilities and Service Systems		
Impact UTIL-1: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or	None required.	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
telecommunications facilities, the construction or relocation of which could cause significant environmental effects.		
Impact UTIL-2: The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.	None required.	N/A
Impact UTIL-3: The proposed project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments.	None required.	N/A
Impact UTIL-4: The proposed project would not 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.	None required.	N/A
Impact UTIL-5: The proposed project would comply with federal, State, and local statutes and regulations related to solid waste.	None required.	N/A
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to utilities and service systems.	None required.	N/A
Section 3.18—Wildfire		
Impact WILD-1: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	None required.	N/A
Impact WILD-2: The proposed project would not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to	None required.	N/A

Impacts	Mitigation Measures	Level of Significance After Mitigation
pollutant concentrations from a wildfire or the uncontrolled spread of wildfire.		
Impact WILD-3: The proposed project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	None required.	N/A
Impact WILD-4: The proposed project would not 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.	Implement MM GEO-1.	Less than significant impact.
Cumulative Impact: The proposed project would have a less than significant cumulative impact related to wildfire.	Implement MM GEO-1.	Less than significant impact.

CHAPTER 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Arroyo Lago Residential Project (proposed project) (State Clearinghouse [SCH] No. 2023050339). This document is prepared in conformance with CEQA (California Public Resources Code [PRC], § 21000, *et seq.*) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, § 15000, *et seq.*). This Draft EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the proposed project.

1.1.1 - Overview

The proposed project consists of the development of 194 market-rate single-family homes with approximately 25 percent (49) of the homes designed with affordable Junior Accessory Dwelling Units (JADUs), as well as internal roadways, a 0.7-acre centrally located park, and approximately 0.5 mile of designated public walking trails on an approximately 26.6-acre site. The proposed project would also include off-site infrastructure to support the proposed development, including an approximately 1-acre sewer treatment plant, an approximately 0.4-acre water storage and booster pump facility, an additional 2.5-acre recycled water storage facility with an approximate depth of 10 to 15 feet, approximately 8.5 acres of agricultural irrigation recycled water spray fields, and two bioretention areas. The primary bioretention area is being considered under two design alternatives.

The project site is located within unincorporated Alameda County (County) adjacent to the City of Pleasanton's western city limits, between Lake I of the Zone 7 Chain of Lakes north of project site and Cope Lake to the east of the project site. The project would require the Lead Agency's certification of the Draft EIR, the approval of a Vesting Tentative Map, and the approval of a Site Development Permit and Building Permits, as well as additional approvals from Responsible Agencies. Chapter 2, Project Description, provides a complete description of the project.

1.1.2 - Purpose and Authority

This Draft EIR provides a project-level analysis of the environmental effects of the proposed project. The environmental impacts of the proposed project are analyzed in the Draft EIR to the degree of specificity appropriate, in accordance with CEQA Guidelines Section 15146. This document addresses the potentially significant adverse environmental impacts that may be associated with the planning, construction, and operation of the proposed project. It also identifies appropriate and feasible mitigation measures and alternatives that may be adopted to significantly reduce or avoid these impacts.

CEQA requires that an EIR contains, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction
- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found not to be Significant
- Areas of Known Controversy

1.1.3 - Lead Agency Determination

The County of Alameda is the lead agency for the proposed project. CEQA Guidelines Section 15367 defines the lead agency as “. . . the public agency, which has the principal responsibility for carrying out or approving a project.” Other public agencies may use this Draft EIR in the decision-making or permit process and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by FirstCarbon Solutions (FCS), an environmental consultant, under the direction of the County of Alameda. Prior to public review, it was extensively reviewed and evaluated by the County of Alameda. This Draft EIR reflects the independent judgment and analysis of the County of Alameda as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel are provided in Section 7 of this Draft EIR.

1.2 - Scope of the Draft EIR

This Draft EIR addresses the potential environmental effects of the proposed project. The County of Alameda issued a Notice of Preparation (NOP) for the proposed project on May 12, 2023, which circulated between May 12, 2023, and June 12, 2023, for the statutory 30-day public review period. The NOP public review period was then extended by the lead agency to June 23, 2023.

This Draft EIR evaluates the potential environmental impacts identified in the NOP and also considers the issues raised by agencies and the public in response to the NOP. The NOP is contained in Appendix A of this Draft EIR.

Sixty-seven comment letters were received in response to the NOP. They are listed in Table 1-1 and provided in Appendix A of this Draft EIR.

Table 1-1: NOP Comment Letters

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
Public Agencies				
Native American Heritage Commission	Cady Campagne	May 12, 2023	Summarizes CEQA requirements and background information.	N/A
			Summarizes Assembly Bill (AB) 52 and Senate Bill (SB) 18 requirements for cultural and tribal cultural resources.	Section 3.4, Cultural Resources and Tribal Cultural Resources
			Provides recommendations for Cultural Resource Assessments (CRAs)	Section 3.4, Cultural Resources and Tribal Cultural Resources
Dublin San Ramon Services District	Jaclyn Yee	June 7, 2023	Request to include details related to planned wastewater treatment, including responsible party to maintain the facility and plan for meeting regulatory requirements.	Chapter 2, Project Description; Section 3.17, Utilities and Service Systems
			Contact information and offer of assistance with questions.	N/A
City of Pleasanton	Ellen Clark	June 8, 2023	Request for evaluation of water supply and water quality, including polyfluoroalkyl substances (PFAS) contamination.	Section 3.9, Hydrology and Water Quality; Section 3.8, Hazards and Hazardous Materials; Section 3.17, Utilities and Service Systems
			Request for description and evaluation of adequacy of wastewater treatment system and impacts of proposed sewer treatment plant on groundwater.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems.
			Request for evaluation of stormwater treatment and runoff.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request for evaluation of public services and related hazards, including access for emergency vehicles and response times.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services
			Request for analysis of aesthetics and visual hazards, including shadow impacts to adjacent neighborhoods.	Section 3.1, Aesthetics, Light, and Glare

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Request for analysis of noise impacts associated with proximity to City of Pleasanton Operations Services Center, Fire Training Facility, and Police Department practice range.	Section 3.12, Noise
			Request to analyze odor impacts associated with Pleasanton Garbage Service (PGS) facility.	Section 3.2, Air Quality
			Request to analyze air quality and greenhouse gas (GHG) emission impacts.	Section 3.2, Air Quality; Section 3.7, Greenhouse Gas Emissions
			Request for analysis of Vehicle Miles Traveled (VMT) and relevant thresholds.	Section 3.16, Transportation
			Request to analyze traffic safety impacts on Busch Road and other affected streets.	Section 3.16, Transportation
			Request for analysis of impacts to biological and cultural resources.	Section 3.3, Biological Resources; Section 3.4, Cultural Resources and Tribal Cultural Resources
			Request to analyze growth-inducing impacts.	Chapter 5, Other CEQA Considerations
			Request to include potential development on adjacent parcels in project description and analysis.	Chapter 2, Project Description
			Request that the cumulative analysis include impacts of all planned and reasonably foreseeable development on properties near the project site.	Various Sections
City of Pleasanton	Melinda Denis	February 10, 2023; Duplicate Letter sent on November 16, 2022	Request to prepare a Traffic Impact Study (TIS), which must be reviewed and approved by the City.	Section 3.16, Transportation
			Request to include mixed-use path and all existing rights of way for Busch Road on project plans.	Chapter 2, Project Description; Section 3.16, Transportation
			Request to analyze PFAS contamination in groundwater.	Section 3.9, Hydrology
			Request to analyze wastewater impacts on groundwater quality.	Section 3.9, Hydrology

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Request to evaluate public services and emergency response times.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services
			Request to include a Livermore-Pleasanton Fire Department (LFPD) truck exhibit if the proposed project will need to be served by LFPD.	Section 3.14, Public Services
			Request to evaluate visual impacts from the proposed project onto the Village at Ironwood neighborhood.	Section 3.1, Aesthetics, Light, and Glare
			Request to evaluate noise impacts from existing land uses in the area on the proposed project.	Section 3.12, Noise
			Request to analyze noise impacts from the proposed project on surrounding land uses.	Section 3.12, Noise
			Request to evaluate GHG and air quality impacts.	Section 3.2, Air Quality; Section 3.7, Greenhouse Gas Emissions
			Request to prepare a Biological Resources Assessment (BRA).	Section 3.3, Biological Resources
			Request to prepare a Cultural Resources Assessment (CRA) of the project site.	Section 3.4, Cultural Resources and Tribal Cultural Resources
			Request to analyze stormwater runoff impacts.	Section 3.9, Hydrology; Section 3.17, Utilities and Service Systems
			Request to analyze open space and recreational facilities.	Section 3.14, Public Services; Section 3.15, Recreation
			Request to include a Class I Trail and Water Efficient Landscape Ordinance (WELO) compliant landscape plans.	Chapter 2, Project Description
			Request to evaluate impacts to Pleasanton Unified School District (PUSD) schools.	Section 3.14, Public Services
			Request to address existing easements for Pacific Gas and Electric Company (PG&E) utility poles.	Chapter 2, Project Description

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Recommendation that open GeoTracker environmental case be closed prior to the approval of the proposed project.	Section 3.8, Hazards and Hazardous Materials
			Provides a recommended title disclosure to be included with the sale of lots within the subdivision.	N/A
			Request to evaluate encroachment of project features on Busch Road.	Section 3.16, Transportation
			Request to discuss proposed Busch Road improvements.	Section 3.16, Transportation
			Requirement that the improvement of Busch Road within the proposed project conform to adopted City standards for public infrastructure.	Section 3.16, Transportation
			Requirement that the applicant enter into an agreement with the City that ensures the installation of required public infrastructure.	Section 3.16, Transportation
			Information about Busch Road operation costs and requirement that the applicant fund their fair share of future maintenance costs.	Section 3.16, Transportation
City of Pleasanton	Ellen Clark	June 29, 2022	Statement that the City won't support the proposed project until an East Pleasanton Specific Plan is prepared in conformance with the City's General Plan.	N/A
			Request to evaluate cumulative impacts of the proposed project.	Various Sections
			Request to analyze VMT and provide a supplemental analysis for potential delay-based impacts.	Section 3.16, Transportation
			Request to evaluate traffic impacts to the intersections of Bernal Avenue, First Street, and Sunol Boulevard.	Section 3.16, Transportation
			Request to include the plans for water and sanitary services for the proposed project.	Section 3.17, Utilities and Service Systems

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Request to evaluate and identify overall water supply and demand needs and its potential impacts.	Section 3.17, Utilities and Service Systems
			Request to identify the use of recycled water for landscape irrigation and the extension of “purple pipe” to service the proposed project.	Section 3.17, Utilities and Service Systems
			Request to evaluate stormwater treatment and retention facilities.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request to evaluate potential noise, air quality, and aesthetic compatibility issues with regard to the Operations Service Department located west of the site.	Section 3.1, Aesthetics, Light, and Glare; Section 3.2, Air Quality; Section 3.12, Noise
			Request to evaluate impacts from the PGS facility located south of the project site.	Various Sections
			Request to analyze impacts to and from the East Bay Regional Park District (EBRPD) Master Plan and the Zone 7 Arroyo Management Plan improvements.	Various Sections
			Request to incorporate the final alignment of the Iron Horse Trail into project plans.	Chapter 2, Project Description
			Request to evaluate vehicular access to nearby industrial businesses.	Section 3.16, Transportation
			Request to show exceptions for PG&E easements and roadway easements on plans.	Chapter 2, Project Description
			Request to describe how the proposed project will meet specific Alameda County General Plan and East County Area Plan (ECAP) policies relevant to hazards, emergency access, public services, sewers, and air quality.	Section 3.2, Air Quality; Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services; Section 3.17, Utilities and Service Systems
			Request to analyze public service response times.	Section 3.14, Public Services
			Request to evaluate emergency access for first responders.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Request to analyze expected water flow/pressure available at fire hydrants.	Section 3.17, Utilities and Service Systems
			Request to evaluate Phase I and Phase II hazardous materials reports for the project site.	Section 3.8, Hazards and Hazardous Materials
Zone 7 Water Agency	Elke Rank	June 12, 2023	Request for evaluation of potential impacts to Cope Lake from the sewer treatment plant.	Section 3.3, Biological Resources; Section 3.9, Hydrology and Water Quality
			Suggestion to explore piping generated wastewater to the sewer treatment plant in the City as mitigation.	Section 3.17, Utilities and Service Systems
			Request to clarify intended water supply, turnouts, and associated infrastructure proposed.	Chapter 2, Project Description; Section 3.17, Utilities and Service Systems
			Request to evaluate whether Zone 7 has accounted for new water demand and where supply would come from.	Section 3.17, Utilities and Service Systems
			Request to evaluate potential contamination in proposed water sources and potential mitigation.	Section 3.9, Hydrology and Water Quality
			Request to evaluate potential stormwater impacts to nearby lakes and potential mitigation.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request to address acreage reduction of the proposed irrigation spray field from the 2018 NOP.	Chapter 6, Alternatives
			Request to be added to the Distribution List.	N/A
State Water Resources Control Board, Division of Drinking Water	Yvonne Heaney	June 13, 2023	Request to be added to the Distribution List.	N/A
			Concerns about long-term sustainability of water supply and infrastructure for the proposed project.	Section 3.9, Hydrology and Water Quality
			Information about requirement for public water system permit from the Division of Drinking Water (DDW).	Section 3.9, Hydrology and Water Quality
			Concern regarding knowledge and appropriate technical, managerial, and financial capacity to operate the water system long-term.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Concern regarding meeting regulatory requirements long-term for a development with less than 200 connections.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Concern regarding potable water distribution system with operation, maintenance, and monitoring.	Section 3.17, Utilities and Service Systems
			Suggestion that a connection to the City of Pleasanton could provide a sustainable water supply for the proposed development more efficiently than Zone 7 could.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Suggestion for developer to contact DDW to discuss proposed water supply to comply with the California Health and Safety Code.	N/A
Pleasanton Unified School District (PUSD)	Ahmad Sheikholeslami	June 14, 2023	Statement that proposed project is within the PUSD boundaries.	Section 3.14, Public Services
			Request to evaluate impacts and cumulative impacts on the schools that serve the area, including three specific schools.	Section 3.14, Public Services
			Request to be added to the Distribution List.	N/A
Alameda County Water District	Ava Lazor	June 21, 2023	Background information regarding Alameda County Water District.	N/A
			Request to be added to the Distribution List.	N/A
			Concern regarding Sewer Treatment Plant and how the effluent will be addressed in relation to Alameda Creek.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
California Department of Fish and Wildlife	Jessica Limon	June 23, 2023	Request for description of land use changes from the proposed project.	Chapter 2, Project Description; Section 3.10, Land Use and Planning
			Request for description of type and size of project facilities and features.	Various Sections
			Request for description of area and design plans for buildings, ground-disturbing activities, fencing, paving, machinery, landscaping, and stormwater systems.	Various Sections

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			Request for description of operational features of the proposed project.	Various Sections
			Request for description of construction schedule, activities, equipment, and crew sizes.	Chapter 2, Project Description
			Discussion of regulatory requirements including the California Endangered Species Act (CESA) Incidental Take Permit, nesting birds, protected species, and the lake and streambed alteration agreement.	Section 3.3, Biological Resources
			Recommendations for environmental setting, including baseline habitat assessments and site surveys for special-status species, aquatic habitats, and botanical resources.	Section 3.3, Biological Resources
			Request to evaluate land use changes, riparian habitats, special-status species, habitat disturbances, movement corridors, and cumulative impacts.	Section 3.3, Biological Resources; Section 3.10, Land Use and Planning
			Request to assess the proposed project’s potential habitat for western burrowing owls.	Section 3.3, Biological Resources
			Request to evaluate impacts to tri-colored blackbird and California tiger salamander.	Section 3.3, Biological Resources
			Statement that relevant data should be reported to the California Natural Diversity Database (CNDDDB).	Section 3.3, Biological Resources
			Information regarding potential filing fees.	Section 3.3 Biological Resources
Organizations				
Meridian Community at Ironwood	Nancy Lee	June 12, 2023	Concern regarding traffic and safety.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services; Section 3.16, Transportation
Individuals				
N/A	Barry Jolette	May 29, 2023	States that the City of Pleasanton needs additional housing to meet needs of citizens.	Section 3.13, Population and Housing

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			Urges the County to change or reject the proposal.	N/A
			Concern for backyard privacy of homes in the Village at Ironwood.	N/A
			Concern regarding consistency with neighboring housing.	Section 3.1, Aesthetics, Light, and Glare; Section 3.10, Land Use and Planning
			Concern and questions about project location and access, as well as financial aspects regarding road improvements.	Chapter 2, Project Description; Section 3.16, Transportation
			Concern regarding water supply.	Section 3.17, Utilities and Service Systems
			Concern regarding negative impacts to the City.	Various Sections
N/A	Diana Atwell	May 29, 2023; Duplicate Letter sent on October 27, 2022 and September 9, 2018	Concern for aesthetics and light impacts caused by proposed project and fence.	Section 3.1, Aesthetics, Light, and Glare
			Discussion of need for affordable housing. Commenter believes this development does not address the need.	Section 3.13, Population and Housing
			Concern regarding trees, wildlife, and wetland impacts.	Section 3.3, Biological Resources
			Concern for noise related impacts on adjacent communities.	Section 3.12, Noise
			Concern regarding indirect/direct elder abuse potentially caused by noise and/or light impacts, along with sleep disturbances.	Section 3.1, Aesthetics, Light, and Glare; Section 3.12, Noise
			Suggestion that endangered trees, wetlands, and animals were illegally removed from the project site.	Section 3.3, Biological Resources
			Concerns regarding excessive traffic on Busch Road.	Section 3.16, Transportation
			Concerns regarding public services, utilities, and emergency services.	Section 3.14, Public Services; Section 3.17, Utilities and Service Systems
			Concerns regarding water drainage into adjacent homes.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
N/A	Sheri Guzolik	May 30, 2023	Discussion of traffic concerns from increased residents and number of cars in the community.	Section 3.16, Transportation
			Request for an additional vehicular access route off of Mohr Avenue.	Section 3.16, Transportation
			Question regarding why the proposed project is being assigned to the City of Pleasanton while the project site is located within City of Livermore boundaries.	Chapter 2, Project Description
			Question regarding schools for students to attend and how the influx of students will be addressed.	Section 3.14, Public Services
			Question regarding how number of residents was calculated.	Section 3.13, Population and Housing
			Question regarding how the water storage site would be filled.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
N/A	Bruce and Elizabeth Simonsen	May 30, 2023	Support for the proposed project.	N/A
N/A	Kip Anderson and Gail McDonald	May 31, 2023	Suggestion to consider the proposed project in the context of the entire east side of the City of Pleasanton.	Chapter 2, Project Description; Chapter 6, Alternatives
			Concern regarding increase in routine traffic in the project area.	Section 3.16, Transportation
			Concern for emergency traffic on Busch Road.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services; Section 3.16, Transportation
			Request to evaluate construction impacts on surrounding neighborhoods, the Pleasanton Operations Service Center, and the Pleasanton Recycling Center.	Various Sections
			Request to address the need for police, fire, and emergency services to the proposed project and the surrounding neighborhoods.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Request to evaluate findings of organizations which study seasonal wildlife and habitats.	Section 3.3, Biological Resources
			Request to evaluate the impacts on the Iron Horse Trail.	Various Sections
			Request to address impacts related to odors from the Sewer Treatment Plant.	Section 3.2, Air Quality
			Concern about the impacts of the proposed project on the Village at Ironwood.	Various Sections
			Concern for PFAS contamination in wells serving the City of Pleasanton.	Section 3.9, Hydrology and Water Quality
			Request to evaluate the impacts of the proposed project on existing neighborhoods in the area.	Various Sections
			Concern for sunlight not reaching solar panels at the Village at Ironwood homes.	Section 3.1, Aesthetics, Light, and Glare
			Concern for grading and flooding of residences adjacent to the Village at Ironwood.	Section 3.6, Geology and Soils; Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request to evaluate construction dust, noise, and soil disturbance impacts on adjacent properties.	Section 3.2, Air Quality; Section 3.6, Geology and Soils; Section 3.12, Noise
			Request to evaluate the impacts of gun noise and fire department activities from the Operations Service Center on the proposed project.	Section 3.12, Noise
			Concern for traffic along Busch Road with regard to the PGS facility.	Section 3.16, Transportation
N/A	Kip Anderson	June 1, 2023	Concern regarding the lack of a coordinated Eastside plan with the cooperation of the City of Pleasanton and the County of Alameda.	Chapter 2, Project Description; Chapter 6, Alternatives
			Concern for water and PFAS contamination in some wells. Request that water issues for the proposed project are	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			analyzed and planned for. Request that sewage treatment and water treatment are also studied more.	
			Discussion regarding solar panels and sunlight in the backyards of the Village at Ironwood.	Section 3.1, Aesthetics, Light, and Glare
			Concern regarding traffic mitigation and prevention. Suggestion that El Charro Road and Boulder Street be built out fully.	Section 3.16, Transportation
N/A	Ted Fong	June 1, 2023	Discussion of the lack of a cohesive development plan in the East Pleasanton Area and between the City and County.	Chapter 2, Project Description; Chapter 6, Alternatives
			Suggestion to develop a long-term plan to accommodate growth in the area for clean water and capacity, road infrastructure, and emergency services.	Section 3.9, Hydrology and Water Quality; Section 3.14, Public Services; Section 3.16, Transportation; Section 3.17, Utilities and Service Systems
			Suggestion that the proposed project be developed as if it were a part of the City with the intention of future annexation.	Chapter 2, Project Description; Chapter 6, Alternatives
			Discussion that the City and County should cooperate between jurisdictions so there can be a balance to individual and common objectives being met.	Various Sections
			Request for the City and County to cooperate to meet principles stated on the City’s website.	Various Sections
			Request to develop an East Pleasanton area plan type of approach before the proposed project is approved.	Chapter 2, Project Description; Chapter 6, Alternatives
N/A	Sharon Z. Sacks	June 1, 2023	Request further study of elimination of Zone 7 easement east of the eastern wall of the Village at Ironwood impacting water use.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Discussion of easement road being used for emergencies for Pleasanton/Livermore Police and Fire Departments and the Alameda County Sheriff Department.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services

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			Concern for increased traffic on Busch Road and Valley Avenue.	Section 3.16, Transportation
			Request to consider developing a throughway off El Charro Road to prevent increased traffic flow.	Section 3.16, Transportation
N/A	Alan Hansen	June 1, 2023	Concern for family’s health and welfare impacted by the proposed project.	Various Sections
			Request for a master plan of the larger contiguous areas south of Busch Road and east of the proposed project.	Chapter 6, Alternatives
N/A	Scott and Kip Anderson	June 1, 2023	Concern regarding 2-story buildings along the Village at Ironwood blocking sunlight to solar panels.	Section 3.1, Aesthetics, Light, and Glare
			Concern regarding privacy at the Village at Ironwood from 2-story homes.	N/A
			Concern regarding stormwater runoff into backyards of homes at the Village at Ironwood.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Discussion of A-1 zoning designation and rezoning. Question regarding when that will occur.	Chapter 2, Project Description; Section 3.10, Land Use and Planning
			Discussion of compliancy with R-1 requirements.	Chapter 2, Project Description; Section 3.10, Land Use and Planning
N/A	Arne Olson	June 2, 2023	Discussion of proposed elimination of Zone 7 easement road available to the Pleasanton-Livermore Fire Department, the Alameda County Sheriff, and the Pleasanton Police Department.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services
			Request to study the impacts to health, safety, and ability of police and fire services to address emergencies in the Village at Ironwood and the proposed project.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services
N/A	Arne Olson	June 2, 2023	Discussion of soil importation to the project site performed in 2018 and 2019.	Section 3.6, Geology and Soils

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Discussion of Alameda County Department of Environmental Health evaluation of importing soil from the Sobrante Sunnyvale Source Area.	Section 3.6, Geology and Soils
			Statement that the Alameda County Supervisors approved a Soil Import Ordinance.	Section 3.6, Geology and Soils
			Request to evaluate soil to a depth of six feet on the project site.	Section 3.6, Geology and Soils
			Request to complete a current seismic and geotechnical analysis of the project site.	Section 3.6, Geology and Soils
N/A	Arne Olson	June 2, 2023	Discussion of Zone 7 as a Required Ministerial Approval and whether there is sufficient clean water to support the proposed project.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request to study the impacts on PFAS plume navigation that could result from the proposed project.	Section 3.9, Hydrology and Water Quality
N/A	Tom Grudkowski	June 2, 2023	Discussion of land use designation according to the East County Area Plan.	Chapter 2, Project Description; Section 3.10, Land Use and Planning
			Request to consider rezoning to R-1 for the proposed projects and potential future developments east of the proposed project.	Chapter 2, Project Description; Section 3.10, Land Use and Planning
			Request to adopt West Alameda County standards.	N/A
			Request that the Zone 7 access road be retained and improved.	Chapter 2, Project Description; Various Sections
N/A	Basanta K. Mitra	June 2, 2023	Discussion of previously re-graded land past the eastern wall of the Village at Ironwood which caused heavy water runoff.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request that the Draft EIR review grading and water runoff impacts.	Section 3.2, Air Quality; Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems

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			Request that the County requires a Conditional Use for the proposed project ensuring eastbound runoff.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
N/A	Dennis Romatz	June 3, 2023	Discussion of Solar Easement Requirements for new construction.	Section 3.1, Aesthetics, Light, and Glare
			Suggestion that Solar Easements will need to be adjusted due to the proposed project regrading the land 4 feet higher than the Village at Ironwood.	Section 3.1, Aesthetics, Light, and Glare
			Request to lower the grading back down 4 feet for the first row of houses to be built along the east wall and retain higher grading for the next row of houses.	Chapter 2, Project Description; Section 3.6, Geology and Soils
N/A	John McDonald	June 3, 2023	Concern regarding the elevated grading change on the proposed project site, which would allow proposed residences to look into the backyard of homes in the Village at Ironwood.	N/A
			Concern regarding proposed 2-story homes blocking the morning sun essential to solar systems at the Village at Ironwood.	Section 3.1, Aesthetics, Light, and Glare
			Concern regarding flooding problems at the Village at Ironwood caused by the elevation change on the proposed project site.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request that no building should be permitted without a master plan to include all access roads.	Chapter 2, Project Description; Section 3.16, Transportation; Chapter 6, Alternatives
N/A	Noël Wilson	June 3, 2023	Concern regarding traffic flow on Busch Road and Valley Avenue.	Section 3.16, Transportation
			Support for connecting the proposed development to El Charro Road.	Chapter 2, Project Description
			Request to create a master plan for the project site and surrounding area before approving the proposed project.	Chapter 2, Project Description; Chapter 6, Alternatives

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N/A	Robert E. Russman	June 4, 2023	Discussion of proposed project characteristics and background.	N/A
			Request that Alameda County require a Master Plan from Arroyo Lago analyzing traffic and safety concerns before approving the proposed project.	Chapter 2, Project Description; Section 3.16, Transportation; Chapter 6, Alternatives
			Request to consider a Conditional Use that road infrastructure improvements be included in any subsequent proposal by this company or subsequent owners.	Section 3.16, Transportation
N/A	John and Carol Ghinazzi	June 4, 2023	Request that a master plan for the area be developed by the County and the City.	Chapter 2, Project Description; Chapter 6, Alternatives
			Request that the plan address traffic impacts, emergency access, an extension of El Charro Road, and public services to be provided.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services; Section 3.16, Transportation
N/A	Ted Fong	June 5, 2023	Discussion of privacy concerns in the Village at Ironwood caused by the Arroyo Lago Residential Project.	N/A
			Request that the County and City require the developer to address encroachment on 55+ community at the Village at Ironwood.	N/A
			Suggestion to require a larger setback for the houses on the east wall with a minimum of 20 to 30 feet.	Section 3.10, Land Use and Planning
			Suggestion to require all the houses on the east wall to be single story.	Chapter 6, Alternatives
			Suggestion to annex the proposed project into the City of Pleasanton to maximize value and overall profits.	Chapter 2, Project Description; Chapter 6, Alternatives
N/A	Doug Schiel	June 5, 2023	Concern regarding stormwater drainage and flooding of eastern Village at Ironwood homes bordering the proposed project.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems

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			Concern regarding privacy and sunlight/solar systems caused by height of retaining wall and “Good Neighbor Fence.”	Section 3.1, Aesthetics, Light, and Glare
			Request to return project site to original elevation.	Chapter 2, Project Description; Section 3.6, Geology and Soils
			Suggestion that Alameda County review EIR to ensure that stormwater drainage from the proposed project will be mitigated.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
N/A	Arne Olson	June 5, 2023	Request for the development of a Master Plan for the east County because the County has standards for similarly zoned property in the western part of the County.	Chapter 2, Project Description; Chapter 6, Alternatives
			Discussion of background information regarding the Village at Ironwood’s 55+ community requirements for noise and lighting.	N/A
			Request to evaluate the proposed project assuming the development standards for Medium Density Residential (MDR) zoned unincorporated property in the western County apply.	N/A
N/A	Tom Grudkowski	June 5, 2023	Concern regarding water quality impacts caused by PFAS contamination and the proposed sewage treatment facility.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request that testing of the important land fill for contaminants be performed prior to the proposed project’s approval.	Section 3.2, Air Quality; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials
			Request that the Zone 7 access road along the east wall of the Village at Ironwood be retained for emergency access. In doing so, the western boundary of the proposed project would be moved eastward with additional separation from the Village at Ironwood.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services

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			Discussion of possible extension of El Charro Road to Busch Road, which may be necessary for emergency access.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services; Section 3.16, Transportation
			Concern regarding traffic congestion caused by the proposed project and other developments along Busch Road.	Section 3.16, Transportation
N/A	Mimi Basu	June 5, 2023	Concern for the proposed project’s impacts on air, light, and privacy for adjacent homes in the Village at Ironwood.	Section 3.1, Aesthetics, Light, and Glare; Section 3.2, Air Quality
			Concern regarding the setbacks and spacing between proposed residents and homes in the Village at Ironwood.	Section 3.10, Land Use and Planning
			Concern regarding noise and vandalism with the new community and the proximity to the adjacent neighborhoods.	Section 3.12, Noise
			Discussion of need for development in underutilized open spaces and consideration for quality of life in impacted neighborhoods.	N/A
N/A	John Wilson	June 5, 2023	Concern regarding traffic congestion on Valley Avenue, which may affect the egress from the Village at Ironwood and emergency access.	Section 3.16, Transportation
			Concern regarding odor impacts from the proposed sewer treatment plant.	Section 3.2, Air Quality
N/A	Doug and Sandy Schiel	June 6, 2023	Discussion of previous flooding issues at the Village at Ironwood properties caused by grading and increased fill dirt.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Concern of setbacks, increased fill, and two-story homes negatively impacting light and privacy at the Village at Ironwood.	Section 3.1, Aesthetics, Light, and Glare; Section 3.10, Land Use and Planning
			Request for the proposed project to be annexed to the City of Pleasanton.	Chapter 2, Project Description; Chapter 6, Alternatives

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N/A	Evan Shelan	June 6, 2023	Concern regarding the proximity of the proposed project’s buildings to the Village at Ironwood, which could impact privacy.	N/A
			Concern for solar systems and shadows cast by 2-story homes in the proposed project.	Section 3.1, Aesthetics, Light, and Glare
			Concern for traffic and transportation at the intersection of Valley Avenue and Busch Road. Request for a comprehensive plan to establish entry and exit points.	Section 3.16, Transportation
			Discussion regarding water quality and PFAS contamination.	Section 3.9, Hydrology and Water Quality
			Request for a Master Plan to address these issues.	Chapter 2, Project Description; Chapter 6, Alternatives
N/A	Hal LaFlash	June 6, 2023	Discussion of comprehensive plan to address water and wastewater issues in the area, such as PFAS contamination.	Section 3.9, Hydrology and Water Quality
			Concern for PFAS contamination in City wells and whether a new well will be required.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Concern regarding sewer treatment plant potentially being undersized for the anticipated needs.	Section 3.17, Utilities and Service Systems
			Concern regarding bioretention areas, agricultural spray area, and sewer treatment plant being located adjacent to Zone 7’s lakes.	Section 3.9, Hydrology and Water Quality
			Request to create a master plan for this area with participation from the City of Pleasanton.	Chapter 2, Project Description; Chapter 6, Alternatives
N/A	Tom Grudkowski	June 6, 2023	Request for a preliminary grading plan and Vesting Tentative Tract Map.	Chapter 2, Project Description; Section 3.6, Geology and Soils
			Request for the Plan Set showing stormwater runoff.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems

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			Concern for stormwater runoff causing flooding at the Village at Ironwood homes.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request for architecture plans for elevations, site setbacks, and traffic flows.	Chapter 2, Project Description
			Concern for proximity of homes in the proposed project to the Village at Ironwood homes.	N/A
			Concern for soil fill contamination and on-site infrastructure.	Section 3.2, Air Quality; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials
N/A	Pamela Hardy Alpert	June 7, 2023	Request to expand the public noticing to the adjacent Ironwood community.	N/A
			Concern regarding traffic and request to use current non-summer traffic data.	Section 3.16, Transportation
			Request for confirmation regarding improvements to Busch Road or El Charro Road.	Chapter 2, Project Description; Section 3.16, Transportation
			Concern regarding vehicle collisions at the Valley Avenue and Busch Road intersection.	Section 3.16, Transportation
			Concerns about odor impacts from the proposed sewer treatment plant.	Section 3.2, Air Quality
			Request for information about sizing and operation of proposed sewer treatment plant and agricultural field.	Section 3.17, Utilities and Service Systems
			Request for clarification on designation and uses for proposed agricultural field adjacent to Cope Lake as well as impacts to wildlife and migratory birds.	Chapter 2, Project Description; Section 3.3, Biological Resources; Section 3.10, Land Use and Planning
			Support for evaluating the extension of Boulder Road and Valley Avenue at the intersection of Busch Road.	Section 3.16, Transportation; Chapter 6, Alternatives

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
N/A	Milton Louie	June 8, 2023	Concern regarding traffic and transportation.	Section 3.16, Transportation
			Concern regarding traffic at intersection of Santa Rita Road and Valley Avenue, as well as Busch Road and Valley Avenue.	Section 3.16, Transportation
			Concern regarding 1,400 homes that would be built on the south side of Busch Road and the north side of Valley Avenue compounding traffic.	Section 3.16, Transportation
			Support for the proposed project.	N/A
			Request to use real and current traffic data for analysis.	Section 3.16, Transportation
N/A	Tom Grudkowski	June 8, 2023	Question regarding proposed project plan not referencing prior project plans for the site and prior concerns.	Chapter 2, Project Description; Chapter 6, Alternatives
			Question on why the project site's prior plan is different from the proposed project; lists differences between the two projects.	Chapter 2, Project Description
			Statement that the submitted SB-330 application is incomplete because it is listed as Unincorporated Pleasanton rather than Unincorporated Alameda County.	N/A
			Request for prior Arroyo Lago project information to be available, along with past environmental, soil, and landfill reports.	N/A
			Request for analysis on the removal of the existing Zone 7 access road.	Various Sections
			Comment that the Livermore-Amador Valley Quarry Area Reclamation (LAVQAR) progress must be pursued before the proposed project is approved.	Section 3.11, Mineral Resources
			Request for evaluation for additional infrastructure for utilities and public services.	Section 3.14, Public Services; Section 3.16, Transportation; Section 3.17, Utilities and Service Systems

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Concern regarding traffic impacts for access to the project site.	Section 3.16, Transportation
			Question regarding Arroyo Lago being listed “For Sale” although the proposed project has not yet been approved.	N/A
			Question regarding prior issues and concerns for a previously proposed project and soil reclamation for the project site.	Section 3.6, Geology and Soils
			Concern regarding the elevation, proximity, and setback of the proposed residences, especially with regard to privacy and sunlight for homes in the Village at Ironwood.	Section 3.1, Aesthetics, Light, and Glare; Section 3.10, Land Use and Planning
			Request for the vesting tentative map.	Chapter 2, Project Description
			Concern regarding air, water, and soil pollutants, such as PFAS.	Section 3.2, Air Quality; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials; Section 3.9, Hydrology and Water Quality
			Concern regarding previously filled wetlands on the project site.	Section 3.3, Biological Resources
			Suggestion that the standard application and subdivision application are incomplete.	N/A
N/A	Douglas and Janice Miller	June 8, 2023	Concern regarding lack of cohesive planning in Alameda County and the City of Pleasanton, which could impact public services.	Section 3.14, Public Services
			Suggestion for City of Pleasanton to adhere to the 2020 Master Plan.	N/A
N/A	Sri Garikipati	June 8, 2023	Concern regarding traffic on Busch Road and El Charro Road.	Section 3.16, Transportation
			Question regarding future developments in open land on Busch Road.	N/A

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Questions regarding PG&E buildings and recycle station on Busch Road.	N/A
			Questions regarding the Quarry and potential air quality impacts.	Section 3.2, Air Quality
			Concern regarding water bodies and the protection of habitations within them.	Section 3.3, Biological Resources; Section 3.9, Hydrology and Water Quality
N/A	Diana Atwell	June 9, 2023	Request to address traffic related to ADUs.	Section 3.16, Transportation
N/A	John and Gaye Harrell	June 11, 2023	Concerns regarding water quality and PFAS impacts from new and existing wells.	Section 3.9, Hydrology and Water Quality
N/A	Dennis Addiego	June 12, 2023	Concern regarding setbacks, elevation, and stormwater runoff/flooding. Suggestion to create a 6-to-8-foot setback as a flood control area.	Section 3.1, Aesthetics, Light, and Glare; Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Concern regarding the proposed size of lots and homes impacting sunlight and solar panels in nearby communities.	Section 3.1, Aesthetics, Light, and Glare
			Concern regarding density and conformance with the Pleasanton Master Plan.	Section 3.10, Land Use and Planning; Section 3.13, Population and Housing
			Concern regarding traffic in the area.	Section 3.16, Transportation
N/A	John and Gaye Harrell	June 12, 2023	Concern regarding traffic in the area and potential road improvements.	Section 3.16, Transportation
			Concern regarding emergency services and access.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services; Section 3.16, Transportation
N/A	Pamela Hardy Alpert	June 12, 2023	Concern regarding potential toxic elements, such as PFAS, in groundwater and soil.	Section 3.2, Air Quality; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials; Section 3.9, Hydrology and Water Quality
			Request to confirm the proposed location for the sewer treatment plant.	Chapter 2, Project Description

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Question regarding location of street access to the project site.	Chapter 2, Project Description
N/A	Tom Grudkowski, Carol Olson, and Arne Olson	June 12, 2023	Background information regarding proposed project.	N/A
			Request to test and analyze reclamation of Radum Quarry on project site.	Section 3.8, Hazards and Hazardous Materials
			Request to analyze existing and potential pollutants and contaminants on the project site within the soil, such as PFAS.	Section 3.6, Geology and Soils; Section 3.9, Hydrology and Water Quality
			Background information for an area referred to as "POND," located near Well 8, which may contain harmful materials.	N/A
			Request to study Fugitive Dust.	Section 3.2, Air Quality
			Request to study contaminants which may impact the adjacent Lakes used by Zone 7.	Section 3.9, Hydrology and Water Quality
			Request to analyze additional infrastructure needed for utilities and public services for potential contamination.	Section 3.14, Public Services; Section 3.17, Utilities and Service Systems
			Question regarding a sign on El Charro Road about harmful chemicals.	Section 3.8, Hazards and Hazardous Materials
N/A	Tom Grudkowski, Carol Olson, and Arne Olson	June 12, 2023	Background information regarding proposed project. Question about prior plan and concerns.	N/A
			Request to analyze impact on quality-of-life and living conditions for adjacent community regarding setbacks, elevation, and privacy.	Section 3.10, Land Use and Planning
			Concerns regarding solar panels in adjacent community, solar easements, and shading.	Section 3.1, Aesthetics, Light, and Glare
N/A	Dennis and Linda Romatz	June 13, 2023	Statement that no building permits can be issued until the solar easements are established and documented.	Chapter 2, Project Description

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
N/A	Doug and Sandy Schiel	June 13, 2023	Request to know when the Draft EIR is expected to be complete.	N/A
N/A	Muhammad Adeel Alam	June 14, 2023	Concerns regarding traffic in the area.	Section 3.16, Transportation
			Concern regarding schools being impacted.	Section 3.14, Public Services
			Concern with increase in crime, such as mail theft and stealing of car parts.	Section 3.14, Public Services
			Concern regarding impacts on home values.	N/A
			Request to be added to the Distribution List.	N/A
N/A	Shanu Jain	June 16, 2023	Concern regarding traffic on Busch Road and El Charro Road.	Section 3.16, Transportation
			Question regarding future developments in open land on Busch Road.	N/A
			Questions regarding PG&E buildings and recycle station on Busch Road.	N/A
			Questions regarding the Quarry and potential air quality impacts.	Section 3.2, Air Quality
			Concern regarding water bodies and the protection of habitations within them.	Section 3.3, Biological Resources; Section 3.9, Hydrology and Water Quality
N/A	Mingying Fan	June 16, 2023	Concern regarding traffic.	Section 3.16, Transportation
			Concern regarding safety concerns in the area. Statement that package loss and stolen mail is occurring more frequently.	Section 3.14, Public Services
			Concern regarding the Sewer Treatment Plant impacting air quality and odor.	Section 3.2, Air Quality
			Concern regarding the image of Pleasanton and community.	Section 3.1, Aesthetics, Light, and Glare

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
N/A	Alana Musante and Gregg Hall	June 21, 2023	Concern regarding the quality of Zone 7 water, including PFAS contamination and causes, impacted by additional housing and wastewater treatment.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
N/A	Carmen Paulino, Doris Morgado, Barbara Bacho, Sharon Long, Charlotte Ashe, Sheila Stevens, Kris Blakely, Carol McCormick, Tricia Morehouse, BK Masterson, Claudia Jane Hughes, and Diana Zoellner	June 21, 2023	Background information about the commenters. Statement that they were not informed about the proposed project.	N/A
			Statement that the proposed project could violate elder abuse laws.	N/A
			Concern regarding disruption and environmental pollution near the commenter’s neighborhood during construction.	Section 3.2, Air Quality; Section 3.9, Hydrology and Water Quality; Section 3.12, Noise
			Concern regarding pedestrian traffic and sidewalk availability.	Section 3.16, Transportation
			Concern regarding health due to air quality, noise pollution, emergency access, and traffic.	Section 3.2, Air Quality; Section 3.8, Hazards and Hazardous Materials; Section 3.12 Noise; Section 3.14, Public Services; Section 3.16, Transportation
			Concern regarding GHG emissions, climate change, and air quality.	Section 3.2, Air Quality; Section 3.7, Greenhouse Gas Emissions
N/A	Vince Wong, Sofie Su, Jack Wang, Geetha Harva, Raj Harva, Paul Hammons, Cynthia Altman, Jean-Christophe Rahman-Firer, and Asra Rahman-Firer	June 21, 2023	Question regarding residents notified within 1,000 feet of the proposed project.	N/A
			Question regarding potential impacts to environmental justice communities and marginalized populations.	N/A
			Question regarding the valuation of real estate properties in the vicinity.	N/A
			Question regarding businesses notified within 1,000 feet of the proposed project.	N/A
			Question regarding previous land uses.	Various Sections

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Question regarding hazardous materials and regulatory agency inspection.	Section 3.8, Hazards and Hazardous Materials
			Question regarding current hazardous waste testing.	Section 3.8, Hazards and Hazardous Materials
			Question regarding potential contamination in the land and groundwater from past uses.	Section 3.8, Hazards and Hazardous Materials; Section 3.9, Hydrology and Water Quality
N/A	Yiqun Huang, Yi-Ju Chen, Todd Miller, Gang Lin, Yue Feng, Luch and Hector Jhoung, Holly and Steve Johnson, and Reika and Hyo Nakari	June 21, 2023	Concern regarding air quality impacts and GHG emissions.	Section 3.2, Air Quality; Section 3.7, Greenhouse Gas Emissions
			Question regarding appliances and lighting that will be used in the proposed project.	Various Sections
			Concern regarding “significant damage” the proposed project could cause.	Various Sections
N/A	Arne and Carol Olson	June 21, 2023	Statement that the NOP did not list the United States Environmental Protection Agency (EPA) as a required ministerial approval.	Chapter 2, Project Description
			Statement that a hazardous chemicals warning is posted at the project site.	Section 3.8, Hazards and Hazardous Materials
			Background information of mining pits and fill on the project site, as well as potential toxic contaminants.	Section 3.8, Hazards and Hazardous Materials; Section 3.11, Mineral Resources
			Statement that the EPA should be notified of the proposed project and study the deposits on the site.	Chapter 2, Project Description; Section 3.11, Mineral Resources
			Request that the EPA should advise on building on homes on potentially contaminated soil.	Chapter 2, Project Description; Section 3.11, Mineral Resources
			Request to reference history of hazardous materials on the project site.	Section 3.8, Hazards and Hazardous Materials

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
N/A	John and Gaye Harrell, Barbara Bacho, Charlotte Ashe, Sheila Stevents, Carol McCormick, Tricia Morehouse, BK Masterson, Carmen Paulino, Judy Butter Butterly, Lori Frost, Doris Morgado, Sharon Long, Kris Blakely, Dianna Zoellner, and Claudia Jane Hughes	June 22, 2023	Concern regarding increased traffic.	Section 3.16, Transportation
			Concern regarding a lack of public transportation.	Section 3.16, Transportation
			Concern regarding access for police and emergency services.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services
			Concern regarding health and safety related to air and water quality.	Section 3.2, Air Quality; Section 3.8, Hazards and Hazardous Materials; Section 3.9, Hydrology and Water Quality
N/A	Tom Grudkowski, Carol Olson, and Arne Olson	June 22, 2023	Statement that the applicant is listing the proposed project's homes for sale before County approval.	N/A
			Statement that the SB-330 application is not accurate because: (1) the Zone 7 access road was not identified, (2) a previous wildlife pond was potentially filled without approval, and (3) a portion used by the Quarry for waste storage was not identified.	Chapter 2, Project Description; Section 3.3, Biological Resources; Section 3.8, Hazards and Hazardous Materials; Section 3.16, Transportation
			Background information stating the proposed project site contained wetlands, which were filled in 2019. The commenter shares that the site is in a current state of "seasonal wetlands."	Section 3.3, Biological Resources
			Statement that wild geese and birds were previously occupying the project site.	Section 3.3, Biological Resources
			Concern regarding rain runoff and flooding in adjacent communities, as well as potential contamination.	Section 3.9, Hydrology and Water Quality

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Concern regarding contaminated dust during construction activities.	Section 3.2, Air Quality
			Statement that there is hazardous site notice posted on the northeast corner of the project site.	Section 3.8, Hazards and Hazardous Materials
N/A	Tim and Rita Hsu, Tony Yang, Lisa Horrillo, Pat Mitchell, David and Nicole Lyman, Sophia and Chris Chase, Hongbin Mao, and Yan Lin	June 23, 2023	Concern regarding water pollution/quality and drought.	Section 3.9, Hydrology and Water Quality
			Concern regarding impacts to landfills and air quality and GHG emissions from toxic gases and fumes.	Section 3.2, Air Quality; Section 3.7, Greenhouse Gas Emissions; Section 3.17, Utilities and Service Systems
			Request to evaluate water and wastewater impacts during construction, including disposal and potential contamination.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request to evaluate square feet of land and soil that could be contaminated.	Section 3.6, Geology and Soils
			Request to evaluate the cost for current residents to support construction due to water constraints.	N/A
			Request to evaluate the availability and quality of water resources.	Section 3.9, Hydrology and Water Quality; Section 3.17, Utilities and Service Systems
			Request for estimations of amount of trash predicted and how it will be disposed of/burned.	Section 3.17, Utilities and Service Systems
			Request to evaluate air pollution and potential violation of air quality standards from burned trash or chemical stagnate trash.	N/A
			Request to evaluate sorting trash according to 2020 SB-1383.	Section 3.17, Utilities and Service Systems
N/A	Pamela Chan, Brian Ng, Nancy Tsai, Jim and Sandi Farrell,	June 23, 2023	Concerns regarding construction contributions to climate change.	Section 3.7, Greenhouse Gas Emissions
			Concerns regarding noise and vibration impacts.	Section 3.12, Noise

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
	Xiang Ding Zhang, Laura Wang, Arvind Maheshwari, and Neetu and Snehal Trivedi		Concern regarding construction contamination, including air quality, water, wastewater, flooding, pollution, noise, and traffic.	Various Sections
			Question regarding hazardous waste prevention.	Section 3.8, Hazards and Hazardous Materials
			Question regarding incorporation of traditional ecological knowledge and tribal perspectives.	Section 3.4, Cultural Resources and Tribal Cultural Resources
			Concern regarding natural disasters.	Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials; Section 3.9, Hydrology and Water Quality; Section 3.18, Wildfire
			Question about conflict with existing conservation efforts.	Section 3.5, Energy; Section 3.7, Greenhouse Gas Emissions
			Question about how the project will impact California’s transition to a circular economy. Also, a question about impacts to sustainability goals.	Various Sections
			Concern regarding overall net impacts of the project.	Various Sections
			Concern regarding GHG emissions.	Section 3.7, Greenhouse Gas Emissions
			Concern regarding land contamination.	Section 3.8, Hazards and Hazardous Materials
			Question about indirect/secondary impacts from the proposed project.	Various Sections
			Concern regarding biodiversity and ecological resilience.	Section 3.3, Biological Resources
			Question regarding environmental justice and equitable distribution of benefits and burdens.	N/A
			Concern regarding air quality impacts and GHG emissions, especially fugitive dust, carbon compounds, and burning trash.	Section 3.2, Air Quality; Section 3.7, Greenhouse Gas Emissions

Agency/ Organization	Author	Date	Topics Discussed in Comment Letter	Location Comment is Addressed/Discussed in Draft EIR
			Concern regarding traffic, school pick-ups, and harmful emissions from increased idling time.	Section 3.2, Air Quality; Section 3.7, Greenhouse Gas Emissions; Section 3.16, Transportation
			Question about rules and estimations for vehicles from proposed project.	Section 3.16, Transportation
			Concern about emergency access timing.	Section 3.8, Hazards and Hazardous Materials; Section 3.14, Public Services
			Concern regarding odor impacts.	Section 3.2, Air Quality
N/A	Tom Grudkowski, Carol Olson, and Arne Olson	June 23, 2023	Concern regarding toxic contaminants present on the project site and fugitive dust caused by mining and construction, especially polluting the Lake I water.	Section 3.2, Air Quality; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials; Section 3.9, Hydrology and Water Quality
			Request for studies of any filed documents and reports of contaminants.	Section 3.2, Air Quality; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials; Section 3.9, Hydrology and Water Quality
Source: Compiled by FirstCarbon Solutions (FCS). 2023				

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The Public Scoping Meeting held on June 8, 2023, at the Pleasanton Public Meeting, Large Meeting Room, identified the following potential areas of concern based on verbal and written comments from the attendees:

- Busch Road and Valley Avenue traffic
- Request for integrated County General Plan
- Water supply and wells
- Aesthetics
- Light and shadow
- Proximity to existing land uses
- Stormwater drainage
- Safety on Busch Road
- Buildout of El Charro Road
- Biological Resources
- Cohesive planning between City and County
- Noise
- Health impacts to seniors
- Contaminated fill soil
- PFAS contamination
- Climate change
- Air pollution
- GHG emissions
- Solar easements
- Grading
- Water pollution
- Emergency access
- Agricultural irrigation spray fields
- Wetlands

1.2.1 - Environmental Issues Determined not to be Significant

The NOP identified topical areas that were determined not to be significant. An explanation of why each area is determined not to be significant is provided in Section 4, Effects Found not to be Significant. These topical areas are as follows:

- Agricultural Resources and Forestry Resources

1.2.2 - Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that will require further analysis in the EIR. These sections are as follows:

- Aesthetics, Light, and Glare
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

1.3 - Organization of the EIR

This Draft EIR is organized into the following main sections:

- **Chapter ES: Executive Summary.** This chapter includes a summary of the proposed project and alternatives to be addressed in the Draft EIR. A brief description of the areas of controversy and issues to be resolved, and overview of the Mitigation Monitoring and

Reporting Program (MMRP), in addition to a table that summarizes the impacts, mitigation measures, and level of significance after mitigation, are also included in this section.

- **Chapter 1: Introduction.** This chapter provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.
- **Chapter 2: Project Description.** This chapter includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the proposed project are also provided.
- **Chapter 3: Environmental Impact Analysis.** This chapter analyzes the environmental impacts of the proposed project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Chapter 3 are as follows:
 - **Section 3.1—Aesthetics, Light, and Glare:** Addresses the potential visual impacts of development intensification and the overall increase in illumination produced by the proposed project.
 - **Section 3.2—Air Quality:** Addresses potential air quality impacts associated with project implementation and emissions of criteria pollutants. In addition, the section also evaluates project emissions of toxic air contaminants.
 - **Section 3.3—Biological Resources:** Addresses potential impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat; and impacts on listed, proposed, and candidate threatened and endangered species.
 - **Section 3.4—Cultural Resources and Tribal Cultural Resources:** Addresses potential impacts on historical resources, archaeological resources, paleontological resources, and burial sites. This section also addresses potential project impacts related to tribal cultural resources.
 - **Section 3.5—Energy:** Addresses potential project impacts related to energy usage.
 - **Section 3.6—Geology and Soils:** Addresses the potential impacts the project may have on soils and assesses the effects of project development in relation to geologic and seismic conditions.
 - **Section 3.7—Greenhouse Gas Emissions:** Addresses potential project emissions of greenhouse gases.
 - **Section 3.8—Hazards and Hazardous Materials:** Addresses potential for presence of hazardous materials or conditions on the project site and in the project area that may have the potential to impact human health.
 - **Section 3.9—Hydrology and Water Quality:** Addresses the potential impacts of the project and off-site components on local hydrological conditions, including drainage areas, and changes in the flow rates.
 - **Section 3.10—Land Use and Planning:** Addresses the potential land use impacts associated with division of an established community and consistency with the Alameda County General Plan and ECAP.
 - **Section 3.11—Mineral Resources:** Addresses the potential impacts of the project associated with mineral resources considered valuable locally, to the region, and to the residents of the State.

- **Section 3.12—Noise:** Addresses potential noise impacts during construction and at project buildout from mobile and stationary sources. The section also addresses the impact of noise generation on neighboring uses.
- **Section 3.13—Population and Housing:** Addresses the potential of the proposed project to induce direct or indirect population growth.
- **Section 3.14—Public Services:** Addresses potential impacts upon public services, including fire protection, law enforcement, schools, parks, and recreational facilities.
- **Section 3.15—Recreation:** Addresses potential impacts related to parks and park usage.
- **Section 3.16—Transportation:** Addresses potential impacts related to the local and regional roadway system and public transportation, bicycle, and pedestrian access.
- **Section 3.17—Utilities and Services Systems:** Addresses potential impacts related to service providers, including fire protection, law enforcement, water supply, wastewater, solid waste, and energy providers.
- **Section 3-18—Wildfire:** Addresses potential impacts related to wildfire including lands within State Responsibility Areas and lands classified as very high fire hazard severity zones.
- **Chapter 4: Effects Found not to be Significant.** This chapter contains analysis of the topical sections not addressed in Chapter 3.
- **Chapter 5: Other CEQA Considerations.** This chapter provides a summary of significant environmental impacts, including unavoidable and growth-inducing impacts. This section discusses the cumulative impacts associated with the proposed project, including the impacts of past, present, and probable future projects. In addition, the proposed project’s energy demand is discussed.
- **Chapter 6: Alternatives to the Proposed Project.** This chapter compares the impacts of the proposed project with three land-use project alternatives: the No Project, No Build Alternative, the Annexation into the City of Pleasanton Alternative, and the Mixed Use Alternative. An environmentally superior alternative is identified. In addition, alternatives initially considered but rejected from further consideration are discussed.
- **Chapter 7: Persons and Organizations Consulted/List of Preparers.** This chapter also contains a full list of persons and organizations that were consulted during the preparation of this Draft EIR. This Chapter also contains a full list of the authors who assisted in the preparation of the Draft EIR, by name and affiliation.
- **Appendices.** The Draft EIR appendices includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

1.4 - Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the Draft EIR has also been described. The documents and other sources that have been used in the preparation of this Draft EIR include but are not limited to:

- Alameda County General Plan
- East County Area Plan (ECAP)
- County of Alameda 2023-2031 Housing Element Update¹
- City of Pleasanton General Plan
- East County Area Plan Environmental Impact Report (EIR)
- Alameda County 2023-2031 Housing Element Update Initial Study/Mitigated Negative Declaration (IS/MND)
- Livermore-Amador Valley Quarry Area Reclamation Specific Plan

In accordance with CEQA Guidelines Section 15150(b), the General Plan, the ECAP, and the referenced documents and other sources used in the preparation of the Draft EIR are available for review at the Alameda County Planning Department at the address shown in Section 1.6 below.

1.5 - Documents Prepared for the Proposed Project

The following technical studies and analyses were prepared for the proposed project:

- Jurisdictional Memorandum—Pleasanton Lakes prepared by WRA Environmental Consultants (Appendix C)
- Preliminary Geotechnical Report prepared by ENGEO Incorporated (Appendix E)
- Phase I Environmental Site Assessment prepared for Assessor’s Parcel Number (APN) 946-4634-1 (residential project site) by Haley & Aldrich, Inc. (Appendix F)
- Phase I Environmental Site Assessment prepared for APNs 946-4634-2 and 946-1350-10 (off-site areas) by Haley & Aldrich, Inc. (Appendix F)
- Transportation Impact Study prepared by W-Trans (Appendix I)
- Traffic Operations Study prepared by W-Trans (Appendix I)
- Wastewater Balance Technical Memorandum prepared by EKI Environment & Water, Inc. (Appendix K)
- Wastewater and Water Service Memorandum prepared by Bert L. Michalczyk Consulting Engineers, Inc. (Appendix K)

1.6 - Review of the Draft EIR

Upon completion of the Draft EIR, the County filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (PRC § 21161). Concurrent with

¹ While the County of Alameda’s 2023-2031 Housing Element Update has not yet been certified by the California Department of Housing and Community Development (HCD), the draft is not expected to have any substantial modifications or amendments. HCD is expected to certify and the County Board of Supervisors is expected to adopt the 2023—2031 Housing Element Update, without amendment, in the summer of 2024.

the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at the Alameda County Planning Department. The address is provided below:

Alameda County Community
Development Agency Planning Department
224 West Winton Avenue, Room 111
Hayward, CA 94544

The Draft EIR is also available for review at the following website:
<https://www.acgov.org/cda/planning/landuseprojects/currentprojects.htm>

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Aubrey Rose, AICP, Planner III
Alameda County Community
Development Agency Planning
Department
224 West Winton Avenue, Room 111
Hayward, CA 94544
Phone: 510.670.5322
Email: aubrey.rose@acgov.org

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the Planning Commission meeting on the proposed project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the proposed project.

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CHAPTER 2: PROJECT DESCRIPTION

This Draft Environmental Impact Report (Draft EIR) analyzes the potential environmental effects of the proposed Arroyo Lago Residential Project (proposed project) in the County of Alameda (County). This Chapter provides a detailed overview of the project site location and setting, project objectives, project details, characteristics, and construction phasing. It also describes the intended uses of the Draft EIR by agencies with approval and permitting authority over the proposed project, as well as required approvals and permits.

The 330 Land Company (project applicant) proposes to construct 194 market-rate single-family homes with approximately 25 percent (49 homes) designed as Accessory Dwelling Units (ADU), a 0.7-acre centrally located park, and approximately 0.5 mile of designated public walking trails on an approximately 26.6-acre site. The proposed project would also include internal roadways and two driveways to facilitate access and circulation within the project site.

Additionally, the proposed project would include off-site infrastructure to support the proposed development, including an approximately 1-acre sewer treatment plant, an approximately 0.4-acre water storage and booster pump facility, an approximately 2.5-acre recycled water storage facility with an approximately 10- to 15-foot depth, approximately 8.5 acres of agricultural irrigation recycled water spray fields, and two bioretention areas with treatment areas sized at approximately 0.9-acre and 0.03-acre respectively.

On June 14, 2021, prior to filing a formal development application, the project applicant filed a Preliminary Application pursuant to Senate Bill (SB) 330. Subject to certain limited exceptions, SB 330 provides that a housing development project shall be subject only to the ordinances, policies, and standards adopted and in effect when a Preliminary Application was submitted. (Government Code § 65589.5(o)).

2.1 - Project Location and Setting

2.1.1 - Location

Regional Location

The County is located in the eastern San Francisco Bay Area of California. The County is bordered to the north by Contra Costa County, to the east by San Joaquin County, to the south by Santa Clara County, and to the west by San Francisco Bay (Exhibit 2-1). The County covers 739 square miles and has historically consisted of suburban communities serving major employment centers to the north, west, and south.

Major roadway networks including State Route (SR) 84, Interstate 580 (I-580), and I-680 provide regional access to the project area. The portion of SR-84 closest to the project site is a north-south highway that begins at SR-12 in the City of Livermore, passes the City of Pleasanton to the east, and terminates in the Town of San Gregorio.

I-580 is an east–west highway that is the main point of access connecting cities in the western portion of the County to cities in the eastern portion of the County. I-680 is a north–south highway that travels through the western portion of the City of Pleasanton.

Local Setting

The project site is located directly east of the City of Pleasanton city limits between Lake I of the Zone 7 Chain of Lakes north of the project site and Cope Lake to east of the project site (Exhibit 2-2a). The project site does not currently have a street address but can be accessed north of the eastern end of Busch Road. The site is within the unincorporated County but is also within the City of Pleasanton’s Sphere of Influence (SOI). Presently, the project site is vacant and graded with no structures or existing development. An informal access road travels from the southeast corner of the project site, across the site, and to the northwest corner along the western boundary of the site.

The project site consists of three Assessor’s Parcel Numbers (APNs)—APN 946-4634-1 (the subdivision property itself) and two parcels that will support off-site facilities/infrastructure: APN 946-4634-2 and APN 946-1350-3-10 (Exhibit 2-2b). Specifically, the project site is located within the *Livermore, California* United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map (Latitude 37° 40' 38.28" North; Longitude 121° 51' 22.68" West).

2.1.2 - Surrounding Land Uses

West

The northern portion of the project site is adjacent to an age-qualified single-family residential neighborhood to the west, while the southern portion of the project site is adjacent to the Pleasanton Operations Center, the Livermore-Pleasanton Fire Department Training Tower, and Pleasanton City Water Services facilities. Further to the west of the Pleasanton Operations Center is a private elementary school and a single-family residential neighborhood.

North

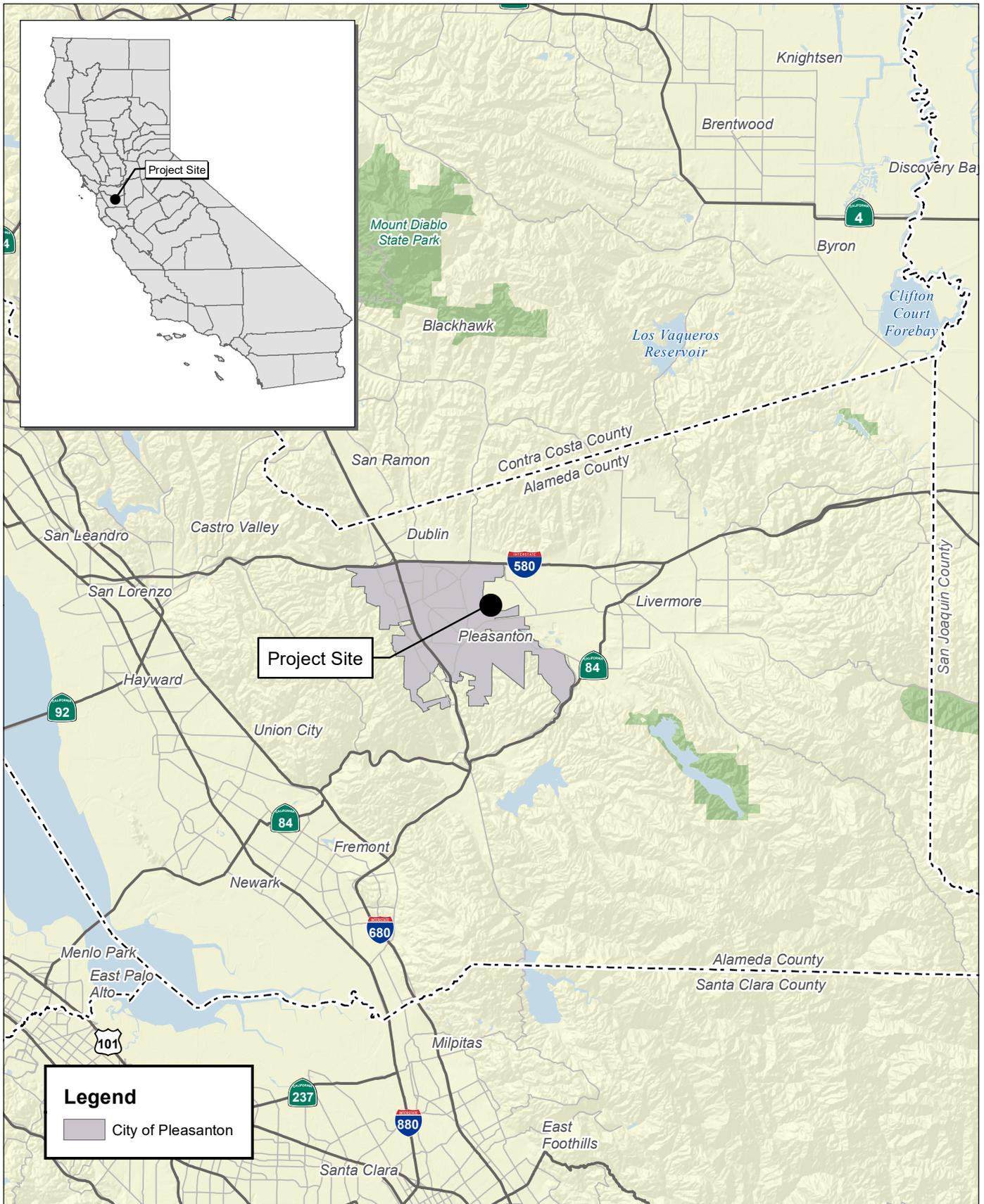
Lake I of the Zone 7 Chain of Lakes is located to the north. Areas beyond Lake I consist primarily of residential uses. Mohr Elementary school is approximately 0.72 mile to the north while I-580 is approximately 1.38 miles to the north.

East

The project site is adjacent to vacant land designated Large Parcel Agriculture (LPA) by the County. It is also within the Urban Growth Boundary and the City of Pleasanton’s SOI. Further east of the project site are mineral extraction operations, located at a distance of approximately 5,000 feet. North of the mineral extraction operations and approximately 0.6 mile east of the project site is Cope Lake, which is part of the complex of water bodies that includes the Zone 7 Chain of Lakes.

South

The project site is bounded by Busch Road to the south and is adjacent to industrial uses, including truck storage and yard facilities and the Pleasanton Garbage Service. The Union Pacific Railroad (UPRR), which supports the Altamont Corridor Express (ACE) passenger trains, and Stanley Boulevard are located further south, approximately 0.36 mile from the project site.



Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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Source: Bing Aerial Imagery. City of Pleasanton. County of Alameda.

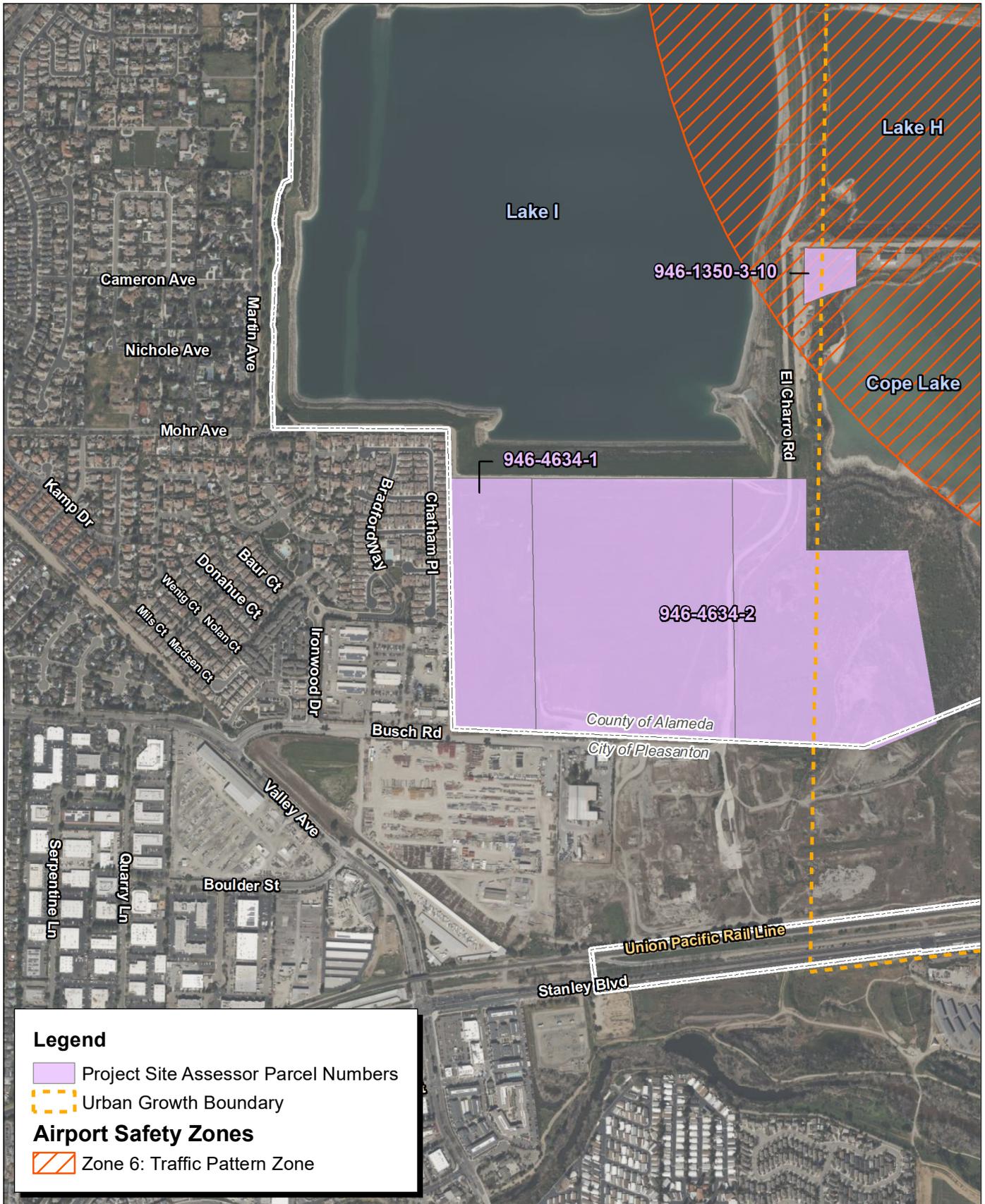


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Exhibit 2-2a Local Vicinity Map

COUNTY OF ALAMEDA
ARROYO LAGO RESIDENTIAL PROJECT
ENVIRONMENTAL IMPACT REPORT

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Legend

- Project Site Assessor Parcel Numbers
- Urban Growth Boundary

Airport Safety Zones

- Zone 6: Traffic Pattern Zone

Source: Bing Aerial Imagery. City of Pleasanton. County of Alameda.



Exhibit 2-2b
Project Site
Assessor Parcel Numbers

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2.1.3 - Existing Land Use Designations and Zoning

Land Use Designation

According to the County’s East County Area Plan (ECAP), the project site’s primary parcel land use designation is Medium Density Residential (MDR).¹ Other parcels in the project site are under the LPA Large Parcel Agricultural designation. The MDR designation allows for densities between 4.1 and 8.0 units per acre. Land uses allowed within this designation include single-family detached and attached homes, multiple family residential units, group quarters, public and quasi-public uses, limited agricultural uses, community and neighborhood commercial uses, neighborhood support uses, and similar compatible uses.² Land use designations for the site and surrounding parcels are shown in Exhibit 2-3 and Exhibit 2-4.

Zoning

The project site is zoned Agriculture (A).³ Although the proposed project would not be consistent with the primary or conditional uses permitted for the A zoning designation, rezoning is not required because the proposed project is consistent with the site’s ECAP land use designation and the current zoning is inconsistent with the ECAP.⁴ This is consistent with Government Code Sections 65589.5(j)(4) and 65905.5(c)(2), which state that where the zoning for a site is inconsistent with the general plan designation, a proposed housing development project shall not require a rezoning if the housing development project is consistent with the objective general plan standards. A project can only be reviewed against “objective, quantifiable, written development standards, conditions and policies” and can only be denied if certain findings described in Government Code Section 65589.5(j) are met.

2.2 - Project Characteristics

2.2.1 - Proposed Residential Development

The proposed project includes construction of 194 single-family homes, with approximately 25 percent (49 homes) being designed with deed-restricted ADUs, as shown on Exhibit 2-5a and Exhibit 2-5b. The dwelling units would be approximately 26 to 30 feet in height. The approximately 26.6-acre site would be developed with an approximate density of 7.3 dwelling units per gross acre. The proposed project is expected to include up to approximately 691 residents.^{5,6}

¹ County of Alameda. 2023. Unincorporated Alameda County Public Access Map (PAM). Website: <https://acpwa.maps.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773>. Accessed February 26, 2024.

² County of Alameda. 1994. East County Area Plan. May 5.

³ County of Alameda. 2023. Unincorporated Alameda County Public Access Map (PAM). Website: <https://acpwa.maps.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773>. Accessed February 26, 2024.

⁴ County of Alameda. 2022. Alameda County Zoning Ordinance, Chapter 17.06. Website: https://library.municode.com/ca/alameda_county/codes/code_of_ordinances?nodeId=TIT17ZO_CH17.06ADI. Accessed February 26, 2024. It is well settled law that zoning codes must be consistent with general plans (Government Code Section 65860(a)). The general plan controls when in conflict with a zoning ordinance. (e.g., Government Code Section 65860(c); Sierra Club v. Board of Supervisors (1981) 126 Cal.App. 3d 698, 704; City of Morgan Hill v. Bushey (2018) 5 Cal.5th 1068, 1080.) In addition, the Housing Accountability Act provides that “[f]or purposes of this section, a proposed housing development project is not inconsistent with the applicable zoning standards and criteria, and shall not require a rezoning, if the housing development project is consistent with the objective general plan standards and criteria but the zoning for the project site is inconsistent with the general plan.”

⁵ County of Alameda. 2023. 2023-2031 Housing Element Update: Initial Study – Mitigated Negative Declaration. Website: https://www.acgov.org/cda/planning/housing-element/documents/Alameda-County-HEU_Public-Draft-IS-MND.pdf. Accessed December 4, 2023.

⁶ 194 single-family dwelling units plus 49 ADUs equals 243 total dwelling units. The County’s average number of persons per household is 2.84. 243 multiplied by 2.84 equals approximately 691 residents.

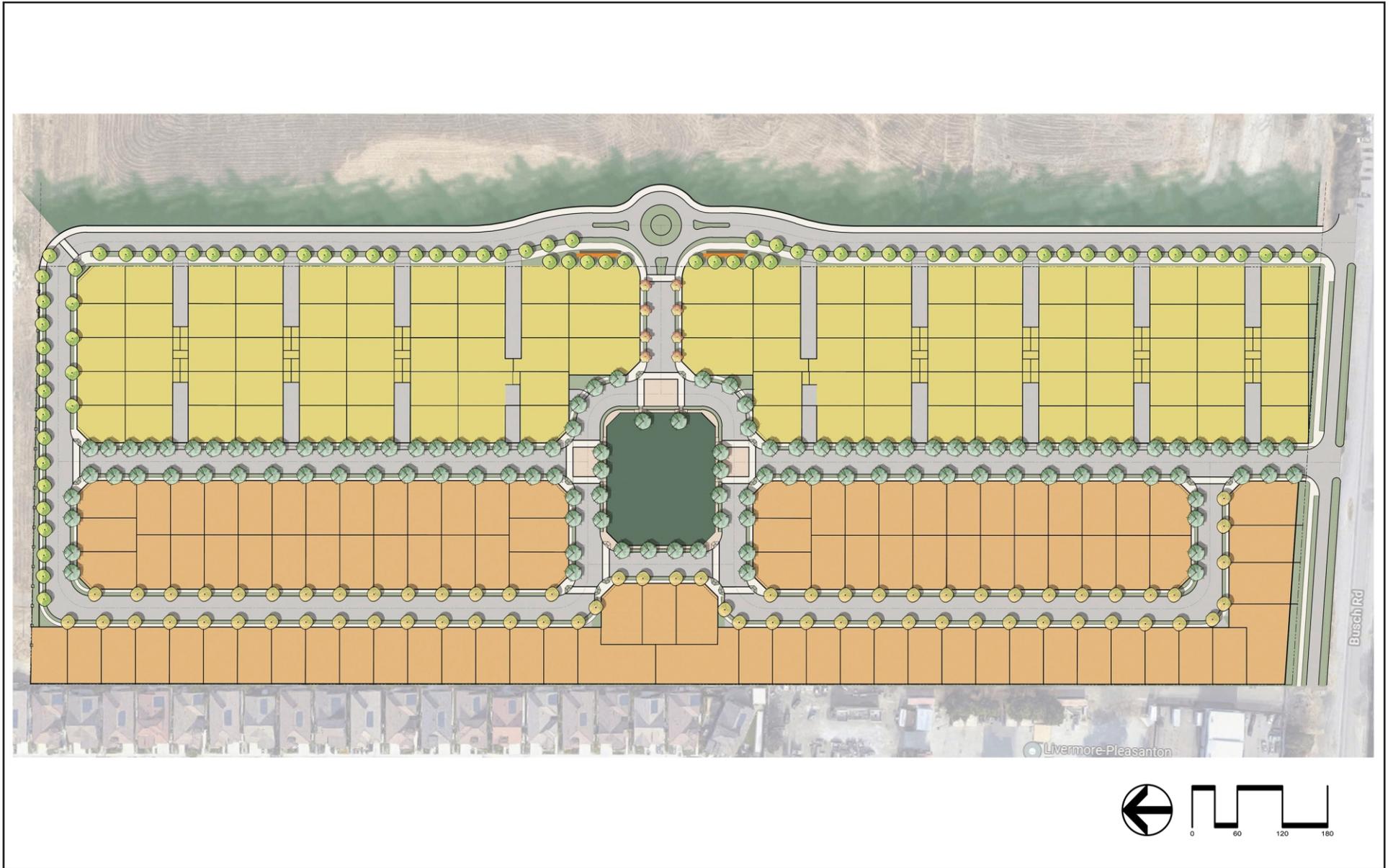
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Source: Bing Aerial Imagery.



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Source: CBG Civil Engineers. 08/2022.

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As part of the proposed project, the existing three parcels within the project site would be reconfigured into 194 residential lots, ranging between 3,500 square feet and 9,387 square feet, as well as 21 open space and park parcels, ranging from 1,117 square feet and 30,423 square feet in area. Furthermore, the proposed project would construct seven internal streets (Streets A-F and Loop A) to provide internal circulation within the site. All circulation, excluding private drive aisles, would be public roads maintained by the County. These plans are demonstrated in Exhibit 2-5a and Exhibit 2-5b.

The project applicant proposes to create two single-family lot design standards. Proposed lots located east of proposed roads Loop A, Street B, and Street E would be developed to “50x70 Lot Development Standards.” Proposed lots located west of proposed roads Loop A, Street B, and Street E would be developed to “50x80 Lot Development Standards.” These development standards are outlined in Table 2-1 below. Any development standards not called out in Table 2-1 would adhere to the County’s Single-Family Residence (R-1) zoning district development standards.

Table 2-1: Proposed 50x70 Lot and 50x80 Lot Design Standards

Development Standard	50x70 Lot Standard	50x80 Lot Standard
Minimum Lot Size	3,500 square feet	4,000 square feet
Minimum Front Setback to Structure	10 feet	10 feet
Minimum Front Setback to Garage	18 feet	18 feet
Minimum Rear Setback to Living	10 feet	8 feet
Minimum Rear Setback to Covered Outdoor Patio	5 feet	5 feet
Minimum Side Setback to Structure	5 feet	5 feet
Maximum Lot Coverage	60 percent	60 percent
Maximum Coverage (square feet)	2,100 square feet	2,400 square feet
Source: KTGy. 2022. Schematic Design. August 17.		

In conformance with the proposed development standards, the project applicant proposes to construct three housing unit types for the 50x70 Lot Development Standards and three housing unit types for the 50x80 Lot Development Standards. Plans for the housing unit types in the 50x70 lots range in size from 2,541 to 2,883 square feet with one attached garage, 4 to 5 bedrooms, and 3 to 3.5 bathrooms. Plans for the housing unit types in the 50x80 lots range in size from 2,991 to 3,398 square feet with one attached garage, 4 to 5 bedrooms, and 3 to 4.5 bathrooms.

- **Plan 1** would be built on a 50x80 lot and contain a 2,991-square-foot house. This housing type would include 4 bedrooms and a loft (optional bedroom), 3 bathrooms, and a 2-car garage. The plan would be constructed in the Farmhouse (1a), Craftsman (1b), and Contemporary Ranch (1c) architectural style variations.
- **Plan 2** would be built on a 50x80 lot and contain a 3,306-square-foot house. This housing type would include 4 bedrooms and a loft (optional bedroom), 4.5 bathrooms, and a 2-car garage.

The plan would be constructed in the Farmhouse (2a), Craftsman (2b), and Contemporary Farmhouse (2c) architectural style variations.

- **Plan 3** would be built on a 50x80 lot and contain a 3,398-square-foot house. This housing type would include 4 bedrooms and a loft (optional bedroom), 4.5 bathrooms, and a 2-car garage. The plan would be constructed in the Farmhouse (3a), Craftsman (3b), and Contemporary Farmhouse (3c) architectural style variations.
- **Plan 4** would be built on a 50x70 Lot and contain a 2,541-square-foot house. This housing type would include 4 bedrooms and a loft, 3 bathrooms, and a 2-car garage. The plan would be constructed in the Farmhouse (4a), Craftsman (4b), and Contemporary Farmhouse (4c) architectural style variations.
- **Plan 5** would be built on a 50x70 Lot and contain a 2,620-square-foot house. This housing type would include 4 bedrooms and a loft (optional bedroom), 3.5 bathrooms, and a 2-car garage. The plan would be constructed in the Farmhouse (5a), Craftsman (5b), and Contemporary Farmhouse (5c) architectural style variations.
- **Plan 6** would be built on a 50x70 Lot and contain a 2,883-square-foot house. This housing type would include 4 bedrooms and a loft (optional bedroom), 3.5 bathrooms, and a 2-car garage. The plan would be constructed in the Farmhouse (6a), Craftsman (6b), and Contemporary Farmhouse (6c) architectural style variations.

2.2.2 - Proposed Off-site Improvements

The proposed project would also include several off-site improvements at different locations throughout APNs 946-4634-2 and 946-1350-3-10, as described below. The location of the approximately 0.9-acre bioretention area is being considered under two design options. Design Option A would cluster the bioretention area directly east of the sewer treatment plant and south of the recycled water storage facility. Design Option B would locate the bioretention area southwest of the agricultural spray field, adjacent to the east side of El Charro Road. The proposed project's impact area for Design Option A is approximately 65.37 acres, and the impact area for Design Option B is approximately 64.97 acres. The sizing, capacities, and energy demands of each component would be the same in either design option. These design options are shown on Exhibit 2-6a and Exhibit 2-6b, respectively. This EIR fully evaluates each of these design options in the various environmental topical sections, and upon approval of the proposed project, one of these design options would be chosen in coordination with the County.

Water Storage and Booster Pump Facility

The proposed project would include the development of a water storage and booster pump facility, as shown on Exhibit 2-7, located northeast of the project site between Lake I and Cope Lake, along El Charro Road. The location of the water storage and booster pump facility would remain the same under both Design Option A and Design Option B, as shown on Exhibit 2-6a and Exhibit 2-6b. Access to the water storage and booster pump facility would be provided via an access path off El Charro Road. The approximately 0.4-acre water storage facility would incorporate one circular tank holding approximately 400,000 gallons with a 50-foot diameter and a 25–28 feet side water depth. The facility would consist of approximately 53,456 gallons of operational storage, 360,000 gallons of fire

storage, and 20,046 gallons of emergency storage. It would incorporate a Booster Pump Station, electrical and chemical building, site access, and perimeter fencing.

Additionally, during routine operations of the water storage and booster pump facility, it is not expected to require any full-time employees; however, less than one full-time equivalent employee would make routine trips to inspect and maintain the facilities. It is expected that the daily trip generation would be less than one vehicle trip to the site each day with occasional delivery trucks and maintenance equipment when required.

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Source: Bing Aerial Imagery. CBG Civil Engineers. 12/2023.

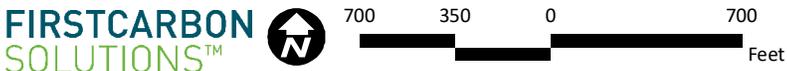
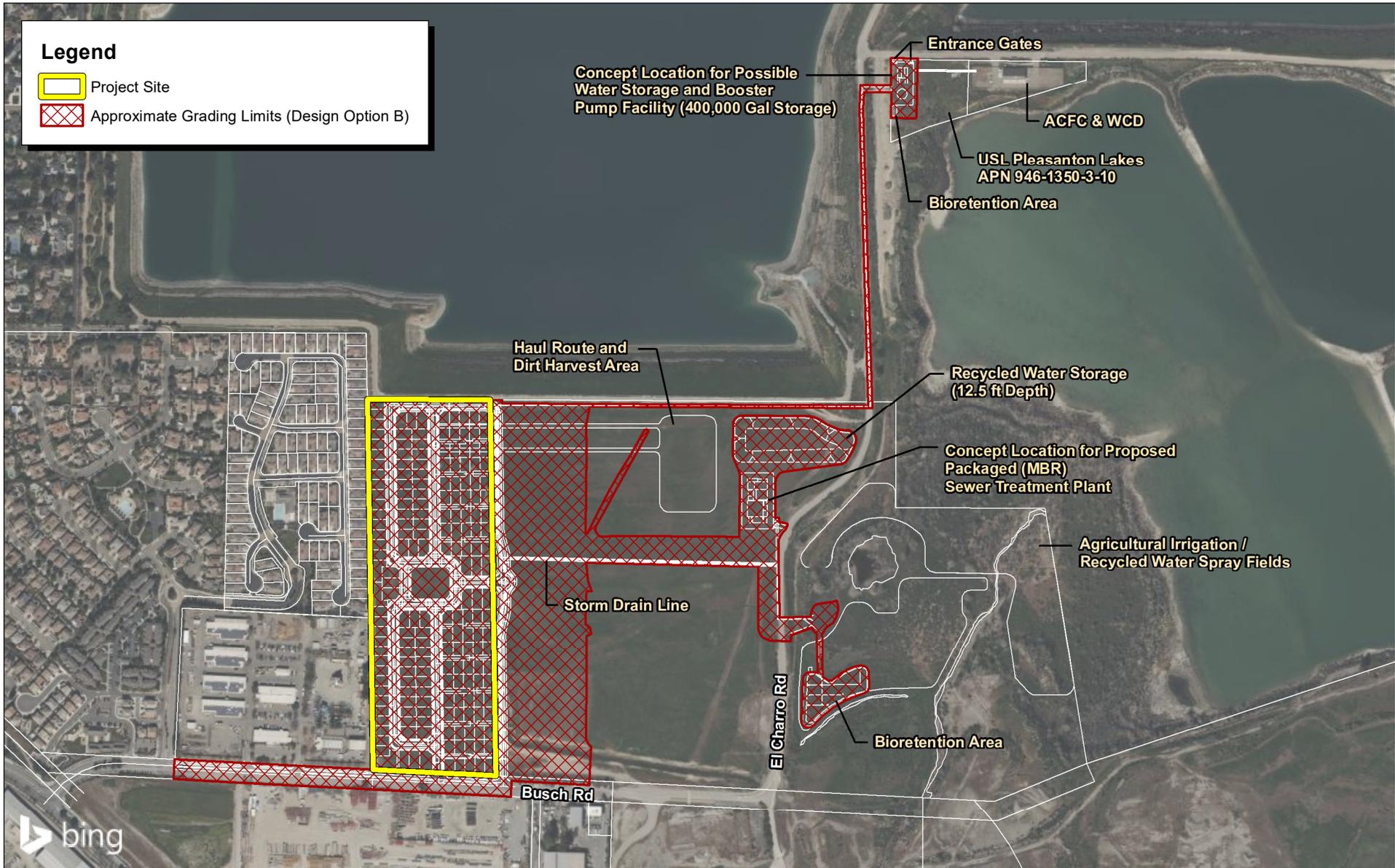


Exhibit 2-6a
Proposed Off-Site Improvements - Design Option A

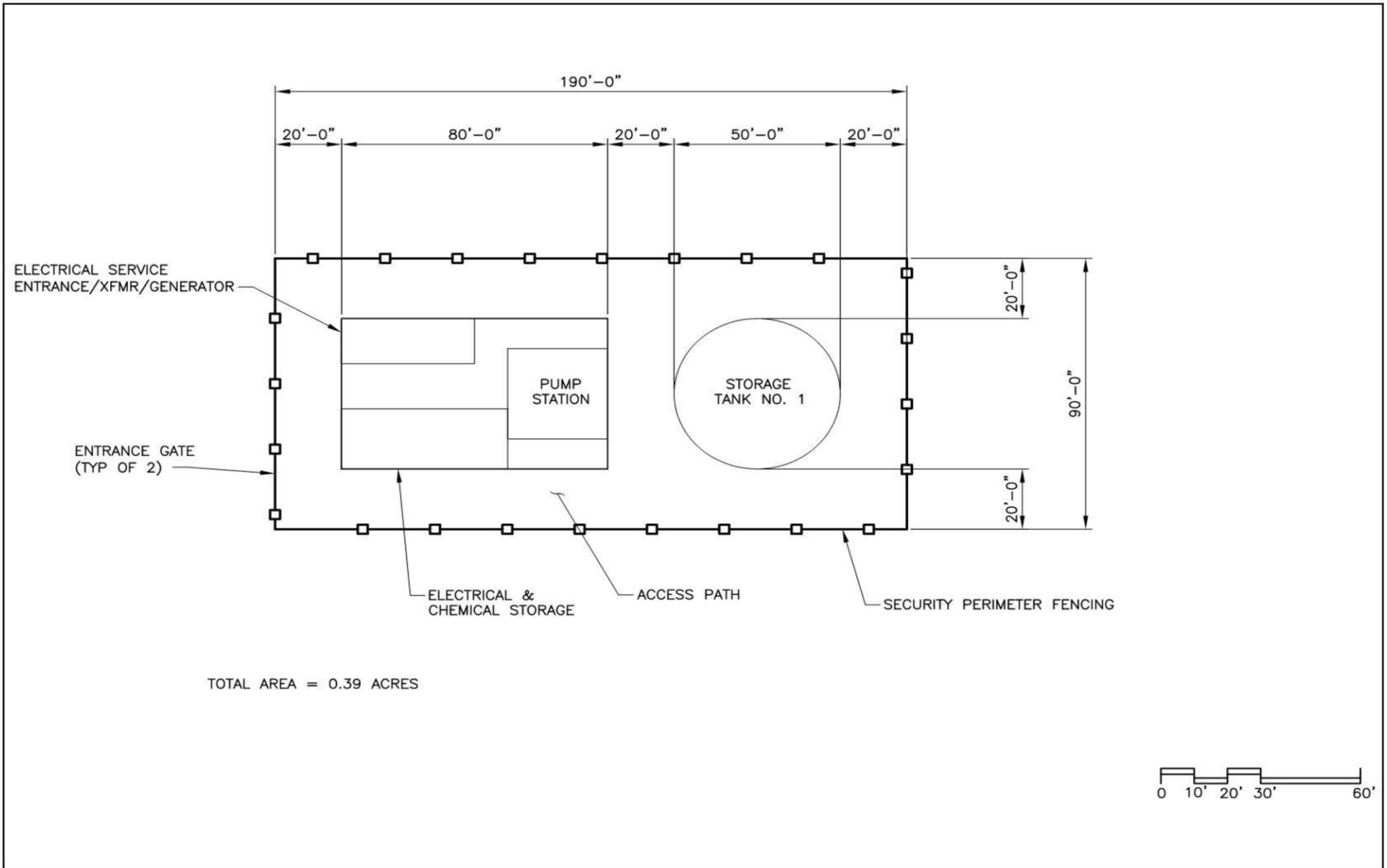
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Source: Bing Aerial Imagery. CBG Civil Engineers. 12/2023.



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Source: Carollo; Cal Water Service Company.

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Sewer Treatment Plant

The proposed project would include the development of an approximately 1-acre sewer treatment plant, as shown on Exhibit 2-8, adjacent to El Charro Road, as shown on Exhibits 2-6a and 2-6b. Access to the sewer treatment plant would be provided via an access road off El Charro Road, which would lead directly to the sewer treatment plant. The proposed sewer treatment plant would be a package membrane bioreactor sewage treatment plant with a capacity to treat 50,000 gallons of wastewater per day. The sewer treatment plant would include an influent pump station, a headworks facility, odor control, a membrane bioreactor facility, ultraviolet disinfection, an effluent and recycled water pump station and pipelines, solids handling, a chemical facility, administration, laboratory, operations, and maintenance.

Additionally, routine operations of the sewer treatment plant would not be expected to require any full-time employees. However, employees would make routine trips to inspect and maintain the facilities. It is expected that the daily trip generation would be less than one vehicle trip to the site each day with occasional delivery trucks and maintenance equipment when required.

Under both Design Option A and Design Option B (Exhibit 2-6a and Exhibit 2-6b), the sewer treatment plant would be located west of El Charro Road in the northern portion of APN 946-4634-2.

Recycled Water Storage Facility

The proposed project would also include an approximately 2.5-acre recycled water storage facility. The recycled water storage facility would have an approximately 900,000-gallon storage capacity and would have a depth ranging from approximately 10 to 15 feet.

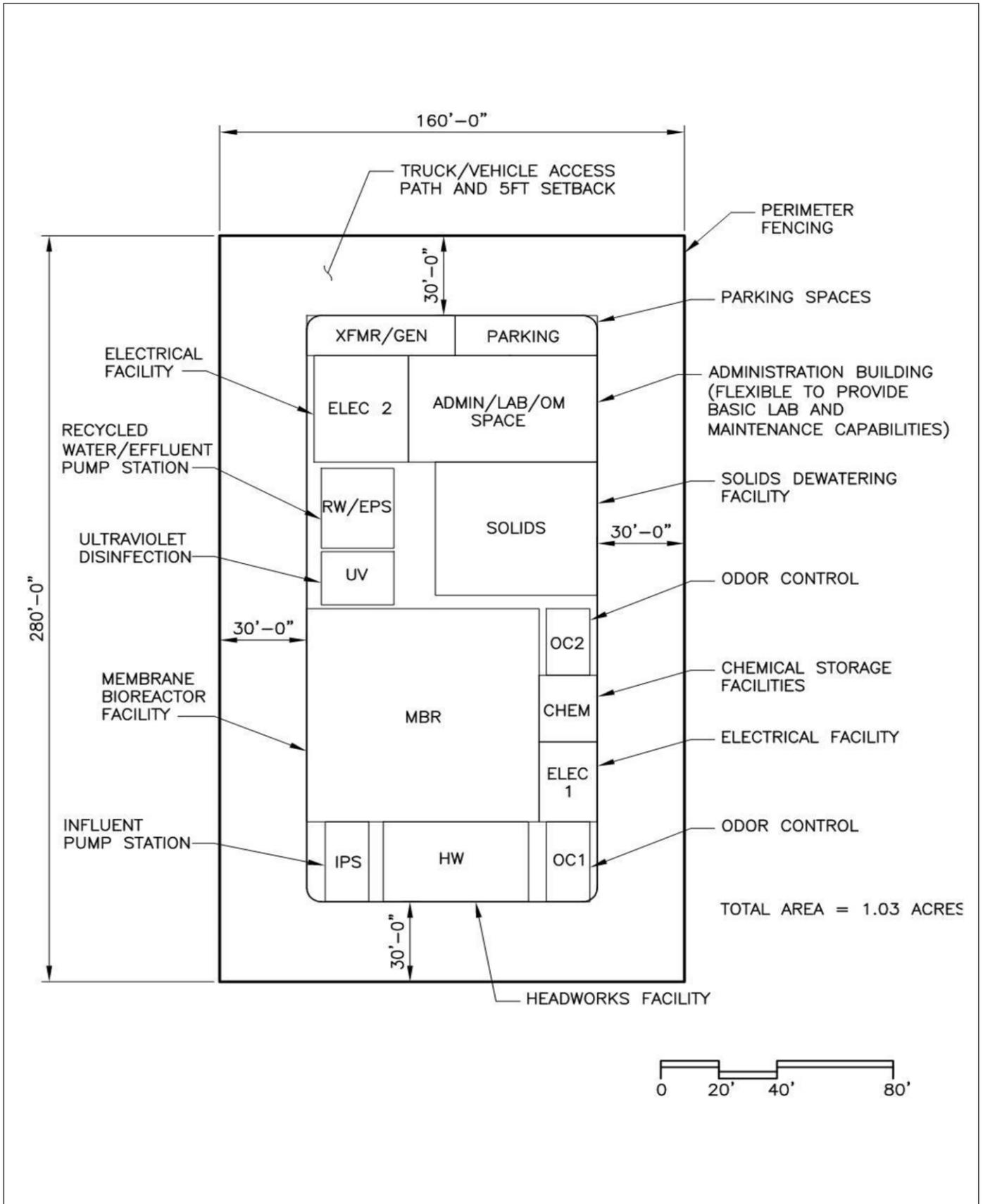
The location of the recycled water storage facility would be west of El Charro Road in the northern portion of APN 946-4634-2 and would remain the same under both Design Option A and Design Option B, as shown on Exhibit 2-6a and Exhibit 2-6b.

Agricultural Irrigation Recycled Water Spray Fields

The proposed project would include the development of approximately 8.5 acres of agricultural irrigation fields, located east of El Charro Road, along the northeastern boundary of APN 946-4634-2, as shown on Exhibit 2-6a and Exhibit 2-6b. The location of the agricultural irrigation fields would remain the same under both Design Option A and Design Option B. The agricultural irrigation fields would use 2- to 6-inch pipes buried approximately 18 to 24 inches in depth, except under service roads. The pipes would be buried deeper under service roads to sustain traffic loads.

Vertical spray heads above ground would water the agricultural irrigation fields using treated effluent from the wastewater treatment plant. The agricultural irrigation recycled water spray fields would water existing vegetation within the spray field areas; this area is not included in the proposed project's limit of disturbance.

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Source: Carollo; Cal Water Service Company.

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Bioretention Areas

The proposed project would include a primary bioretention area, which would include a treatment area of approximately 0.9-acre. The bioretention area would contain two layers: an 18-inch layer of bioretention soil mix, and a 12-inch layer of Class II permeable rock. The bioretention area would be protected by an 8-foot berm and would treat all incoming stormwater from the project site and is being evaluated under two design options. Under Design Option A, the primary bioretention area would be located west of El Charro Road, south of the recycled water storage facility, and east of the water storage and booster pump facility, as shown on Exhibit 2-6a. Under Design Option B, the primary bioretention area would be located east of El Charro Road in the central portion of APN 946-4634-2, as shown on Exhibit 2-6b.

An additional, smaller bioretention area, which would include a treatment area of approximately 0.03-acre, would be located adjacent to the water storage and booster pump facility, as shown on Exhibit 2-6a and Exhibit 2-6b. The location of this additional bioretention area would remain the same under both Design Option A and Design Option B. The bioretention areas would have sufficient capacity to meet the stormwater needs of the proposed development.

Roadway, Bicycle, and Pedestrian Improvements

The proposed project would include frontage improvements along Busch Road, including the construction of an approximately 8-foot-wide sidewalk, an approximately 6-foot-wide Class II bicycle lane, and street landscaping, as shown on Exhibit 2-6a and Exhibit 2-6b. In front of the project site, Busch Road would be redeveloped into a two-lane road with a split median. The street would have a width of 100 feet and would not provide on-street parking. The bicycle improvements would extend approximately 1,000 feet, from the southeast corner of the project site to Ironwood Drive, located west of the proposed project. The location of the roadway, bicycle, and pedestrian improvements would remain the same under both Design Option A and Design Option B.

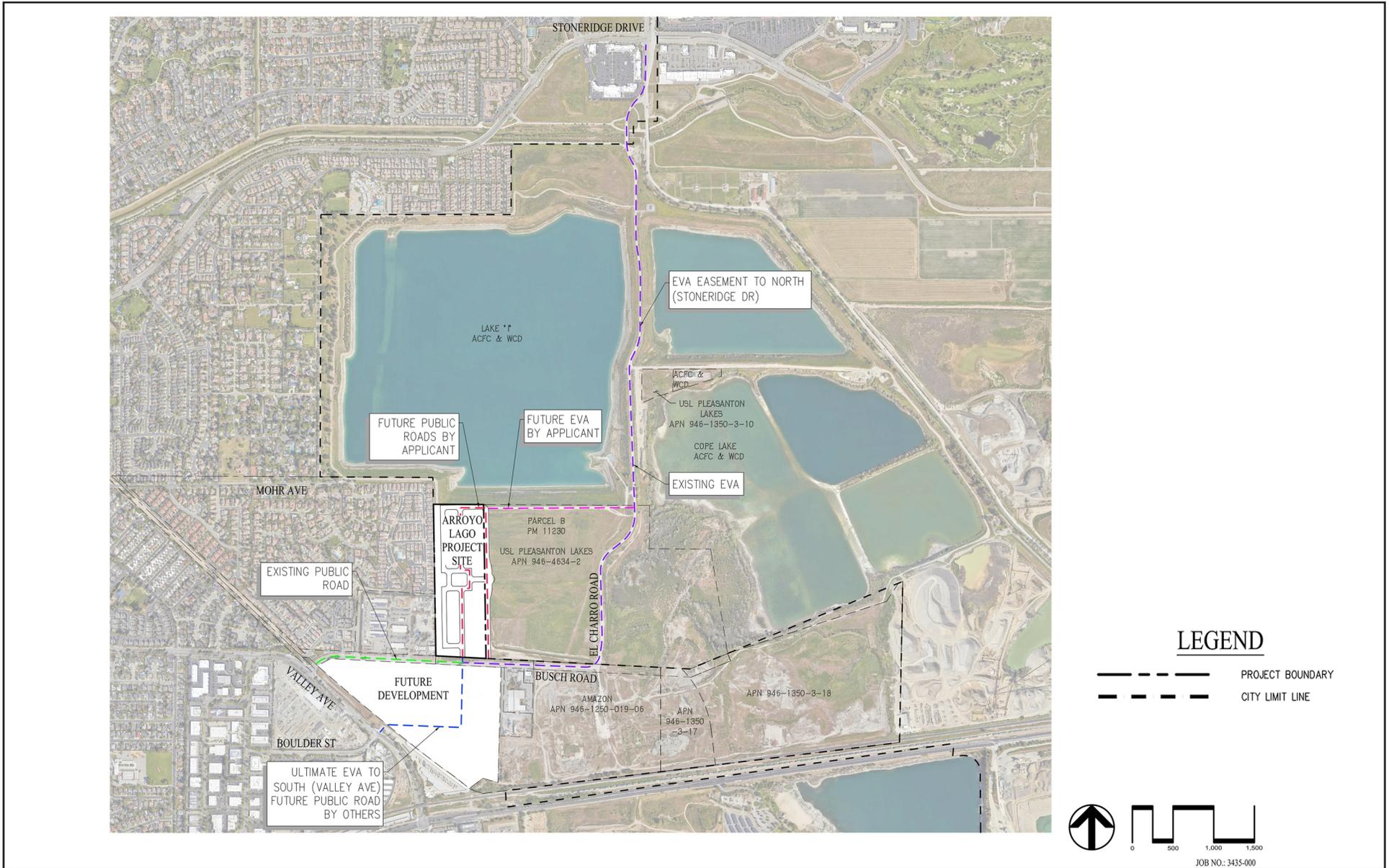
2.2.3 - Circulation and Access

Vehicle

In addition to the 2-car garages attached to each proposed single-family home and the parking available within the driveway, the proposed project would also provide parking on internal streets. Primary vehicular access to the project site would be provided by connecting the existing Busch Road to the proposed internal circulation Street A and Street B, as shown on Exhibits 2-5a and 2-5b.

As shown in Exhibit 2-9, during proposed project operation, emergency access to the proposed project site would be provided via four different access routes. The first emergency access route would be provided via Busch Road from Valley Avenue, and emergency vehicles would enter the site through the first project driveway on Busch Road.

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Source: CBG Civil Engineering; April 2023.

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The second emergency access route would be provided via El Charro Road from Stoneridge Drive, and emergency vehicles would enter at the northeast corner of the project site via an emergency vehicle access route that will be developed as part of the project along the southern boundary of Lake I. The third emergency access route would be provided via El Charro Road, where emergency vehicles would enter Stoneridge Drive and access the site via the project driveways on Busch Road. The fourth emergency access route would be provided via a road to be developed as part of a future development south of the proposed project site that would connect Boulder Street to Busch Road where emergency vehicles could access the site.

Transit

Bus

The Livermore-Amador Valley Transit Authority (LAVTA) Tri-Valley Wheels bus service provides fixed route bus service in Dublin, Pleasanton, and Livermore. As no transit stops are within a 0.5 mile walk of the project site, the proposed project is not easily accessed by transit. Wheels Route 10R is approximately 1 mile from the project site while the Dublin/Pleasanton BART station is 3 miles from the project site via the Iron Horse Regional Trail. Project residents could bike from the project site to these transit stops and board with their bikes.

Rail

Bay Area Rapid Transit (BART) is a regional rail transit service that operates within the County and provides connections to Contra Costa, San Francisco, and San Mateo counties. The Dublin/Pleasanton BART Station is approximately 2.60 miles northwest of the project site.

ACE is a regional transit service that operates from Stockton to San José, passing through Tracy, Livermore, Pleasanton, and Fremont. The closest station, Pleasanton Station, is located approximately 2.10 miles southwest of the project site.

Bicycle

Currently, there are no existing bicycle lanes on Busch Road adjacent to the project site. The nearest bicycle route to the proposed project is a Class IV bicycle path, which starts at the Ironwood Drive and Bradford Way/Cornerstone Court traffic circle and connects to the Iron Horse Trail, approximately 1,000 feet west of the project site.⁷ Both Ironwood Drive and Busch Road provide bicycle lanes on both sides of the road west and north of this intersection. In addition, the Iron Horse Regional Trail, located approximately 1,500 feet west of the project site, provides a multiuse bicycle/pedestrian pathway that provides access to the Dublin/Pleasanton BART Station. The trail runs from the City of Pleasanton to the City of Concord.

The proposed project would construct approximately 1,000 feet of off-site bicycle lane improvements to Busch Road that would connect to the existing bicycle lanes on Busch Road and Ironwood Drive.

⁷ City of Pleasanton. 2023. Bikeways and Trails Map. Website: http://www.cityofpleasantonca.gov/gov/depts/cd/traffic/maps_and_information/bikeways_and_trails_map.asp. Accessed February 26, 2024.

Pedestrian

The proposed project would construct approximately 0.5 mile of designated walking trails on the project site. In addition, all proposed roads on the project site would contain 5-foot sidewalks on both sides and would also provide crosswalks at all internal intersections.

There are no sidewalks currently in the vicinity of the project site, including on Busch Road. The traffic signal at the Busch Road and Ironwood Drive intersection includes crosswalks with pedestrian signal heads to facilitate crossing the street, and sidewalks extend on Busch Road west of the intersection, and on Ironwood Drive.

As discussed above, the proposed project would construct approximately 1,000 feet of off-site sidewalk improvements to Busch Road that would connect to existing sidewalks on Busch Road and Ironwood Drive, as shown on Exhibit 2-6a and Exhibit 2-6b.

2.2.4 - Design, Landscaping, and Lighting

Building Design and Height

Building heights would range from 26 to a maximum of 30 feet (two floors). Buildings would be set back from the proposed streets in accordance with the development standards set forth in Table 2-1.

The exterior of the homes would be constructed with Farmhouse, Craftsman, and Modern Ranch designs. To achieve an architectural variety throughout the site, duplicate styles would not be adjacent to each other. Design features would include slate and metal roofing, lap siding with adjacent trim boards, gable siding with horizontal trim, batten board sidings with adjacent trim boards, fascia, eaves, kneebraces, corbels, shutters, and painted garage and entry doors. The exterior color palette depends upon the architectural design type, with palettes ranging between whites, grays and browns, blues, grays, yellows, stone and terracotta, and brighter greens, blues, and reds.

Landscaping

The project applicant proposes to construct a private 0.7-acre park that would be owned and maintained by the Homeowners Association (HOA) and approximately 0.5 mile of designated walking trails, as shown on Exhibit 2-10.

The park and other open space areas on the project site would be landscaped with various grasses and shrubs of non-native and native origin. Paving across the park, streets, and other open space landscaped areas would consist of concrete and decomposed granite, with accent paving being used to demarcate crossings. Ornamental fencing would be used to separate residences and public spaces. Other amenities, such as benches, tables, and chairs, would be installed in the park.

Internal streets on the project site would be lined with street trees, and the park would contain trees as well. Trees would also be installed along the north side of the project site boundary along Lake I. Proposed project trees would include the crape myrtle, Chinese pistache, native oak, Indian hawthorn, little leaf linden, and Chinese elm species.



- 1 Park Enlargement see next page
- 2 Ornamental Fence at Trail Edge
- 3 Street Trees
- 4 Monument Sign
- 5 Hydroseed



- 1 Accent Paving
- 2 Entry Plaza
- 3 Borrowed Lawn
- 4 Center Picnic Plaza with Shade Structure
- 5 Garden with Decomposed Granite Path
- 6 Natural Play Toy Lot



Source: CBG Civil Engineers. 08/2022.

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2.2.5 - Proposed Utilities

Domestic Water

Water service for the proposed project would be provided by the California Water Services Company (Cal Water). Cal Water has an existing contract with the Zone 7 Water Agency (Zone 7) to provide water throughout Cal Water's service area in the County. Water service to the project site would be provided by a connection to proposed off-site 8-inch diameter water lines in the northeast corner of the project site. Water service throughout the project site would be provided in 8-inch diameter water lines under the proposed internal streets.

As mentioned above, one off-site 8-inch diameter water line would be constructed from the northeast corner of the project site to supply the proposed project. This line would extend eastward toward El Charro Road and then follow El Charro Road north until reaching a proposed water storage facility between Lake I and Cope Lake of the Zone 7 Water Agency's Chain of Lakes. The second off-site 8-inch diameter water line would be constructed from the southwest corner of the project site to also supply the proposed project. This line would extend westward toward Valley Avenue, ultimately connecting with the Zone 7 Vineyard pipeline. There would be a standard Zone 7 turnout (metering facility) at each connection to Zone 7 facilities and the two connections would be tied together to enable water to be fed from two Zone 7 pipelines for redundancy.

Stormwater Drainage

Stormwater from the project site would be drained by 6-inch storm gutters located on the sides of the proposed internal streets. Stormwater would flow into 18-inch pipes located under the streets, and then would be drained out of the site using a 36-inch diameter pipe that would be constructed along Busch Road, flowing eastward. The pipe would continue beyond Busch Road and then turn north, eventually depositing in the proposed primary bioretention area that would be located approximately 0.45 mile east of the project site.

Sanitary Sewer

As discussed above, wastewater from the proposed residential development would be treated by the proposed off-site sewer treatment plant. Sanitary sewer infrastructure would be constructed as part of the proposed project. Residential units on-site would be connected to 8-inch diameter sanitary sewer pipelines that would be constructed underneath the proposed internal streets. Wastewater would subsequently flow out of the project site into an 8-inch sanitary sewer line that would be constructed under Busch Road. Wastewater would flow through this line eastward beyond Busch Road and be redirected toward the proposed sewer treatment plant (Exhibit 2-8). The HOA would own and operate the wastewater facilities associated with the proposed project. Facility operations, maintenance, monitoring, and compliance reporting would be regulated via a waste discharge permit issued by the San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB) in accordance with applicable laws.

Solid Waste and Recycling Collection

The proposed project would be served by the Pleasanton Garbage Service, Inc. (PGS), which would provide both solid waste and recycling services. Garbage and recycling services would be provided on a weekly basis.

Power and Telecommunications

Electric and gas services for the proposed project would be provided by Pacific Gas and Electric Company (PG&E). The proposed project would be served by existing utility lines on the north side of the project site and along Busch Road. Both power lines are currently located above ground but would be moved underground as part of the proposed project. AT&T would provide phone services, and Comcast would provide phone and high-speed internet services.

2.2.6 - Phasing and Construction

Construction of the proposed project components and off-site improvements would occur in one phase over a period of 2.5 years, starting in March 2025 and ending in August 2027. All site preparation and grading for the entire project area would also be completed at this time. Grading and site preparation would include the import of approximately 150,000 cubic yards fill. The preliminary construction schedule is provided in Table 2-2.

Table 2-2: Proposed Project Preliminary Construction Schedule

Construction Milestones	Expected Start/End Date
Horizontal Construction (In Tract and Off-site)	
Mass Grading/Surcharge	3/1/2025
Underground Utilities	6/29/2025
Topside Improvements	10/27/2025
Off-site Street Improvements (Busch Road etc.)	1/25/2026
Horizontal Construction Complete	7/24/2026
Water Treatment and Wastewater Treatment Construction (Off-site)	
Mass Grading/Surcharge	6/1/2025
Water Treatment and Wastewater Treatment Construction Complete	5/27/2026
Vertical Construction	
Model Home Starts	8/1/2025
First Production Phase Start	10/30/2025
Second Production Phase Start	1/28/2026
Third Production Phase Start	4/28/2026
Fourth Production Phase Start	7/27/2026
Fifth Production Phase Start	10/25/2026

Construction Milestones	Expected Start/End Date
Sixth Production Phase Start	1/23/2027
Vertical Construction Complete	8/21/2027
Source: 330 Land Company. February 13, 2023.	

2.3 - Project Objectives

The underlying purpose of the proposed project is to improve the County’s housing inventory by developing vacant, underutilized properties for new housing in alignment with the ECAP, MDR land use designation, and State law.

The objectives of the proposed project are to:

- Contribute additional housing opportunities consistent with the County's Housing Element and its Sixth Cycle Regional Housing Needs Assessment (RHNA) approved by the Association of Bay Area Governments (ABAG).⁸
- Develop the project site in accordance with applicable, objective County land use regulations while furthering the goals and objectives of the.
- Further preservation of open space by providing for the compact and orderly development of sites adjacent to existing development.
- Generate new, additional property tax revenues.
- Provide a range of professionally designed housing options, including single-family homes and affordable accessory dwelling units.
- Create a walkable outdoor environment by providing open space, parks, and walking trails for both private and public use, allowing both existing and new residents to take advantage of the development.
- Ensure adequate utility infrastructure exists, including sewer, water, and storm drain to accommodate the development.
- Promote the efficient use of water and energy through incorporation of water and energy conservation measures.

2.4 - Required Actions and Approvals

The proposed project would require the following discretionary and ministerial permits and approvals.

⁸ At the time this Draft EIR was prepared, the County’s Updated Housing Element and the Sixth Cycle Regional Housing Needs Assessment (RHNA) are currently under review. Any future changes to the County’s Updated Housing Element and RHNA is expected to be minimal and would not result in significant changes to the analysis.

2.4.1 - Discretionary and Ministerial Actions

Discretionary approvals and permits are required by the County for implementation of the proposed project. The proposed project would require the following discretionary approvals and actions, including:

- Approval of a Vesting Tentative Map
- Certification of the Final EIR
- Approval of the Statement of Overriding Considerations, Findings, and Mitigation Monitoring and Reporting Plan
- Approval of a Site Development Permit and Building Permits

Subsequent ministerial actions would be required for the implementation of the proposed project including, but not limited to, issuance of grading and building permits.

2.4.2 - Responsible and Trustee Agencies

A number of other agencies in addition to the County of Alameda will serve as Responsible and Trustee Agencies, pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these agencies and other public agencies, which may be required to grant approvals or coordinate with other agencies, as part of project implementation. These agencies may include, but are not limited to, the following:

- United States Fish and Wildlife Service (USFWS)
- California Department of Fish and Wildlife (CDFW)
- San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB)
- Alameda County Flood Control and Water Conservation District (Zone and Water Agency)
- Pleasanton Garbage Service (PGS)
- Pacific Gas and Electric Company (PG&E)
- California Water Services Company (Cal Water)
- Livermore-Pleasanton Fire Department
- Pleasanton Unified School District
- California Public Utilities Commission (CPUC)
- Zone 7 Water Agency (Zone 7)
- California Department of Water Resources (DWR)
- California State Water Resources Control Board (State Water Board)
- Alameda County Environmental Health Department (ACEHD)

2.5 - Intended Uses of this Draft EIR

This Draft EIR is being prepared by the County of Alameda to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed project. Pursuant to CEQA Guidelines Section 15367, the County of Alameda is the lead agency for the proposed project and has discretionary authority over the proposed project and project

approvals. The Draft EIR is intended to address all public infrastructure improvements and all future developments that are within the scope of the proposed project. After certification, it is the intent of the County that this EIR may serve as environmental review for subsequent activities necessary to implement that project subject to all of CEQA's streamlining and tiering provisions. This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding the proposed project. The Draft EIR will be circulated for a minimum of 45 days, during which period comments concerning the analysis contained in the Draft EIR should be sent to:

Aubrey Rose, AICP, Planner III
Alameda County Community Development Agency Planning Department
224 West Winton Avenue, Room 111
Hayward, CA 94544
510.670.5400
aubrey.rose@acgov.org

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CHAPTER 3: ENVIRONMENTAL IMPACT ANALYSIS

Organization of Issue Areas

This Draft Environmental Impact Report (Draft EIR) provides analysis of impacts for those environmental topics where it was determined in the Notice of Preparation (NOP), or through subsequent analysis, that the proposed project would result in “potentially significant impacts.” Sections 3.1 through 3.19 discuss the environmental impacts that may result with approval and implementation of the proposed project.

Issues Addressed in this Draft EIR

The following environmental issues are addressed in Chapter 3:

- Aesthetics, Light, and Glare
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems
- Wildfire

Level of Significance

Determining the severity of project impacts is fundamental to achieving the objectives of the California Environmental Quality Act (CEQA). CEQA Guidelines Section 15091 requires that decision-makers mitigate, as completely as is feasible, the significant impacts identified in the Draft EIR. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision-makers in approving a project to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the Draft EIR.

The level of significance for each impact examined in this Draft EIR was determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds were developed using criteria from the CEQA Guidelines and checklist; State, federal, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

Impact Analysis and Mitigation Measure Format

The format adopted in this Draft EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact AES-1: An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact number identifies the section of the report (AES for Aesthetics, Light, and Glare in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.

Impact Analysis

A narrative analysis follows the impact statement.

Level of Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AES-1 Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact it is associated with (AES-1 in this example); mitigation measures are numbered sequentially.

Level of Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are:

Code	Environmental Issue
AES	Aesthetics, Light, and Glare
AIR	Air Quality
BIO	Biological Resources

Code	Environmental Issue
CUL	Cultural Resources and Tribal Cultural Resources
GEO	Geology and Soils
ENER	Energy
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LAND	Land Use
MIN	Mineral Resources
NOI	Noise
POP	Population and Housing
PUB	Public Services
REC	Recreation
TRANS	Transportation and Traffic
UTIL	Utilities and Service Systems
WILD	Wildfire

Cumulative Effects

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project’s incremental effects are cumulatively considerable. According to CEQA, “. . . the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” In identifying projects that may contribute to cumulative impacts, CEQA allows the use of a list of past, present, and reasonably anticipated future projects, which have the potential to result in related or cumulative impacts, including those which are outside of the control of the lead agency.

In accordance with CEQA Guidelines Section 15130(b), “. . . the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone.” The discussion should be guided by standards of practicality and reasonableness, and it should focus on the cumulative impact to which the identified other projects contribute rather than on the attributes of other projects that do not contribute to the cumulative impact.

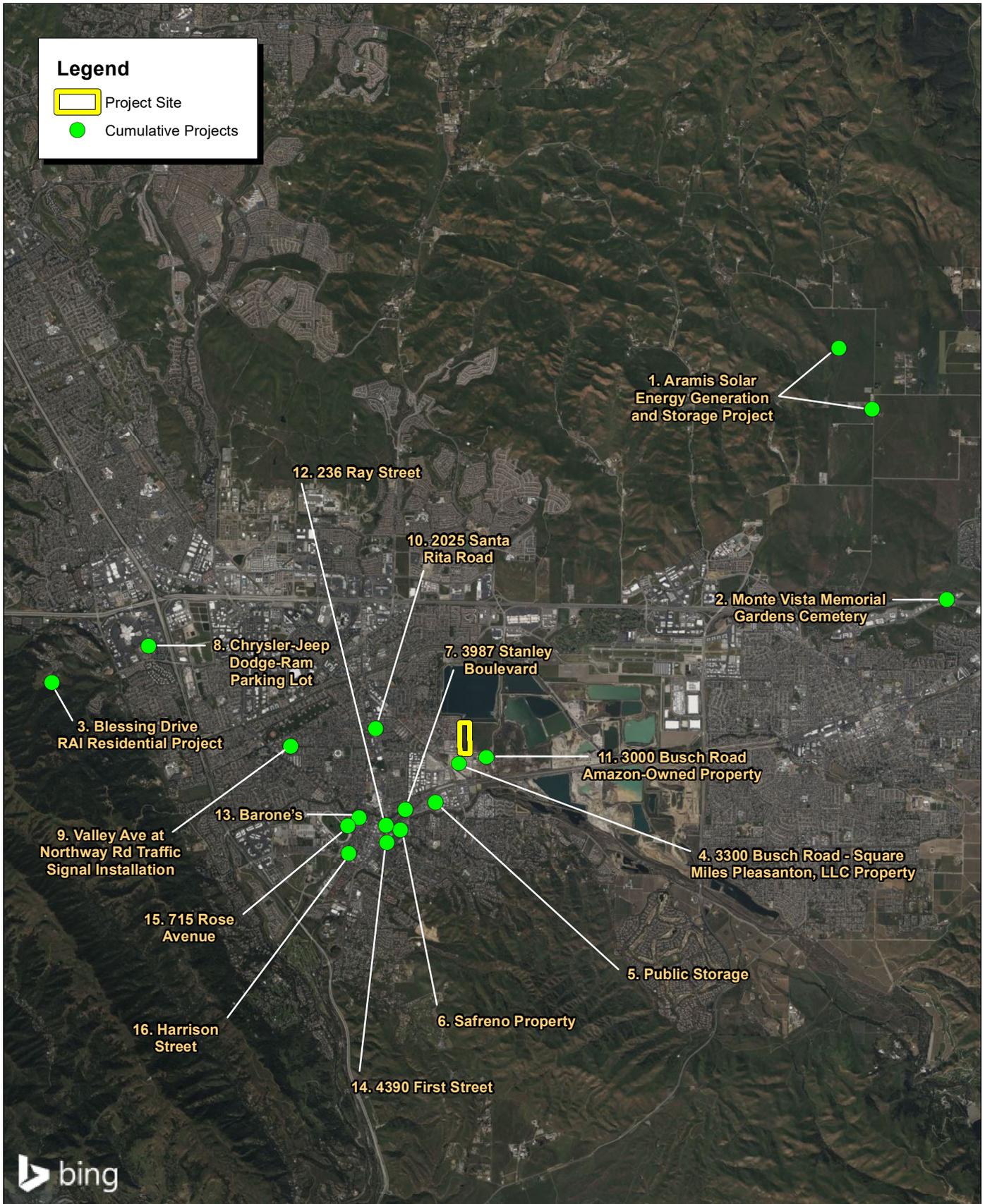
The proposed project’s cumulative impacts were considered in conjunction with other proposed and approved projects in the vicinity of the project site including the County of Alameda (County) and the City of Pleasanton (City).

3.1.1 - Cumulative Project List

Although the physical conditions existing when the notice of preparation is published normally are used to establish the baseline for the analysis of cumulative impacts (State CEQA Guideline § 15125, (a)(1)), the County has sole discretion to determine which projects to include in a cumulative impact project list. In exercising its discretion, the County is guided by the basic standard that the cumulative list should include projects when it is reasonable, feasible, and practical to do so, given the information available about the projects, and when failure to include such projects would lead to an inadequate analysis of the severity and significance of the cumulative impacts in question. *Golden Door Props., LLC v County of San Diego* (2020) 50 CA5th 467, 529. The County also notes that the CEQA Guidelines specify that location may be an important factor when the location of other projects determines whether they contribute to an impact.

Accordingly, to provide a robust analysis of the potential significance of cumulative development, the County's list of cumulative projects is based on several factors including the nature of the resource affected, the location of the project, and the type of project, consistent with the direction in State CEQA Guidelines Section 15130(b)(2).

Table 3-1, Cumulative Projects, below, provides a list of the projects considered in the cumulative analysis. Generally, past projects are not included within the list of cumulative projects due to the fact that current environmental conditions are already considered as part of the baseline and existing environmental condition. A map showing the locations of these cumulative projects is included as Exhibit 3-1.



Source: Bing Aerial Imagery. CBG Civil Engineers 10/31/2023.



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Table 3-1: Cumulative Projects

#	Jurisdiction	Project	Characteristics	Location	Distance from Project	Quantity	Units	Status
1	County of Alameda	Aramis Solar Energy Generation and Storage Project	Solar	1815 Manning Road and 4400 North Livermore Avenue	6.16 miles	533	Acres	Approved
2	County of Alameda	Monte Vista Memorial Gardens Cemetery	Funeral Home, Crematorium, and Burial Lots	3656 Las Colinas Road	5.66 miles	47	Acres	Approved
3	County of Alameda	Blessing Drive RAI Residential Project	Single-family residences	9480 Blessing Drive	4.83 miles	1	DU	Approved
4	County of Alameda	Senior East County Lakes	Gated age-restricted mixed density residential and support services	Busch Road (APN 946-4634-002)	Adjacent to proposed project to the East	569 10,000	DU Square feet of support services	Under Review
5	Zone 7	Chain of Lakes Conveyance Project	Multi-use pipeline that will connect the northern Chain of Lakes area with Lake A and the South Bay Aqueduct/Del Valle Water Treatment Plant	Approximately 7 miles of pipeline starting at the southeastern corner of Lake I and terminating at the Del Valle Water Treatment Plant	0.02 mile at the start of the pipeline and 5 miles at the terminus	N/A	N/A	Under Study
6	City of Pleasanton	3300 Busch Road–Square Miles Pleasanton, LLC Property	Residential–Multi-family/Apartments	3300 Busch Road	0.13 mile	390	Residential units	Under Review
7	City of Pleasanton	Public Storage	Storage facility buildings	3716 Stanley Boulevard	0.68 mile	205,027	Square feet	Under Construction

#	Jurisdiction	Project	Characteristics	Location	Distance from Project	Quantity	Units	Status
8	City of Pleasanton	Safreno Property	Residential—Single-family	4212 and 4226 First Street	1.15 miles	6	Residential units	Under Review
9	City of Pleasanton	3987 Stanley Boulevard	Residential—Single-family	3987 Stanley Boulevard	0.92 mile	3	Residential units	Under Construction
10	City of Pleasanton	Chrysler-Jeep-Dodge-Ram Parking Lot	Commercial; Parking lot	2964 Stoneridge Drive	1.18 miles	201	Parking spaces	Under Construction
11	City of Pleasanton	Valley Avenue at Northway Road Traffic Signal Installation	Transportation/ Traffic signal	Valley Avenue and Northway Road	1.03 miles	1	Traffic signal	Under Review
12	City of Pleasanton	2025 Santa Rita Road	Residential—Multi-family/Apartments	2025 Santa Rita Road	0.99 mile	42	Residential units	Under Review
13	City of Pleasanton	3000 Busch Road—Amazon-Owned Property	Sortation Center	3000 Busch Road	0.15 mile	715,000	Square feet	Under Review
14	City of Pleasanton	236 Ray Street	Residential—Multi-family/Apartments	236 Ray Street	1.27 miles	1	Unit	Approved
15	City of Pleasanton	Barone’s	Mixed-use	475 and 793 St. John Street	1.34 miles	14	Units	Under Review
16	City of Pleasanton	4390 First Street	Residential—Single-family	4390 First Street	1.38 miles	1	Unit	Approved
17	City of Pleasanton	715 Rose Avenue	Residential—Multi-family/Apartments	715 Rose Avenue	1.6 miles	4	Units	Approved
18	City of Pleasanton	Harrison Street	Residential—Multi-family/Apartments	4884 Harrison Street	1.85 miles	46	Units	Approved

Source: County of Alameda. 2023. Current Development Projects; City of Pleasanton. 2023. Community Development.

3.1.2 - Cumulative Impact Format

The cumulative impact discussions in Sections 3.1 through 3.19 explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, City, planning area, County, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing noise impacts, the geographic study area is more local and includes the immediate vicinity of the areas of new development. In assessing air quality impacts, all development within the air basin contributes to regional emissions of criteria pollutants and basin-wide projections of emissions is the best tool for determining cumulative effect. After establishing the relevant geographic scope, this analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, would result in a cumulatively significant impact. This analysis then considers whether incremental contribution to cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance. Under State CEQA Guidelines Section 15130(a)(2), where a project contributes to a cumulative impact but the combined cumulative impact with the project's incremental effect is not significant, the EIR must only "briefly indicate" why the cumulative impact is not significant.

The cumulative impacts discussions in Section 3.1 through 3.19 are located at the end of each section, after the project-specific analysis.

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3.1 - Aesthetics, Light, and Glare

3.1.1 - Introduction

This section describes the existing aesthetics, light, and glare conditions in the project area, as well as the relevant regulatory framework. This section also evaluates the possible impacts related to aesthetics that could result from implementation of the proposed project. Descriptions and analysis in this section are based, in part, on the California Department of Transportation (Caltrans) Scenic Highways Systems List, the Alameda County General Plan (General Plan), East County Area Plan (ECAP), and project exhibits, including renderings of the proposed project (Exhibit 3.1-1 through Exhibit 3.1-12).

The following public comments were received during the Environmental Impact Report (EIR) Notice of Preparation (NOP) scoping period related to aesthetics:

- The Draft EIR should evaluate aesthetics and visual hazards, including shadow impacts to adjacent neighborhoods.
- The Draft EIR should evaluate visual impacts from the proposed project onto the Village at Ironwood neighborhood.
- The Draft EIR should analyze potential aesthetic compatibility issues with regard to the Operations Service Department located west of the site.
- The Draft EIR should evaluate aesthetics and light impacts caused by the proposed project.
- The Draft EIR should evaluate whether the proposed project would interfere with sunlight reaching solar panels at homes in the Village at Ironwood neighborhood.
- The Draft EIR should discuss whether the proposed project would impact the image of Pleasanton and community.
- The Draft EIR should discuss consistency with neighboring housing.

3.1.2 - Environmental Setting

Visual Character

Visual character in the California Environmental Quality Act (CEQA) context is an impartial description of the defining physical features, landscape patterns, and distinctive physical qualities within a landscape. Visual character is informed by the composition of land, vegetation, water, and structure and their relationship (or dominance) to one another and by prominent elements of form, line, color, and texture that combine to define the composition of views. Visual character-defining resources and features within a landscape may derive from notable landforms, vegetation, land uses, building design and façade treatments, transportation facilities, overhead utility structures and lighting, historic structures or districts, or panoramic open space.

Alameda County

Alameda County (County) includes a variety of topographical features, such as the San Francisco Bay-Delta estuary complex, and is within the Central Coast Range Geomorphic Province of California. The County covers a total of 821 square miles of land and water, with elevations ranging from 25 feet below sea level in the eastern area of the County to low lying and relatively flat coastal terrain along the San Francisco Bay-Delta estuary complex and major ridgelines along the Diablo Range, a subdivision of the Pacific Coast Ranges, including the summit of Rose Peak which rises to an elevation of 3,817 feet above mean sea level, making it the most prominent topographical feature in the County.

The physical environment of the County ranges from urban to rural. The western and central County areas are characterized by urban and suburban city development and the eastern County area is characterized primarily by agricultural and open space areas, although the cities of Livermore and Pleasanton also present a substantial level of urban and suburban city development.

Project Site

The project site is in eastern Alameda County, south of Lake I of the Zone 7 Water Agency (Zone 7) Chain of Lakes, north of Busch Road, and adjacent to the City of Pleasanton. It is relatively flat in elevation and is currently vacant and graded. However, the off-site component areas contain trees and undisturbed vegetation.

The project site is bounded by Lake I to the north; existing residential neighborhoods to the west and northwest; the City of Pleasanton and Livermore-Pleasanton Fire Department public services and utilities facilities to the west, southwest, and south; industrial uses to the south; and vacant land designated Large Parcel Agriculture (LPA) by the County. (Please refer to Exhibit 2-2a in Chapter 2, Project Description, of this Draft EIR.)

Scenic Resources

Scenic resources typically involve prominent, unique, and identifiable natural features in the environment (e.g., trees, rock outcroppings, islands, ridgelines, channels of water, and aesthetically appealing open space) and cultural features or resources (e.g., regional or architecturally distinctive buildings or structures that serve as a focal point of interest).

Alameda County

The Open Space Element of the General Plan identifies the main scenic resources in the County as being woodland areas or areas with outstanding topography, geology, vegetation, wildlife habitat, the San Francisco Bay and shoreline, ridge lines, rolling hills, canyons, significant stands of trees, and watercourses.

In addition, the ECAP identifies scenic resources specific to the east County, including the following ridgelines:¹

¹ County of Alameda. 1994. East County Area Plan. May 5.

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

The ECAP also identifies various spaces in the east County as important “community separator” scenic resources, which include:

- The Resource Management area of approximately 7,400 acres separating East Dublin and North Livermore;
- The Chain of Lakes area, which separates the cities of Pleasanton and Livermore;
- The area on Pleasanton and Main Ridges above 670 feet separating the communities of Pleasanton, Castro Valley, and Hayward;
- The area west of Dublin that separates the communities of Dublin and Castro Valley; and
- The Vargas Plateau and Sheridan Road areas, which separate the communities of Fremont and Sunol.

Project Site

There are no scenic resources, as defined by the General Plan and ECAP, located on the project site. The nearest scenic resource is Lake I of the Zone 7 Chain of Lakes, adjacent to the northern boundary of the project site. Cope Lake, also part of the Chain of Lakes, is located approximately 0.4 mile east of the project site.

Views

Views may be generally described as panoramic vistas from publicly accessible locations of a large geographic area for which the field of vision may be wide and/or may extend into the distance. Examples of distinctive views include urban skylines, valleys, mountain ranges, or large bodies of water.

Alameda County

State Route (SR) 84 and portions of the Interstate (I-680) and I-580 are officially designated State Scenic Highways.² I-580 from San Leandro to the eastern Alameda County line and from Oakland to

² California Department of Transportation (Caltrans). 2023. State Scenic Highway Map. Website: <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>. Accessed February 26, 2024.

the western Alameda County line, as well as SR-13, and I-680 from Fremont to the southern Alameda County line, are eligible State Scenic Highways.³

In addition, the ECAP identifies the following designated viewsheds:⁴

- The major ridgelines listed in the Scenic Resources section above (Policy 105 of the ECAP);
- Brushy Peak, Donlan Peak, and Mount Diablo; and
- Cresta Blanca, near Arroyo Road South of the City of Livermore.

The ECAP also identifies public parkland adjacent to proposed development as being important viewsheds.

Project Site

The project site is directly adjacent to the Chain of Lakes community separator and therefore has direct scenic views on the north and east sides of the project site. Furthermore, views of scenic resources such as the Brushy Peak ridgeline, Mount Diablo peak and ridgeline, Doolan Canyon ridgeline, and ridgelines southwest of the City of Pleasanton are visible from the project site.

Light and Glare

In the context of the CEQA Guidelines, light is nighttime illumination that stimulates sight and makes things visible while glare relates to difficulty seeing in the presence of bright light such as direct or reflected sunlight.

Nighttime lighting is necessary to provide and maintain a safe and secure environment. Light that falls beyond the intended area of illumination is referred to as “light trespass.” Types of light trespass include spillover light and glare. Spillover light, which is light that illuminates surfaces beyond the intended area, is typically caused by artificial lighting sources, such as from building security lighting, signs, parking lot lights, roadway lights, and stadium lights on playing fields. Spillover light can adversely affect light-sensitive uses (i.e., adjacent residences) by creating unwanted illumination. Because light dissipates as it moves farther from its source, the intensity of the lighting source is often increased to compensate for dissipating light, which can increase the amount of light that illuminates adjacent uses. The type of light fixture determines the extent to which light will spill over onto adjacent properties and/or be visible from far away. Modern, energy-efficient fixtures that face downward, such as cutoff-type fixtures and shielded light fixtures, are less obtrusive than light fixtures that have been used in the past.

Project Site and Vicinity

The project site is currently vacant and has no light sources, therefore precluding both nighttime lighting and daytime glare.

³ California Department of Transportation (Caltrans). 2023. State Scenic Highway Map. Website: <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>. Accessed February 26, 2024.

⁴ County of Alameda. 1994. East County Area Plan. May 5.

The primary sources of nighttime light in the surrounding area are security and operations lights from the Livermore-Pleasanton Fire Department (LFPD) Training Center and Pleasanton Utility Water District west of the project site, the Pleasanton Garbage Transfer Station and private industrial area south of the project site, and residential lighting west and northwest of the project site. These surrounding homes, public facilities, and industrial facilities also contribute to daytime glare within the project area.

3.1.3 - Regulatory Framework

Federal

No federal plans, policies, regulations, or laws related to aesthetics are applicable to the proposed project.

State

California Scenic Highway Program

The State Legislature created the California Scenic Highway Program, maintained by the California Department of Transportation (Caltrans), in 1963. The purpose of the State Scenic Highway Program is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The status of a proposed State Scenic Highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

Title 24 of the California Code of Regulations Building Energy Efficiency Standards

California Building Standards Code (California Code of Regulations [CCR], Title 24)—including Title 24, Part 6—includes Section 132 of the Building Energy Efficiency Standards, which regulates lighting characteristics, such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying areas by lighting zone. The classification is based on population figures of the 2000 Census. Areas can be designated as LZ1 (dark), LZ2 (rural), or LZ3 (urban). Lighting requirements for dark and rural areas are stricter in order to protect the areas from new sources of light pollution and light trespass.

Solar Shade Control Act

The Solar Shade Control Act (Public Resources Code, Chapter 12) describes specific and limited controls on trees and shrubs. It prohibits the owner of another property to allow a tree or shrub to be placed or grow to the extent that it casts shadow greater than 10 percent of the collector absorption area upon a solar collector's surface at any one time between the hours of 10 a.m. and 2 p.m. However, the Solar Shade Control Act applies specifically to trees and shrubs and would not apply to buildings being created pursuant to the proposed project.

Local***Alameda County General Plan***

The Alameda County General Plan is split into three area plans with land use and circulation elements for their respective geographic areas, as well as area specific goals, policies, and actions for circulation, open space, conservation, safety, and noise. In addition, the General Plan also provides countywide General Plan documents addressing Housing, Conservation, Open Space, Noise, Seismic and Safety, and Scenic Route Elements which contain goals, policies, and actions that apply to the entire unincorporated area.

Open Space Element

The General Plan Open Space Element identifies countywide plans, policies, and goals for Open Space. As of May 5, 1994, under the Board of Supervisors Resolution 94-272, open space diagrams and policies for the East County area have been shifted to the ECAP.

Scenic Route Element

The General Plan Scenic Route Element establishes the following goals and policies related to aesthetics:

Table 3.1-1: General Plan Scenic Route Element Policies Related to Aesthetics

Policy Title	Policy Description	Page Number ¹
Policies That Apply to Scenic Route Corridors		
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 supplementing normal zoning regulations with special (see Scenic Route Corridor Development Standards, page 18) height, area, and side yard 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.	13
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.	13
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	13

Policy Title	Policy Description	Page Number ¹
	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.	
Use Landscaping to Increase Scenic Qualities of Scenic Route Corridors	Landscaping should be designed and maintained in scenic route corridors to provide added visual interest, to frame scenic views, and to screen unsightly views,	13
Provide and Encourage Continuing Maintenance of Scenic Route Corridors	Continuing maintenance of scenic route corridors that the public owns or has rights to should be provided. Private owners of areas within the scenic route corridor should be encouraged to provide maintenance of landscape and structures as a means of improving the scenic quality of the scenic route.	14
Principles That Apply to Both the Scenic Route Corridor and the Remainder of the County		
Landscape all Properties and Streets	All new building sites, including parking areas and vehicular entrances in business; commercial and industrial areas should be landscaped, and street trees should be planted along all rights-of-way in the county as a means of improving the scenic quality of the county.	14
Encourage Owners of Large Holdings to Protect and Enhance Areas of Scenic Values	Public agencies and private individuals having control of large holdings should be encouraged to protect and enhance natural resources within their properties. Cooperation should also be sought with owners of smaller lots and with community improvement and conservation groups.	14
Control Tree Removal	No mature trees should be removed without permission of the local jurisdiction as a means of preserving the scenic quality of the county.	15
Control Alteration of Streambeds and Bodies of Water	Alteration of streambeds or bodies of water and adjacent vegetation should be permitted only with approval of the local jurisdiction, as a means of preserving the natural scenic quality of stream courses, bodies of water, vegetation and wildlife in the county. Development along edges of streams, canals, reservoirs, and other bodies of water should be designed and treated so as to result in naturalistic, architectural or sculptural forms.	15
Principles That Apply to Areas Beyond the Scenic Route Corridors		
Preserve and Enhance Natural Scenic Qualities in Areas Beyond the Scenic Corridor	Views from scenic routes will comprise essentially all of the remainder of the county beyond the limits of the scenic corridor: the corridor is intended to establish a framework for the observation of the views beyond. Therefore, in all areas in the county extending beyond the scenic route corridors, scenic qualities should be preserved through retaining the general character of natural slopes and natural formations, and through preservation and enhancement of water areas, water courses, vegetation and wildlife habitats. Development of lands adjacent to scenic route corridors should not obstruct	15

Policy Title	Policy Description	Page Number ¹
	views of scenic areas and development should be visually compatible with the natural scenic qualities.	
Provide for Normal Uses of Land but Limit Overhead Utilities and Outdoor Advertising Structures	In both developed and undeveloped areas, outdoor advertising structures, utility and communication towers, poles and wires should be located only where they will not detract from significant scenic views. All other structures and use of land should be permitted as specified in the local zoning ordinance as supplemented by special height regulations (see General Scenic Development Standards, page 20 of the General Plan Scenic Route Element).	15
<p>Notes: ¹ Page number of policy text on Alameda County General Plan Scenic Route Element document. Source: County of Alameda. 1966. Scenic Route Element of the General Plan. May.</p>		

East County Area Plan

The ECAP is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to aesthetics:

Residential Uses

General

Policy 40 The County shall require all new residential development to meet County standards for adequate road access, sewer and water facilities, fire protection, building envelope location, visual compatibility, and public services.

General Open Space

Goal To protect regionally significant open space and agricultural land from development.

General Open Space

Policy 52 The County shall preserve open space areas for the protection of public health and safety, provision of recreational opportunities, production of natural resources (e.g., agriculture, wind power, and mineral extraction), protection of sensitive viewsheds (see definition in Table 1 of the ECAP), preservation of biological resources, and the physical separation between neighboring communities (see Figure 4 of the ECAP).

Policy 56 The County shall require all new developments to dedicate or acquire land for open space and/or pay equivalent in-lieu fees which shall be committed to open space land acquisition and management and shall encourage the cities to impose similar open space requirements on development in incorporated areas.

Policy 62 The County shall require that open space provided as part of a development project be designed to achieve open space objectives (e.g., recreation, viewshed, community separation, riparian protection, public safety).

Implementation Programs—General Open Space

Program 20 The County shall adopt an open space dedication and/or in-lieu fee requirement applicable to all residential and industrial, commercial, and office developments within unincorporated areas to fund the purchase of land within the continuous open space system and provide an endowment for ongoing management of open space lands. The County shall work with cities to develop and adopt an open space dedication and in-lieu fee requirement consistent with the County requirement.

Sensitive Viewsheds

Goal To preserve unique visual resources and protect sensitive viewsheds.

Policy 105 The County shall preserve the following major visually sensitive ridgeline 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; and
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 viewpoints unless there is no other site on the parcel for the structure or on a contiguous parcel in common

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.

Visual Protection

Policy 108 To the extent possible, including by clustering if necessary, structures shall be located on that part of a parcel or 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

Community Separators

Policy 109 The County shall preserve community separators largely in open space in the following locations:

1. The Resource Management area of approximately 7,400 acres separating East Dublin and North Livermore;
2. The Chain of Lakes area which separates the cities of Pleasanton and Livermore;
3. The area on Pleasanton and Main Ridges above 670 feet which separates the communities of Pleasanton, Castro Valley, and Hayward;
4. The area west of Dublin which separates the communities of Dublin and Castro Valley; and
5. The Vargas Plateau and Sheridan Road areas which separate the communities of Fremont and Sunol.

Trees

Policy 110 The County shall require that developments are sited to avoid or, if avoidance is infeasible, to minimize disturbance of large stands of mature, healthy trees and individual healthy trees of notable size and age. Where healthy trees will be removed, the County shall require a tree replacement program which includes a range of tree sizes, including specimen-sized trees, to achieve immediate visual effect while optimizing the long-term success of the replanting effort.

Policy 111 The County shall not allow any structure (e.g., housing unit, barn, or other building with four walls) to exceed the height of the tree canopy in woodland areas.

Viewsheds

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 113 The County shall review development proposed adjacent to or near public parklands to ensure that views from parks and trails are maintained.

Landscaping

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.

Alteration of Landforms

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 or 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.

Grading

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 of 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.

Utilities

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

Implementation Programs—Trees

Program 52 The County shall develop guidelines for tree replacement programs for new developments. The guidelines shall address, at a minimum, the conditions under which replacement will be required and the number, size, and type of trees to be used as replacement trees. Replacement trees shall be selected for appearance, drought-tolerance, habitat value, fire retardance, and suitability to site conditions.

Implementation Programs—Landscaping

Program 53 The County shall establish landscape guidelines for both urban and rural development. The guidelines shall include a list of extremely invasive non-native plants not suitable for use in landscaping.

Alameda County Ordinance Code

The County Zoning Map zones the project site as Agricultural. The proposed project would create residential development standards that would be approved by the County, shown in Table 2-1. Furthermore, the following Agricultural Zoning standards apply to the aesthetics of the project site:

Chapter 17.06—A Districts

The intent of the A District is to allow “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 for the general welfare.”⁵ The A district has the following standards relating to aesthetics:

17.06.080—Signs

No sign in an A district shall be illuminated. No more than two sale or lease signs shall be placed on any lot, and no such sign shall have an area in excess of twenty-four (24) square feet, except in conformance with Sections 17.52.460 and 17.52.470 (Subdivision). In other respects, Section 17.52.020 shall control.

In addition, the Alameda County Ordinance Code establishes the following ordinances related to aesthetics:

Chapter 12.11—Regulation of Trees in County Right-of-Way

Chapter 12.11 of the Alameda County Ordinance Code provides for the preservation and maintenance of street trees. The planting, maintenance, removal, or replacement of any tree located in the right-of-way between the private property line and the edge of the paved street shall be the responsibility of the adjacent property owner on whose frontage the tree is located irrespective of who planted said tree. The Director of the Alameda County Public Works Agency shall have the authority to monitor, inspect, maintain, remove, plant, or repair any tree located in the right-of-way, if necessary to further the goals of this chapter and/or protect the public health, safety, or welfare.

3.1.4 - Methodology

Approach to Analysis

This analysis provides a discussion of the visual impacts associated with the proposed project and the area surrounding the project site. Several variables affect the degree of visibility, visual contrast, and ultimately project impacts: (1) scale and size of facilities, (2) viewer types and activities, (3) distance and viewing angle, and (4) influences of adjacent scenery or land uses. Viewer response and sensitivity vary depending on viewer attitudes and expectations.

As part of this analysis, FirstCarbon Solutions (FCS) conducted a field visit of the project site to observe and document the existing visual quality and character of the project site as well as the surrounding areas. The General Plan and Ordinance Code were also evaluated to determine applicable policies and design requirements for the proposed project. Additionally, FCS developed 12 exhibits that visually simulate the proposed project’s shadow on adjacent, existing residences west of the project site so that potential impacts to solar panels located on the roofs of adjacent existing development could be evaluated. These visual simulations are contained in Exhibits 3.1-1 through 3.1-12.

⁵ County of Alameda. 2010. Alameda County Ordinance Code, Chapter 17.06 – A Districts. Website: https://library.municode.com/ca/alameda_county/codes/code_of_ordinances?nodeId=TIT17ZO_CH17.06ADI. Accessed February 26, 2024.

Light and Glare

The analysis of light and glare impacts in this section focuses on the nature and magnitude of changes in light and glare conditions of the project site and surrounding area. If the light and glare conditions of the proposed project and the existing environment are similar, then the visual compatibility would be high. If the light and glare conditions of the proposed project strongly contrast with the existing light and glare or applicable policies and guidelines, then light and glare compatibility would be low and significant impacts may result. Relevant urban design policies and guidelines are used to provide conclusions regarding the significance of project- and cumulative-level light and glare impacts.

3.1.5 - Thresholds of Significance

The lead agency utilizes the criteria in the CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts to aesthetics are significant environmental effects.

Except as provided in Public Resources Code Section 21099, would the project:

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

3.1.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where appropriate.

Scenic Vistas

Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.

The County does not have quantitative thresholds for evaluation of aesthetics; however, a significant impact may result if the proposed project would block existing views from a County-designated scenic roadway toward a County-designated scenic resource (e.g., ridgeline).

There are no scenic resources, as defined by the General Plan and ECAP, located on the project site. The nearest designated scenic resource to the project site is Lake I from the Zone 7 Chain of Lakes community separator, adjacent to the northern boundary of the project site. While Lake I is in close proximity to the project site, there is no public access to the designated scenic resource. As such, the

resource can only be viewed from adjacent properties. The proposed project would not construct development that would obstruct views of Lake I from adjacent development because the proposed project would have a maximum height of approximately 30 feet. Additionally, the proposed project would be located approximately 295 feet from Lake I. As such, the proposed project would not have a substantial adverse effect on the scenic vistas associated with the Zone 7 Chain of Lakes scenic resource.

The nearest ridgelines are the Happy Valley ridgelines, located approximately 2.44 miles south of the project site. The nearest scenic roadways designated by Caltrans or by the General Plan Scenic Route Element are I-580, which is approximately 1.37 miles north of the project site, and SR-84, which is approximately 2.70 miles east of the project site. Because of the distance and intervening development, the project site is not visible from either of these scenic routes.^{6, 7}

Construction

Construction equipment would be present on the project site intermittently throughout the construction period and could be visible from scenic resources, such as Lake I, although since its presence would be temporary, it would not result in a substantial impact to views from any scenic resources or routes. As the project site does not contain any designated scenic resources and is not visible from the nearest designated scenic routes, I-580 and SR-84, grading and removal of existing vegetation would not impact existing views within the project vicinity. Therefore, there would be no impacts related to construction of the proposed project on scenic resources.

Operation

The ECAP and General Plan Scenic Route Element contain provisions to prohibit development on scenic ridges, hillsides, and rock outcroppings where structures would interrupt the aesthetic landscape of the area. The ECAP contains further provisions that ensure that grading and landscaping of development projects do not alter the visual characteristics of the local area. The project site does not contain any scenic ridges, hillsides, rock outcroppings, or other designated scenic resources. While the proposed project would raise the project site by approximately 6 feet adjacent to the western boundary of the project site, the proposed project would include a retaining wall and good neighbor wall to minimize impacts relate to existing visual characteristics of the site. As such, implementation of the proposed project would not result in a substantial adverse effect on a scenic vista.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

⁶ County of Alameda. 1966. Scenic Route Element of the General Plan. May.

⁷ California Department of Transportation (Caltrans). 2023. State Scenic Highway Map. Website: <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>. Accessed February 26, 2024.

Scenic Highways

Impact AES-2: **The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state Scenic Highway.**

Construction

A significant impact would occur if construction of the proposed project would substantially damage scenic resources within a designated scenic highway. There are no officially designated State Scenic Highways or County scenic roadways in or adjacent to the project site. The nearest officially designated State Scenic Highway is I-680, located approximately 3 miles west of the project site. The nearest highway eligible for State Scenic Highway designation is I-580, located approximately 1.37 miles north of the project site. Given the distance of the project site to these resources and the intervening development, the proposed project would not impact resources within a designated highway. Thus, demolition, grading, and other construction activities would not result in adverse impacts to scenic resources within a designated State Scenic Highway. Therefore, no temporary construction impact related to scenic resources within a State Scenic Highway would occur.

Operation

A significant impact would occur if the operation of the proposed project would substantially damage scenic resources in a designated scenic highway. As stated above, there are no officially designated State Scenic Highways or County scenic roadways in or adjacent to the project site, and the nearest officially Designated State Scenic Highway is I-680, located approximately 3 miles west of the project site. Given the absence of scenic highways proximate to the project site, the lack of designated scenic resources (i.e., ridgelines, hillsides, rock outcroppings) on the project site, and the presence of intervening development between the project site and the nearest scenic highways, the proposed project would not adversely affect resources in a State Scenic Highway. Thus, there would be no impacts with respect to scenic resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Visual Character

Impact AES-3: **The proposed project would not, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, the project would not conflict with applicable zoning and other regulations governing scenic quality.**

The County does not have quantitative thresholds for evaluation of aesthetics; however, the proposed project may have a significant impact if it would be inconsistent with the character of the plan area or existing development in the surrounding area or would substantially alter existing natural topography.

Construction

Construction of the proposed project would include vegetation removal, soil removal and fill, and grading. Construction would also include certain street and utility-related off-site improvements (frontage sidewalk, curb and gutter improvements, bicycle lane improvements, and landscaping improvements), along with off-site water storage and wastewater and stormwater treatment facility improvements. Thus, the construction could temporarily affect the existing visual character, quality, and natural topography of the project site and area.

The project area displays residential characteristics to the west and northwest and industrial characteristics to the south and southwest. Thus, construction activities would temporarily affect existing visual character or quality of the project site and area, especially adjacent to the residential area along the western boundary of the project site. However, the temporary effect of construction of the proposed project would be similar in visual character to the existing industrial operations of the Pleasanton Garbage Transfer Station and private industrial uses south of the project site and to the public utility uses from the Pleasanton Water Services and the LPPD west of the project site. Furthermore, the project site is relatively flat. While the proposed project would raise the project site by approximately six feet adjacent to the western boundary of the project site, the proposed project would include a retaining wall and good neighbor wall to minimize impacts relate to existing visual characteristics of the site. Therefore, construction-related impacts related to degradation of existing visual character, quality, or natural topography of the project site and area would be temporary and less than significant.

Operation

Although the proposed project is located in an urban area, the analysis of operational impacts addresses both consistency with zoning and other regulations governing scenic quality, as well as changes to the existing visual character and quality.

As previously stated, the project site is currently vacant. As a result of the proposed project, the project site would be developed with 194 single-family residential units, internal public streets, a 0.7-acre park, and approximately 0.5 mile of walking trails. The proposed units would be between 26 and 30 feet in height, and the exteriors of the buildings would be composed of standard home-construction materials, such as vinyl, metal, glass, and cement, with exterior color palettes ranging between whites, grays, and browns; blues, grays, yellows, stone, and terracotta; and brighter greens, blues, and reds. Existing residential development in the area consists of single-family residences with similar construction and color palettes. Therefore, the proposed project would be consistent with the character of the surrounding area as it continues to transition toward higher-density multi-family residential uses.

The General Plan designates the site as Medium Density Residential (MDR), which allows for a residential unit density range of 4.1 to 8.0 units per gross acre.⁸ The proposed project would have a density of 7.3 units per gross acre and would thus comply with the applicable, objective provisions of

⁸ County of Alameda. 2023. Unincorporated Alameda County Public Access Map (PAM). Website: <https://acpwa.maps.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773>. Accessed February 26, 2024.

the MDR land use designation. The project site is also zoned as Agriculture (A) by the County Zoning Map.⁹ The County's A zoning designation is inconsistent with the MDR land use designation for purposes of the Housing Accountability Act, in that it does not allow residential development at a density greater than one primary dwelling unit per lot with a minimum lot size of 100 acres. As such, the applicant would utilize site-specific residential development standards, as preliminarily established in Table 2-1, subject to County project approval. As described in Chapter 2, Project Description, remaining residential standards would be derived from development standards established by the County for the R-1 Zoning District. These standards would include design requirements such as limits on setbacks. This would ensure that the buildings would have visual characteristics compatible with adjoining development, in accordance with Policy 115 of the ECAP. In addition, the design of the proposed residences provides for a harmonious composition of mass, scale, color, and textures.

While the proposed project would raise the project site by approximately six feet adjacent to the western boundary of the project site, the proposed project would include a retaining wall and good neighbor wall to minimize impacts relate to existing visual characteristics of the site. The proposed project also includes implementation of a landscaping plan, including the planting of approximately 330 trees and hundreds of shrubs, vines, and groundcover to replace trees proposed for removal, in accordance with a County-approved tree replacement program and Policy 110 of the ECAP. Furthermore, the proposed project would construct a 0.7-acre central park to provide visual character, recreational uses, and park space for both residents of the proposed project and the wider local community. This would align with Policy 62 of the ECAP and would also aid in enhancing the scenic views from the proposed project, as desired by various policies established in the General Plan Scenic Route Element. Therefore, impacts related to consistency with applicable scenic quality regulations and visual quality and character would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Light and Glare

Impact AES-4: The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The County does not have quantitative thresholds for evaluation of aesthetics; however, the following qualitative thresholds are used to evaluate the significance of aesthetics impacts resulting from implementation of the proposed project:

⁹ County of Alameda. 2023. Unincorporated Alameda County Public Access Map (PAM).
Website: <https://acpwa.maps.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773>. Accessed February 26, 2024.

- Increase existing nighttime light or daytime glare sources in the plan area or vicinity in a manner that would substantially affect nighttime or daytime views.
- Reduce sunlight or introduce shadows to public parks and plazas, routinely usable outdoor spaces associated with recreational land uses, pedestrian-oriented commercial spaces such as outdoor eating areas, and existing solar facilities.

Construction

Impacts related to degradation of existing light and glare of the project site and area are limited to operational impacts. No respective construction impacts would occur.

Operation

Excessive or inappropriately directed lighting can adversely affect nighttime views by reducing the ability to see the night sky and stars. Glare can be derived from unshielded or misdirected lighting sources. Reflective surfaces (i.e., polished metal) can also cause glare. Impacts associated with glare range from simple nuisance to potentially dangerous situations (i.e., if glare is directed into the eyes of motorists). Light-sensitive land uses in the area may include the residential neighborhood to the west of the project site. A significant impact would occur if substantial light or glare would adversely affect nighttime or daytime views, respectively, in the area.

The project site is currently undeveloped and does not contain existing sources of light and glare. The proposed project would result in 194 single-family residential units and 49 accessory dwelling units (ADUs) with associated windows, as well as exterior lighting and signage. The proposed project also includes off-site improvements east of the residential component. As noted in the existing setting section, the project site is surrounded by residential uses, industrial uses, public services and utilities facilities, and open space. The existing residential and industrial uses contribute to the existing daytime glare and nighttime lighting of the area. The proposed project would result in the development of residential uses and off-site improvements that would include nighttime security lighting consistent with surrounding uses. Exterior lighting would be located around and within the project site and off-site components. Potential sources of light associated with the proposed project would consist of typical sources of lighting associated with a residential development and from vehicles traveling to and from the project site as well as minimal security lighting on the proposed water pump and booster station and sewer treatment plan and no lighting associated with the bioretention areas and recycled water storage facility. Lampposts would be evenly dispersed within the residential component of the proposed project, with safety lighting as needed throughout the site. In accordance with Policy 115 of the ECAP, all exterior lighting would be designed, located, and shielded to confine direct rays of light to the project site. Furthermore, the proposed project would comply with the California Building Code, which regulates lighting characteristics, such as maximum power, brightness, and shielding. Therefore, lighting impacts would be less than significant.

Glare resulting from the proposed residences' windows would be minimal and would be partially obscured by landscaping, depending on the time of day and the location of the reflecting light source. Furthermore, residential glass typically has a low reflectivity rate. Glare may also occur from on-site vehicles; however, such glare would be transient, depending upon the time of day and location of the vehicle. The proposed project would also comply with all applicable State regulations

relating light and glare, including regulations in Title 24 of the California Code of Regulations Building Energy Efficiency Standards California Building Code (CCR Title 24), including Title 24, Part 6, and Section 132 of the Building Energy Efficiency Standards, which regulates lighting characteristics, such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. As such, the proposed project would have a less than significant impact on glare, and no mitigation would be necessary.

Shadow Study

As previously discussed, visual simulations analyzing shadow impacts from the proposed project were developed and are included as Exhibits 3.1-1 through 3.1-12 in this section of the Draft EIR. During the EIR NOP scoping period, eight commenters expressed concern that the proposed residential development would cast shadows throughout the day that would interfere with or reduce the efficiency of solar energy systems located on the roofs of existing residences adjacent to the proposed project's western boundary. To analyze this potential impact, FCS prepared a shadow study comparing the net new shadow that would occur as a result of the proposed project's development. FCS prepared visual simulation diagrams that focus on four parcels adjacent to the residential component of the project site, showing the site in plan-view over the course of the day (9:00 a.m., noon, and 3:00 p.m.) on four days of the year: the spring equinox, summer solstice, fall equinox, and winter solstice. The study consisted of a series of plan-views showing computer-generated shadows of the proposed project and the immediate surrounding area, computer-generated shadows of the existing conditions, and a juxtaposition showing new shadows superimposed over existing shadows for a visual representation of net new shadows. The results of this study are demonstrated in Exhibits 3.1-1 through 3.1-12.

Fall Equinox

The existing shadows and shadows from the proposed project during the fall equinox are demonstrated on Exhibits 3.1-1 through 3.1-3. As shown in these exhibits, simulated shadows from the proposed project would not create any significant net new shadow on the roofs of adjacent homes in the morning and would result in no shadow at all on adjacent properties by noon and 3:00 p.m. during the fall equinox. Additionally, the proposed project would result in no shadow on the roofs of adjacent houses or their associated solar systems by approximately 9:30 a.m. during the fall equinox. Although shadows would minimally obscure the small portions of roofs of adjacent homes during the morning hours, shadows created by the proposed project would not significantly cover the roofs of adjacent houses or partially/fully obscure their associated solar energy systems. Therefore, shadows created by the proposed project would not impact nearby solar energy systems.

Spring Equinox

The existing shadows and shadows from the proposed project during the spring equinox are demonstrated on Exhibits 3.1-4 through 3.1-6. As shown in these exhibits, simulated shadows from the proposed project would not create any significant net new shadow on the roofs of adjacent homes in the morning and would result in no shadow at all on adjacent properties by noon and 3:00 p.m. during the spring equinox. Additionally, the proposed project would result in no shadow on the roofs of adjacent houses or their associated solar systems by approximately 9:45 a.m. during the spring equinox. Although shadows would minimally obscure the small portions of roofs of adjacent

homes during the morning hours, shadows created by the proposed project would not significantly cover the roofs of adjacent houses or partially/fully obscure their associated solar energy systems. Therefore, shadows created by the proposed project would not impact nearby solar energy systems.

Summer Solstice

The existing shadows and shadows from the proposed project during the summer solstice are demonstrated on Exhibits 3.1-7 through 3.1-9. As shown in these exhibits, simulated shadows from the proposed project would result in no shadow at all on adjacent roofs during the morning, noon, or afternoon during the summer solstice. Therefore, shadows created by the proposed project would not impact nearby solar energy systems.

Winter Solstice

The existing shadows and shadows from the proposed project during the winter solstice are demonstrated on Exhibits 3.1-10 through 3.1-12. As shown in these exhibits, simulated shadows from the proposed project would not create any significant net new shadow on the roofs of adjacent homes in the morning and would result in no shadow at all on adjacent properties by noon and 3:00 p.m. during the winter solstice. Additionally, the proposed project would result in no shadow on the roofs of adjacent houses or their associated solar systems by approximately 9:45 a.m. during the winter solstice. In many cases, potential new shadows overlap with existing shadows cast by other parts of roofs of the adjacent properties. Although shadows would minimally obscure the small portions of roofs of adjacent homes during the morning hours, shadows created by the proposed project would not significantly cover the roofs of adjacent houses or partially/fully obscure their associated solar energy systems. Therefore, shadows created by the proposed project would not impact nearby solar energy systems.

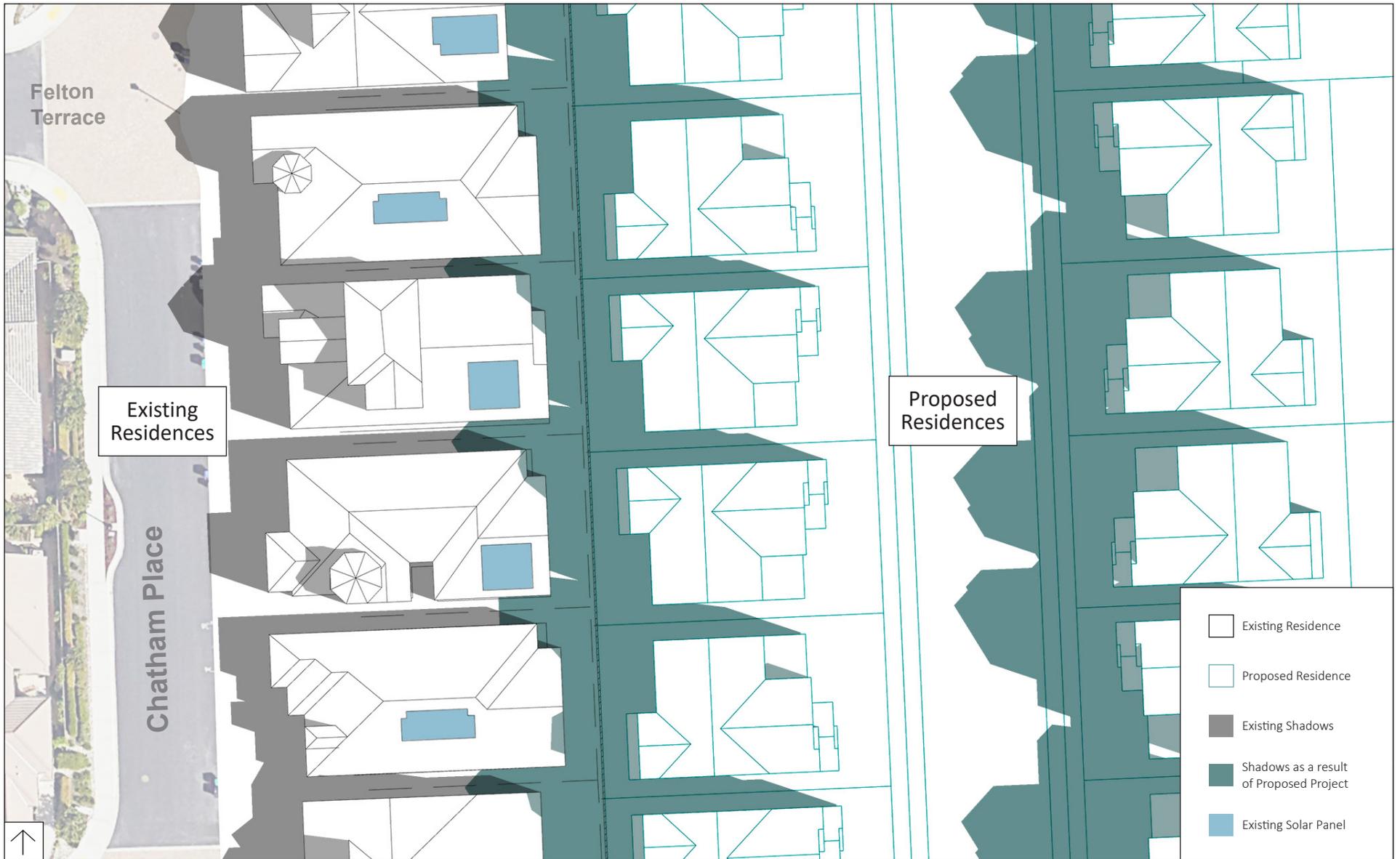
In summary, the shadow study concluded that the proposed project would not have a significant impact on solar energy systems on adjacent homes. The off-site components of the proposed project are not located adjacent to any existing development, with the exception of the Zone 7 maintenance facility located east of the proposed water storage and booster pump facility, which does not include any residential or commercial uses. As previously discussed, lighting on the off-site improvements would be limited to minimal security lighting. Building materials utilized on the off-site improvements do not have the potential to produce any substantial daytime glare. Therefore, the proposed off-site improvements are not expected to produce any substantial impact related to light and glare. Furthermore, as the proposed off-site improvements are not located near any of the existing residences west of the project site, they do not have the potential to impact solar energy systems. Therefore, impacts related to light and glare, including shadow, are less than significant.

Level of Significance Before Mitigation

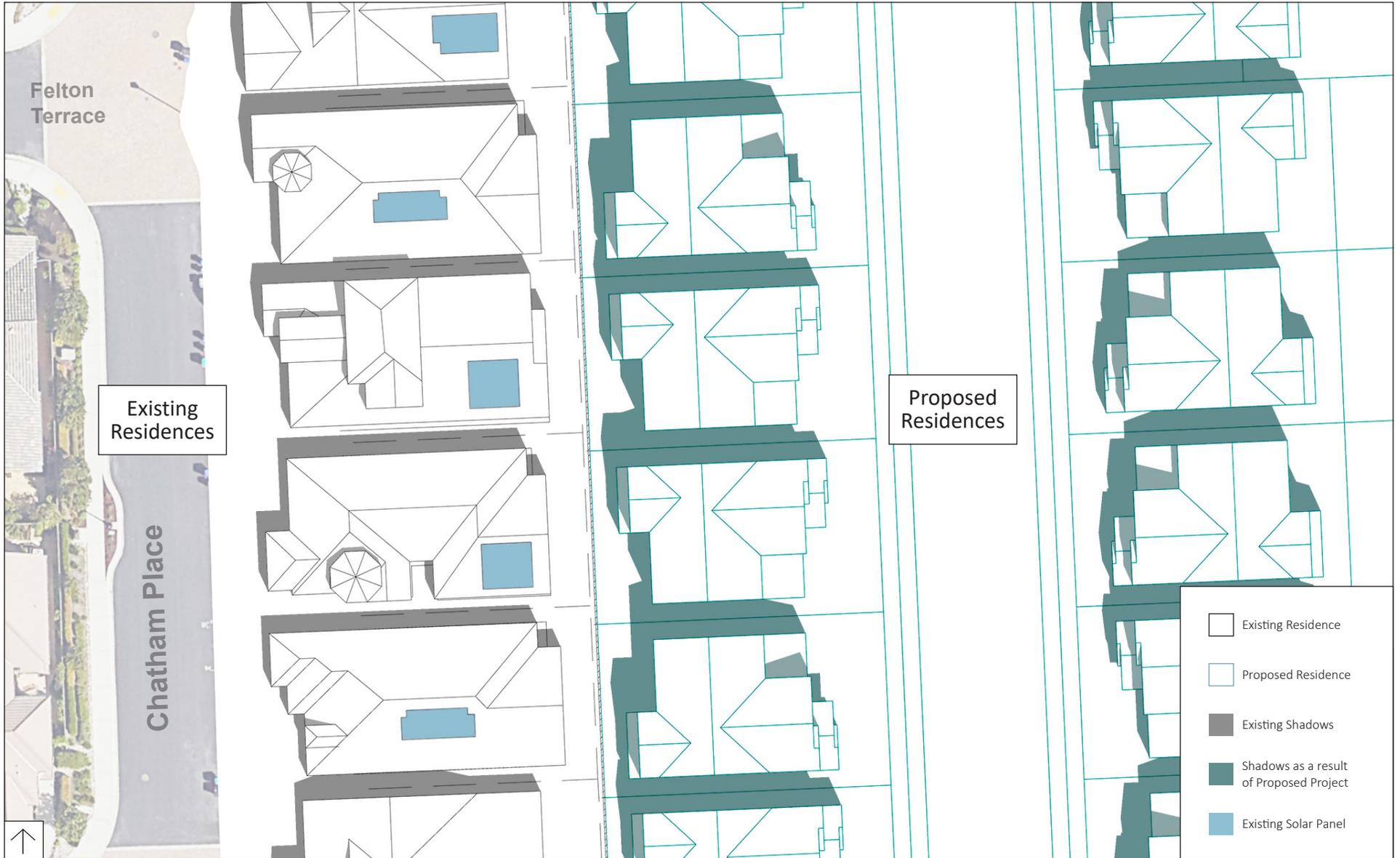
Less than significant impact.

Mitigation Measures

None required.



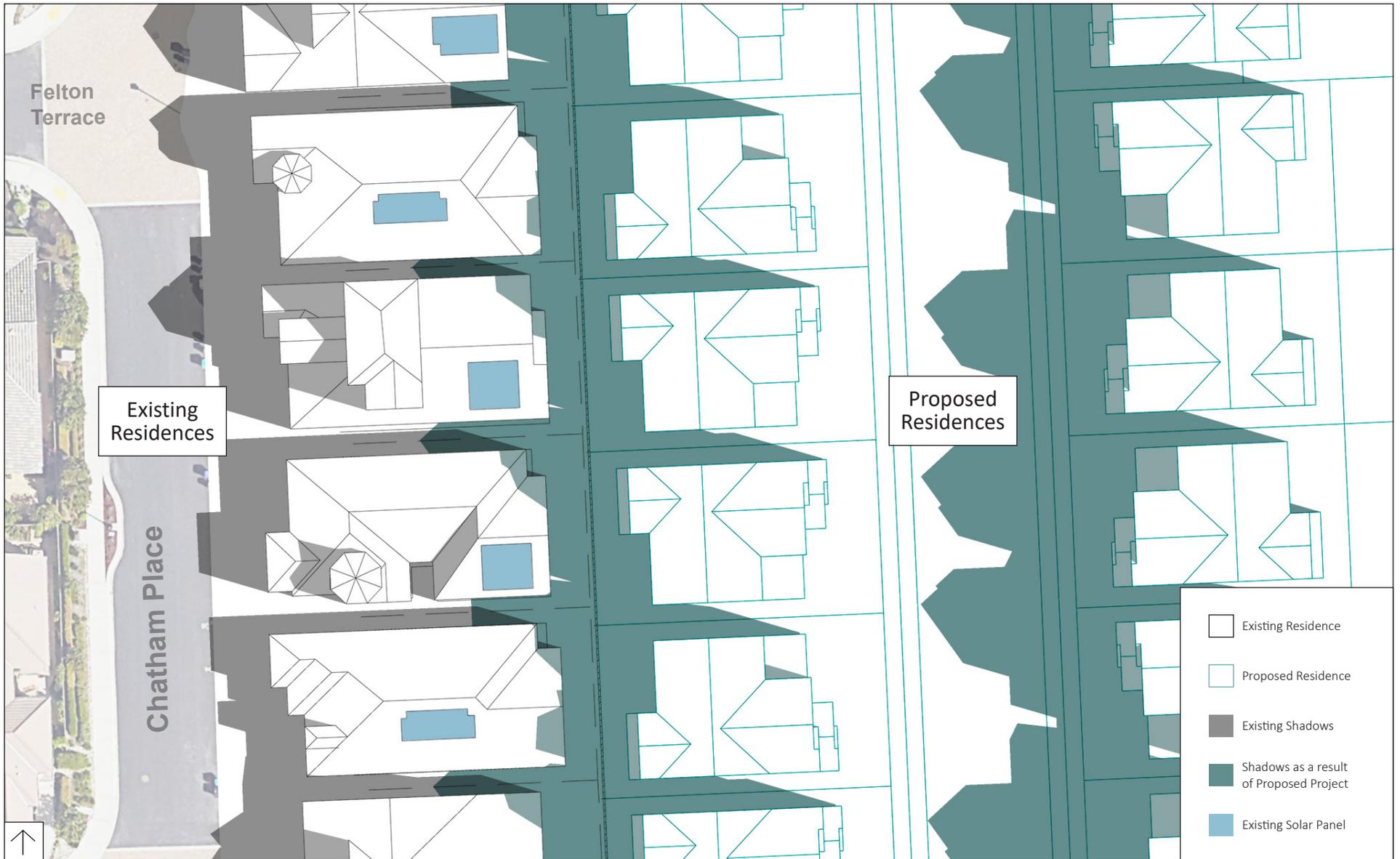
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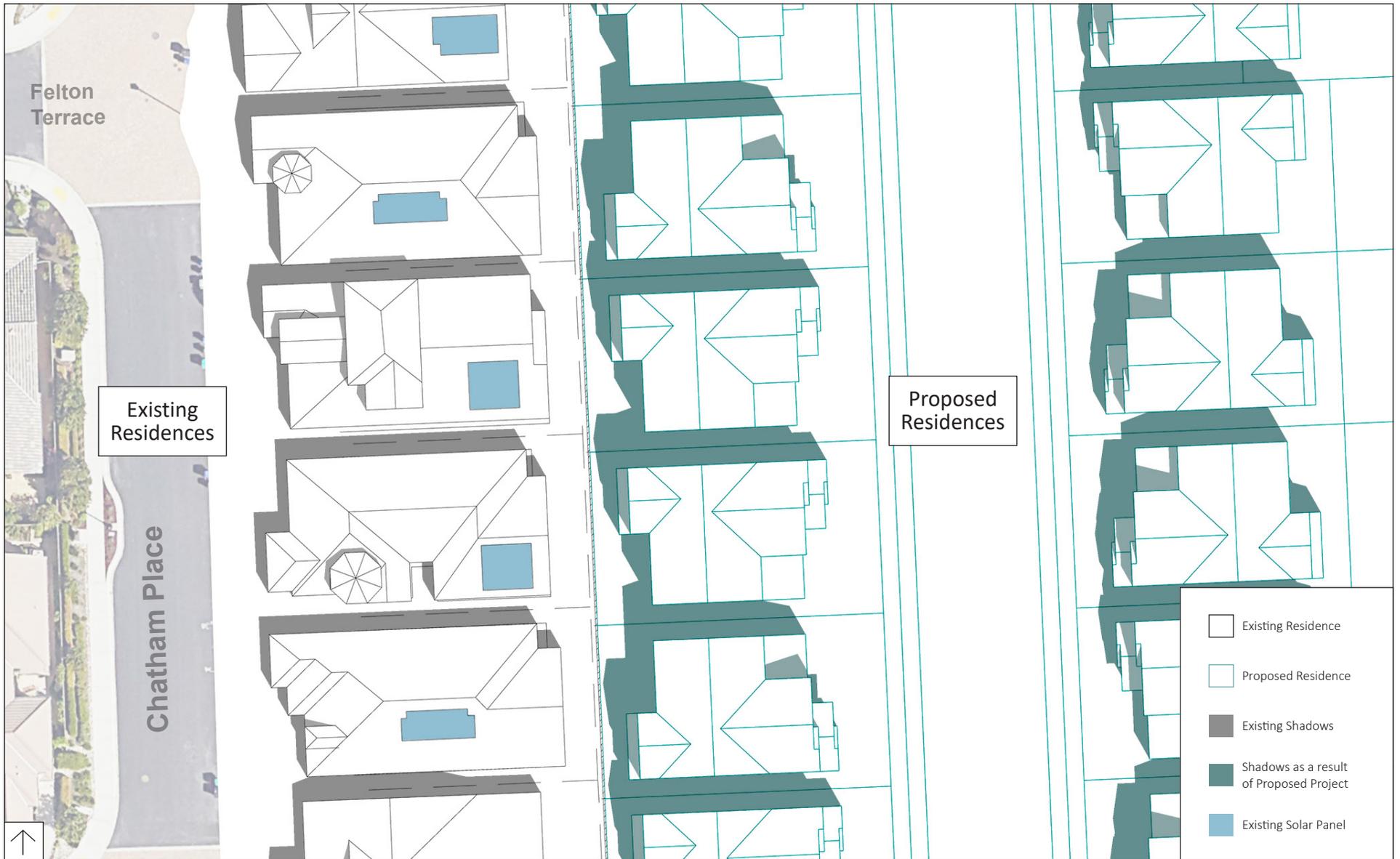
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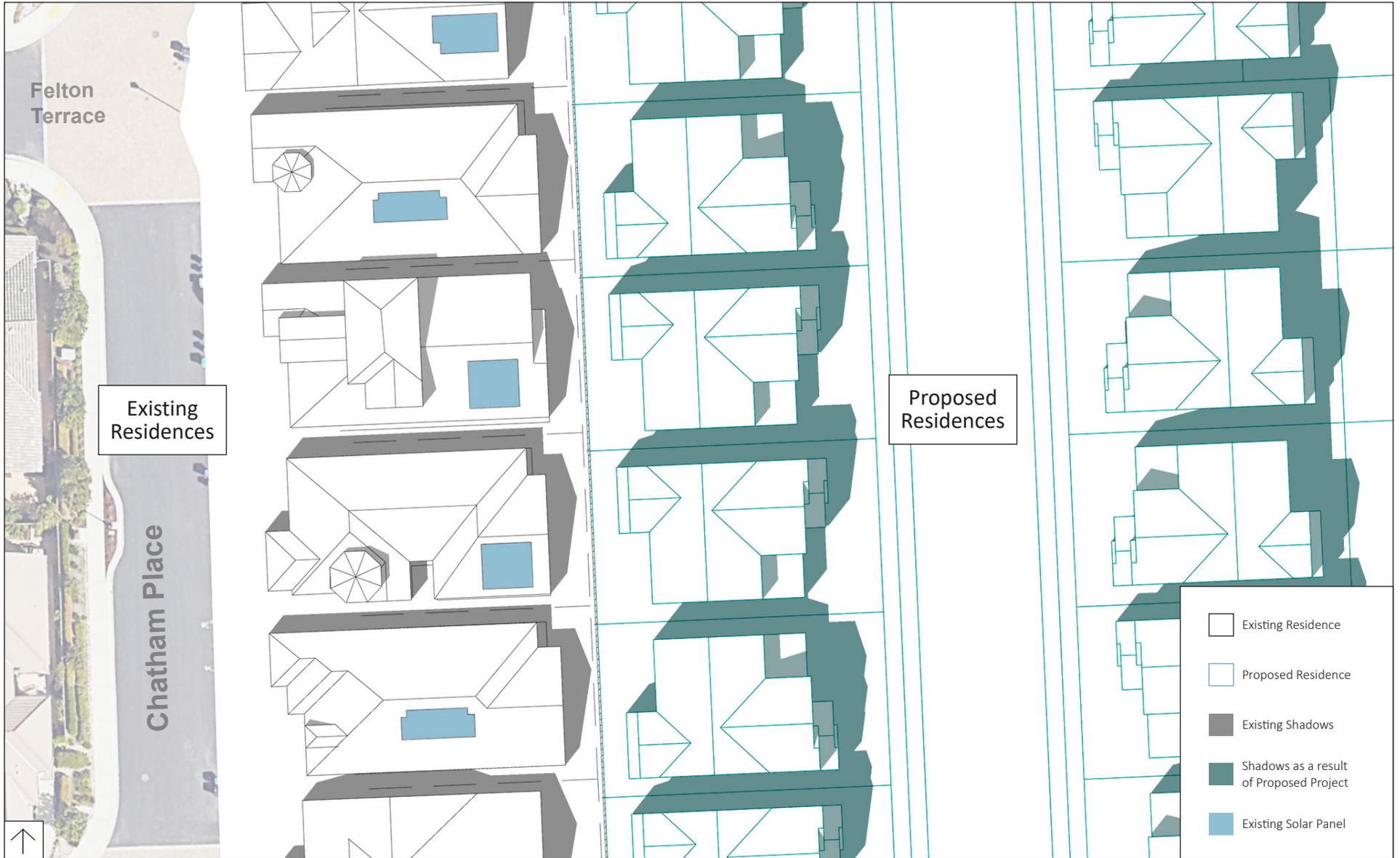
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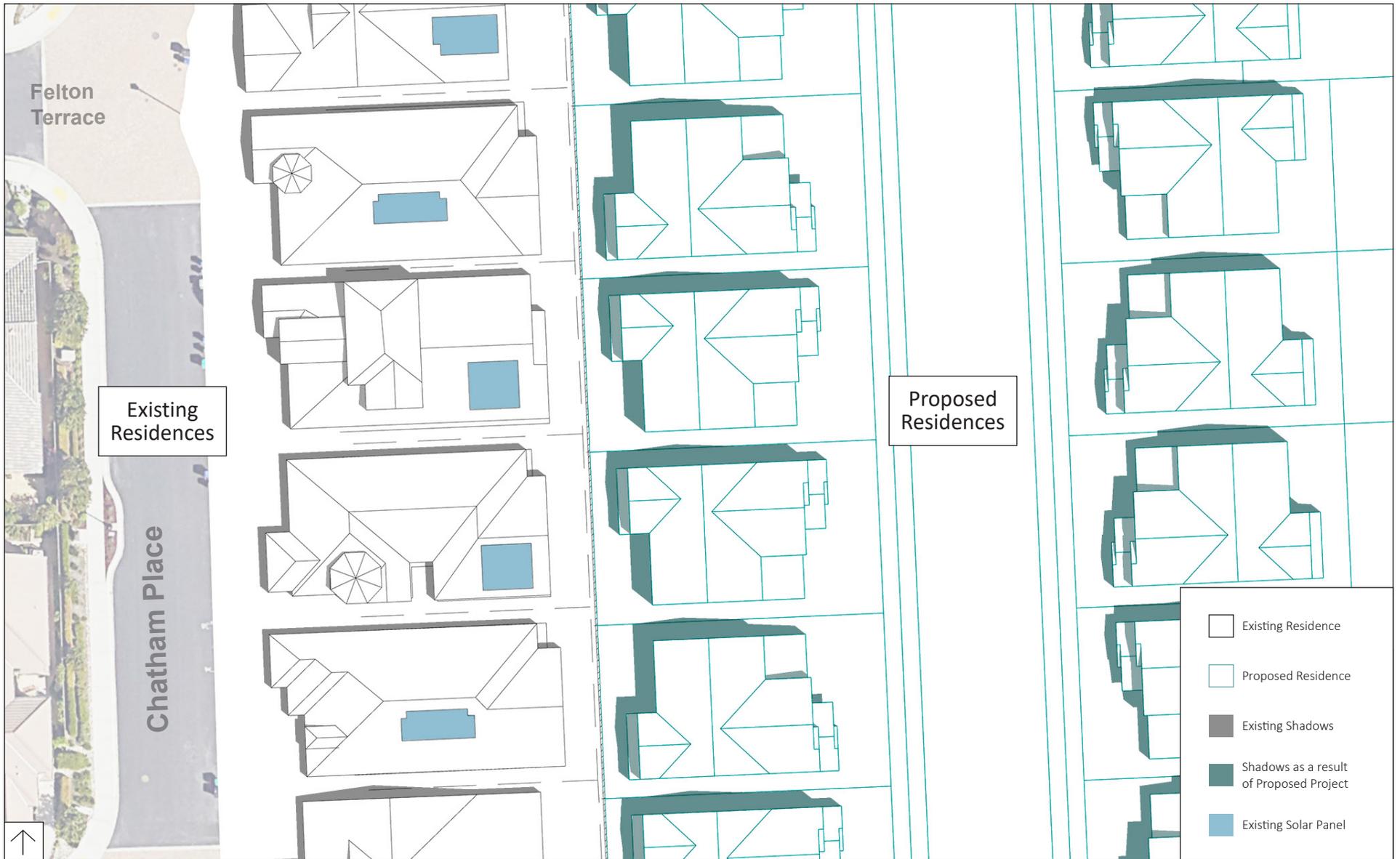
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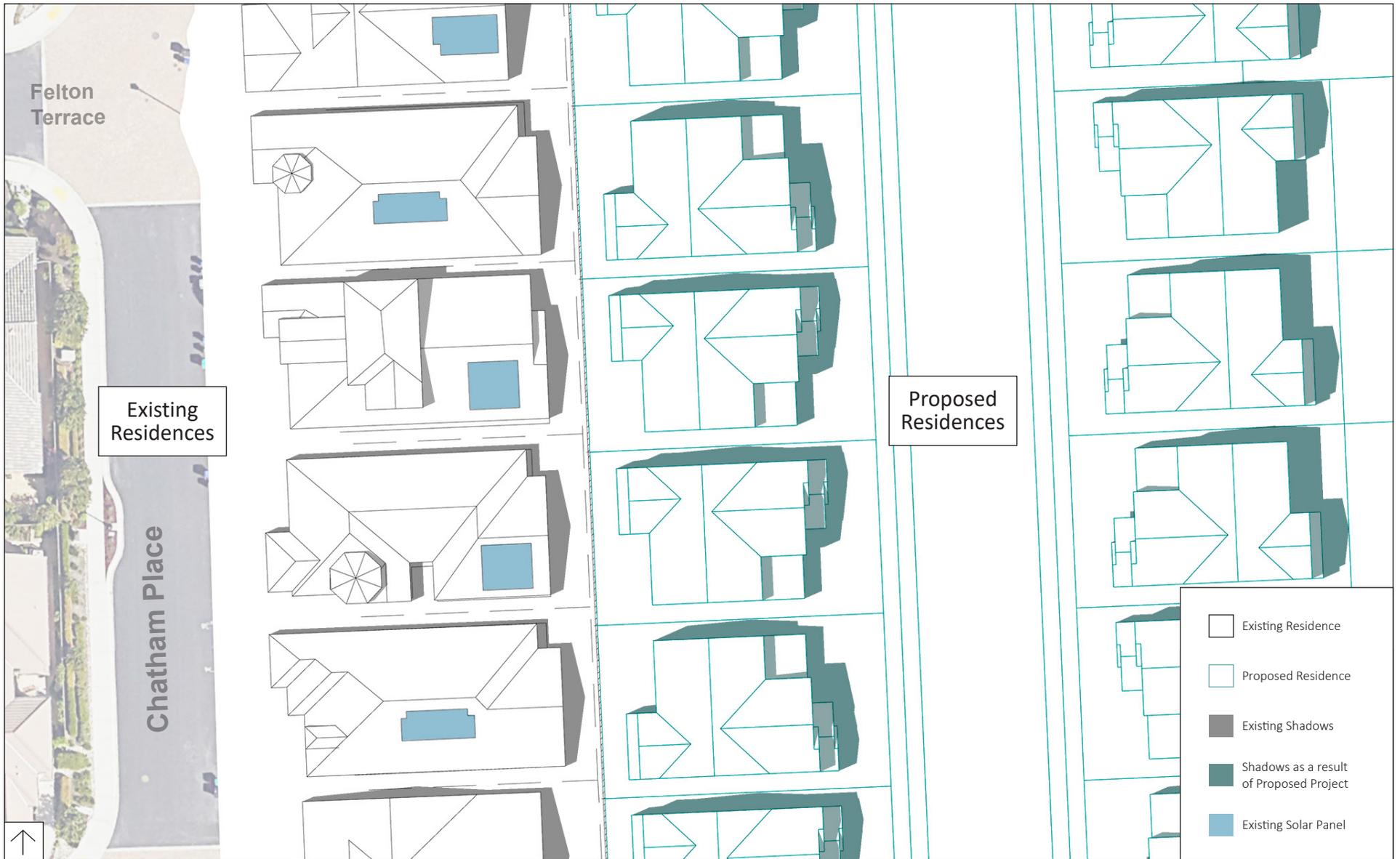
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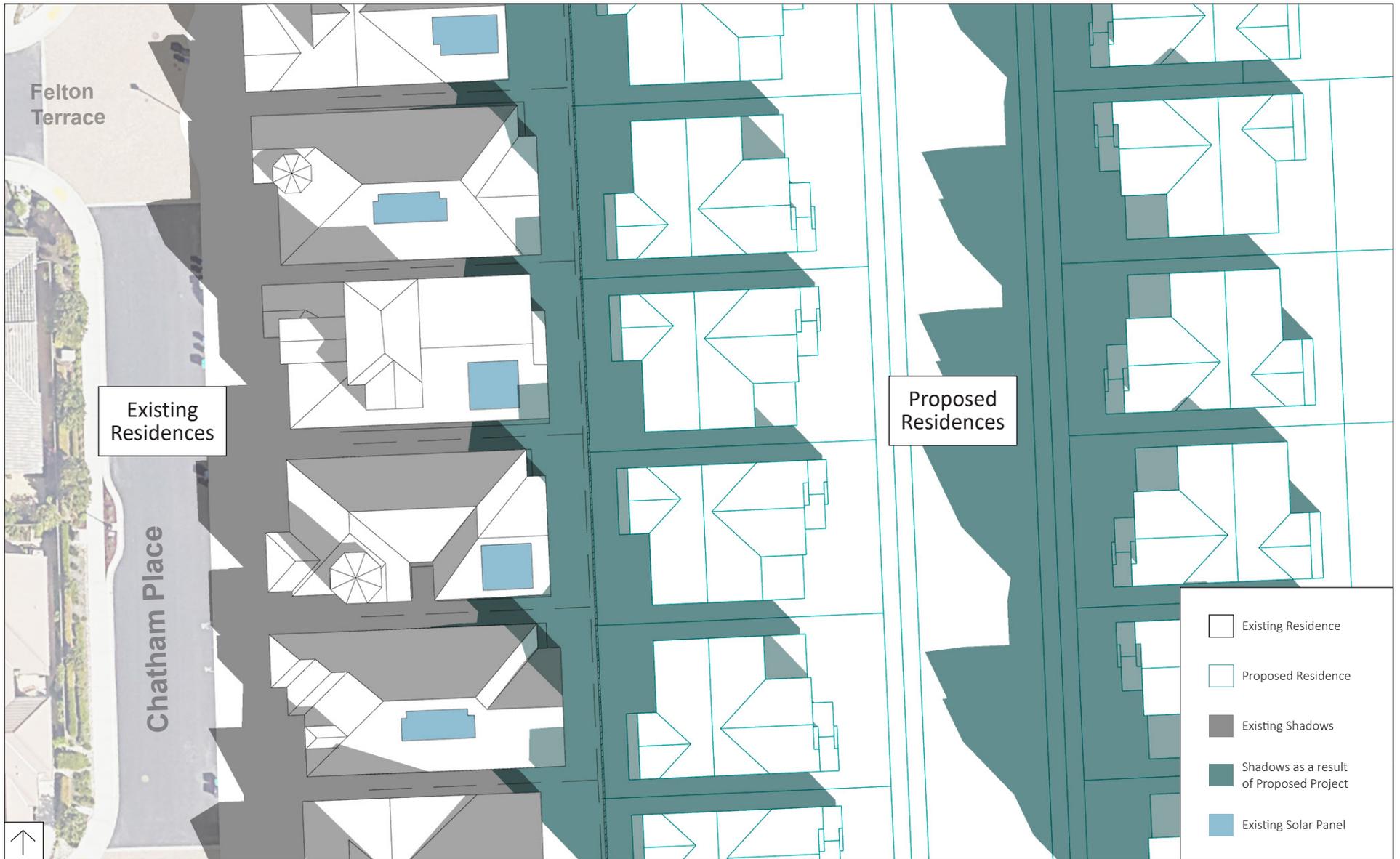
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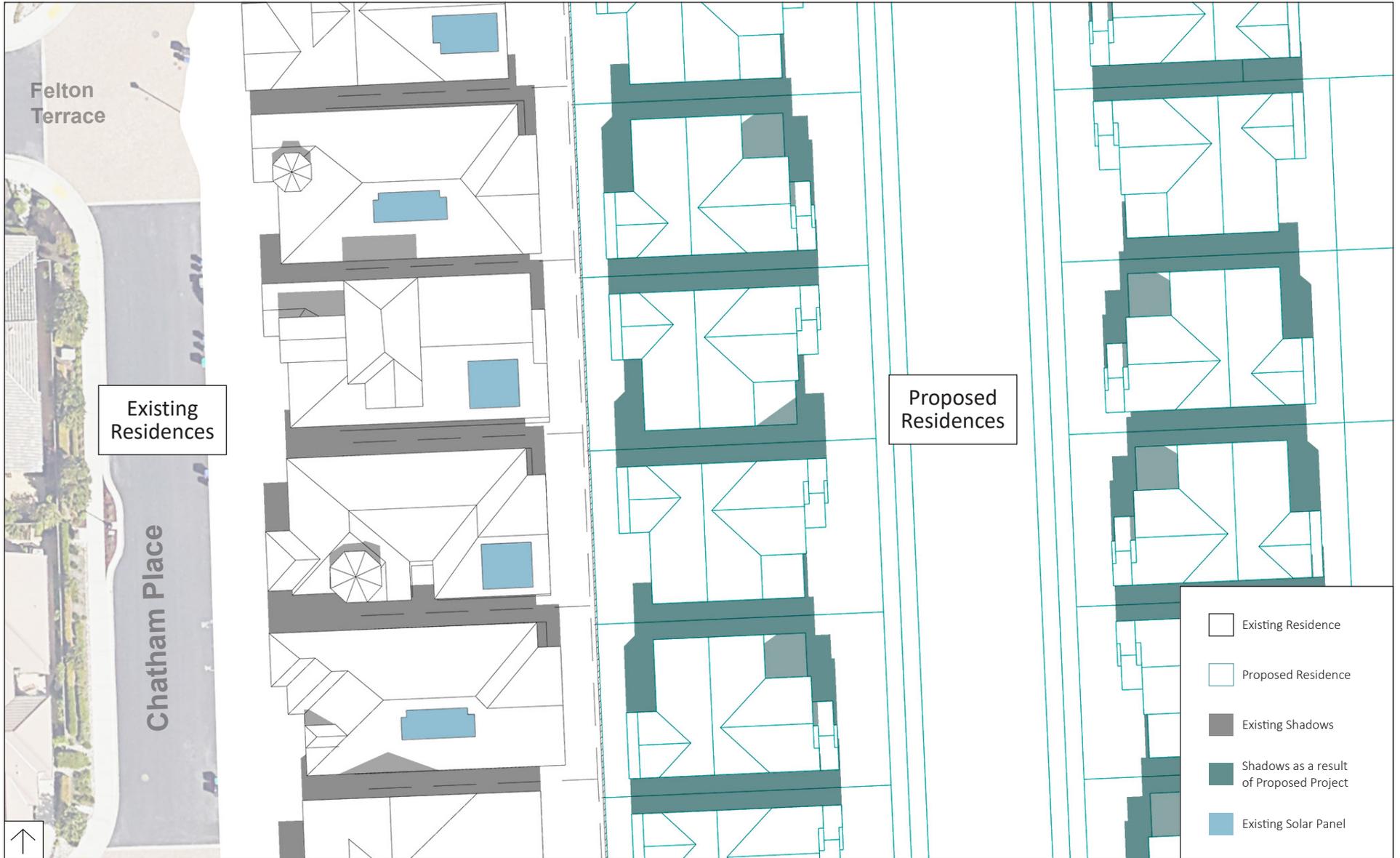
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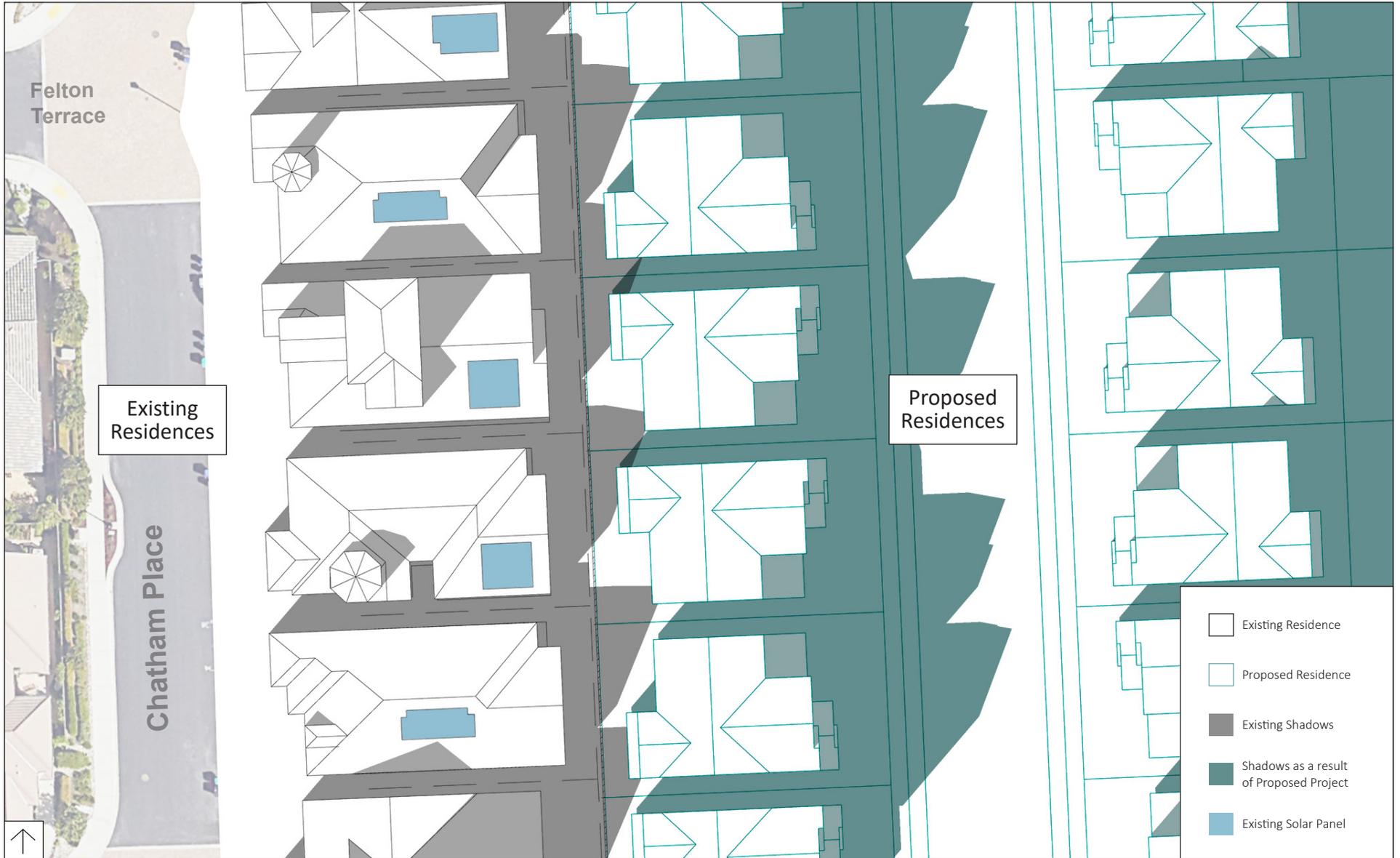
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3.1.7 - Cumulative Impacts

The geographic scope of the cumulative aesthetics analysis is the visible area surrounding the project site. The analysis also considers the foreseeable development projects listed in Table 3-1 (See Chapter 3, Environmental Setting) in the unincorporated County and surrounding cities that would be visible from the project site in addition to the proposed project.

Scenic Vistas

The cumulative project area ranges from urban to rural. The project site is located near industrial uses and lakes and is also immediately adjacent to residential uses in the City of Pleasanton. Cumulative projects could result in cumulative impacts related to scenic vistas if they block or significantly obscure scenic vistas. As described in Impact AES-1, the ECAP does not identify scenic vistas on the project site or within its viewshed. Therefore, there would be no cumulative impacts. Moreover, the proposed project would have no impact and, therefore, would not have any contribution to cumulative impacts.

Scenic Highways

There are no designated State Scenic Highways within the vicinity of the project site, and the nearest officially Designated State Scenic Highway is I-680, located approximately 3 miles west of the project site. Therefore, there would be no cumulative aesthetic impacts with respect to eligible scenic highways. Moreover, the proposed project would have no impact and, therefore, would not have any contribution to cumulative impacts.

Visual Character

As described in Impact AES-3, the project site is located adjacent to industrial and residential land uses. The proposed units would be between 26 and 30 feet in height and the exteriors of the buildings would be composed of standard home-construction materials, such as vinyl, metal, glass, and cement, with exterior color palettes ranging between whites, grays, and browns; blues, grays, yellows, stone, and terracotta; and brighter greens, blues, and reds. Existing residential development in the area consists of single-family residences with similar construction and color palettes. Therefore, the proposed project would be consistent with the character of the surrounding area as it continues to transition toward higher-density multi-family residential uses.

The applicant would utilize site-specific residential development standards, as preliminarily established in Table 2-1, subject to County project approval. As described in Chapter 2, Project Description, remaining residential standards would be derived from development standards established for the R-1 Zoning District. These standards would include design requirements such as limits on setbacks. This would ensure that the buildings would have visual characteristics compatible with adjoining development, in accordance with Policy 115 of the ECAP. In addition, the design of the proposed residences provides for a harmonious composition of mass, scale, color, and textures.

Therefore, there is no significant cumulative impact, and the proposed project's contribution would not be considerable. As such, the proposed project, in conjunction with other planned and approved projects, would result in a less than significant cumulative impact with respect to visual character.

Light and Glare

The proposed project and cumulative projects could increase light and glare in the geographic area. The proposed project and cumulative development would include streetlights, exterior lighting, safety lighting, lighting from vehicles, and sources of glare from buildings and vehicles. However, cumulative impacts would be less than significant because the majority of cumulative projects would be located in an already urbanized area and all cumulative projects would be subject to applicable regulations related to light and glare.

Additionally, cumulative development projects proposed would be required to adhere to the architectural, design, and lighting measures related to aesthetics and community design outlined in the applicable jurisdiction's General Plan and/or respective specific plan, if located therein. Therefore, cumulative impacts would be less than significant.

The proposed project's incremental contribution to light and glare would not be cumulatively considerable because it would not substantially contribute to the less than significant cumulative impact. The proposed project's exterior lighting would be consistent with neighboring developments and would maintain the existing character of the area. The proposed project's lighting would be shielded and directed downward to avoid trespass to the adjacent residential properties and to avoid obtrusive light or glare in the public right-of-way. The exterior materials are designed to minimize glare and impact, without the use of any highly reflective exterior materials. As such, the proposed project, in conjunction with other planned and approved projects, would result in a less than significant cumulative impact with respect to light and glare.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.2 - Air Quality

This section describes existing air quality conditions regionally and locally as well as the relevant regulatory framework. This section also evaluates the possible impacts related to air quality that could result from implementation of the proposed project. Information included in this section is based on project-specific air quality modeling results utilizing California Emissions Estimator Model (CalEEMod) Version 2022.1 and the United States Environmental Protection Agency (EPA) American Meteorological Society Regulatory Model (AERMOD) air dispersion model (Version 23132). Complete modeling output is provided in Appendix B.

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to air quality. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should analyze odor impacts associated with the Pleasanton Garbage Service facility as well as the proposed sewer treatment plant.
- The Draft EIR should evaluate potential air quality impacts with regard to the Operations Service Department located west of the project site.
- The Draft EIR should evaluate potential air quality impacts with regard to the Radum Quarry.
- The Draft EIR should describe how the proposed project will comply with East County Area Plan (ECAP) Policy 302.
- The Draft EIR should evaluate fugitive dust, grading, and soil disturbance impacts of construction on adjacent properties.
- The Draft EIR should analyze the potential for contaminants in landfill for the proposed project site.
- The Draft EIR should evaluate potential air pollutants, such as polyfluoroalkyl substances (PFAS), fugitive dust, and carbon compounds.
- The Draft EIR should provide studies of any filed documents or reports of contaminants.
- The Draft EIR should evaluate whether there would be an increased amount of harmful emissions from increased idling time for traffic and school pick-ups.
- The Draft EIR should analyze potential violation of air quality standards from burned trash or chemical stagnated trash.
- The Draft EIR should evaluate any potential air quality impacts from toxic gases and fumes.

3.2.1 - Environmental Setting

Regional Geography and Climate

Air quality is affected by the rate and location of pollutant emissions and by climatic conditions that influence the movement and dispersion of pollutants. Atmospheric conditions, such as wind speed,

wind direction, and air temperature gradients, along with local and regional topography, influence the relationship between air pollutant emissions and air quality.

The project site is in the San Francisco Bay Area Air Basin (SFBAAB), which consists of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma Counties. SFBAAB covers approximately 5,540 square miles of complex terrain, consisting of coastal mountain ranges, inland valleys, and the San Francisco Bay. The SFBAAB is generally bounded on the west by the Pacific Ocean, on the north by the Coast Ranges, and on the east and south by the Diablo Range.

The climate within the SFBAAB is dominated by a strong, semi-permanent, subtropical high-pressure cell over the northeastern Pacific Ocean. Climate is also affected by the adjacent oceanic heat reservoir’s moderating effects. Mild summers and winters, moderate rainfall and humidity, and daytime onshore breezes characterize regional climatic conditions in the San Francisco Bay Area (Bay Area). In summer, when the high-pressure cell is strongest and farthest north, fog forms in the morning and temperatures are mild. In winter, when the high-pressure cell is weakest and farthest south, occasional rainstorms occur.

Winter daytime temperatures in the SFBAAB typically average in the mid-50°F (degrees Fahrenheit), with nighttime temperatures averaging in the low 40s. Summer daytime temperatures typically average in the 70s, with nighttime temperatures averaging in the 50s. Precipitation varies in the region, but in general, annual rainfall is lowest in the coastal plain and inland valley, higher in the foothills, and highest in the mountains.

Air Pollutant Types, Sources, and Effects

Criteria Air Pollutants

Concentrations of criteria air pollutants are used as indicators of air quality conditions. Air pollutants are termed criteria air pollutants if they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. According to the EPA, criteria air pollutants are ozone, particulate matter (PM₁₀ and PM_{2.5}), nitrogen dioxide (NO₂), carbon monoxide (CO), lead, and sulfur dioxide (SO₂). Table 3.2-1 provides a summary of the types, sources, and effects of criteria air pollutants.

Table 3.2-1: Description of Criteria Pollutants of National and California Concern

Criteria Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Ozone	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), nitrous oxides (NO _x), and sunlight. Ozone is a regional pollutant	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO _x) are mobile sources (on-	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate

Criteria Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
	that is generated over a large area and is transported and spread by the wind.	road and off-road vehicle exhaust).	other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.
Particulate matter (PM ₁₀) Particulate matter (PM _{2.5})	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM ₁₀ refers to particulate matter that is between 2.5 and 10 microns in diameter, (one micron is one-millionth of a meter). PM _{2.5} refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.	<ul style="list-style-type: none"> • Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.
Nitrogen dioxide (NO ₂)	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO _x (NO, NO ₂ , NO ₃ , N ₂ O, N ₂ O ₃ , N ₂ O ₄ , and N ₂ O ₅). NO _x is a precursor to ozone, PM ₁₀ , and PM _{2.5} formation. NO _x can react with compounds to form nitric acid and related small particles and result in particulate matter (PM) related health effects.	NO _x is produced in motor vehicles, internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide forms quickly from NO _x emissions. NO ₂ concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contributions to atmospheric discoloration; increased visits to hospital for respiratory illnesses.
Carbon monoxide (CO)	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease

Criteria Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
	reduces available oxygen in the blood.	wood-burning, and natural sources.	and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.
Sulfur dioxide (SO ₂)	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 parts per million (ppm), the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO _x) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below State and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM ₁₀ .	Human caused sources include fossil fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethyl sulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.	Bronchoconstriction is accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.
Lead (Pb)	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded State or federal standards at any monitoring station since 1982.	Lead ore crushing, lead ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.

Sources:

California Office of Environmental Health Hazard Assessment (OEHHA). 2001. Health Effects of Diesel Exhaust. Website: <https://oehha.ca.gov/media/downloads/calenviroscreen/indicators/diesel4-02.pdf>. Accessed March 21, 2024.

National Archives and Records Administration. 2009. Part II, Environmental Protection Agency. 40 CFR Parts 50 and 58, Primary National Ambient Air Quality Standard for Nitrogen Dioxide; Proposed Rule. July 15. Website: <https://www.gpo.gov/fdsys/pkg/FR-2009-07-15/pdf/E9-15944.pdf>. Accessed March 21, 2024.

National Toxicology Program. 2021. Report on Carcinogens, 15th Edition; U.S. Department of Health and Human Services, Public Health Service. Benzene. Website: <https://ntp.niehs.nih.gov/sites/default/files/ntp/roc/content/profiles/benzene.pdf>. Accessed March 21, 2024.

National Toxicology Program. 2016. Report on Carcinogens, 14th Edition; U.S. Department of Health and Human Services, Public Health Service. Diesel Exhaust Particles. November 3. Website: <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/dieselexhaustparticulates.pdf>. Accessed March 21, 2024.

Criteria Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
			<p>South Coast Air Quality Management District (South Coast AQMD). 2007. Final 2007 Air Quality Management Plan. June. Website: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2007-air-quality-management-plan/2007-aqmp-final-document.pdf?sfvrsn=2. Accessed March 21, 2024.</p> <p>United States Environmental Protection Agency (EPA). 2023. Nitrogen Dioxide (NO₂) Pollution. Basic Information about NO₂. July 25. Website: https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2. Accessed March 21, 2024.</p> <p>United States Environmental Protection Agency (EPA). 2020. Particulate Matter Pollution. Health and Environmental Effects of Particulate Matter (PM). Website: https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm. Accessed March 21, 2024.</p> <p>United States Environmental Protection Agency (EPA). 2020. Health Effects Notebook for Hazardous Air Pollutants. Website: https://www.epa.gov/haps/health-effects-notebook-hazardous-air-pollutants. Accessed March 21, 2024.</p> <p>United States Environmental Protection Agency (EPA). 2021. Indoor Air Quality (IAQ). Volatile Organic Compounds' Impact on Indoor Air Quality. Website: https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality. Accessed March 21, 2024.</p>

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engine exhaust that contains solid material known as diesel particulate matter (DPM). More than 90 percent of DPM is less than one micron in diameter (about 1/70th the diameter of a human hair) and thus is a subset of PM with aerodynamic diameters equal to or less than 2.5 microns (PM_{2.5}). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.¹

TACs are different from criteria pollutants because Ambient Air Quality Standards (AAQS) have not been established for TACs. TACs occurring at extremely low levels may still cause health effects and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

People exposed to toxic air pollutants at sufficient concentrations and durations may have an increased chance of developing cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems.²

¹ California Air Resources Board (ARB). Inhalable Particulate Matter and Health (PM_{2.5} and PM₁₀). Website: <https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health>. Accessed November 29, 2023.

² United States Environmental Protection Agency (EPA). Health and Environmental Effects of Hazardous Air Pollutants. Website: <https://www.epa.gov/haps/health-and-environmental-effects-hazardous-air-pollutants>. Accessed November 29, 2023.

Air Quality

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features. Atmospheric conditions such as wind speed, wind direction, and air temperature inversions interact with the physical features of the landscape to determine the movement and dispersal of air pollutant emissions and, consequently, their effect on air quality.

Regional Air Quality

The Bay Area Air Quality Management District (BAAQMD) is the regional agency regulating air quality within the nine-county SFBAAB.

Air Pollutant Standards and Attainment Designations

Air pollutant standards have been adopted by the EPA and the California Air Resources Board (ARB) for the following six criteria air pollutants that affect ambient air quality: ozone, NO₂, CO, SO₂, lead, and PM, which is subdivided into two classes based on particle size: PM₁₀ and PM_{2.5}. As discussed above, these air pollutants are called “criteria air pollutants” because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. California has also established standards for TACs such as visibility-reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. H₂S is regulated as a nuisance based on its odor detection level. If the standard were based on adverse health effects, it would be set at a much higher level. Vinyl chloride is a TAC and currently regulated as one, but California established a need to regulate it with a health-based “criteria” prior to the establishment of their toxics programs. Table 3.2-2, below, shows the federal and State air quality standards for various components.

Table 3.2-2: Federal and State Air Quality Standards in the SFBAAB

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a
Ozone	1 Hour	0.09 ppm	—
	8 Hour	0.070 ppm	0.070 ppm ^f
Nitrogen dioxide ^b (NO ₂)	1 Hour	0.18 ppm	0.100 ppm
	Annual	0.030 ppm	0.053 ppm
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Sulfur dioxide ^c (SO ₂)	1 Hour	0.25 ppm	0.075 ppm
	3 Hour	—	0.5 ppm
	24 Hour	0.04 ppm	0.14 (for certain areas)
	Annual	—	0.030 ppm (for certain areas)
Lead ^e	30-day	1.5 µg/m ³	—
	Quarter	—	1.5 µg/m ³

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a
	Rolling 3-month average	—	0.15 µg/m ³
Particulate matter (PM ₁₀)	24 Hour	50 µg/m ³	150 µg/m ³
	Mean	20 µg/m ³	—
Particulate matter (PM _{2.5})	24 Hour	—	35 µg/m ³
	Annual	12 µg/m ³	12.0 µg/m ³
Visibility-reducing particles	8 Hour	See note below ^d	
Sulfates	24 Hour	25 µg/m ³	—
Hydrogen sulfide	1 Hour	0.03 ppm	—
Vinyl chloride ^e	24 Hour	0.01 ppm	—

Notes:

µg/m³ = micrograms per cubic meter

30-day = 30-day average

Annual = Annual Arithmetic Mean

ppm = parts per million (concentration)

Quarter = Calendar quarter

^a Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect public health. All standards listed are primary standards except for 3-hour SO₂, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

^b To attain the 1-hour nitrogen dioxide national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (0.100 ppm).

^c On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 parts per billion (ppb). The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

^d Visibility-reducing particles: In 1989, the ARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the Statewide and Lake Tahoe Air Basin standards, respectively.

^e The ARB has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for implementing control measures at levels below the ambient concentrations specified for these pollutants.

^f The EPA Administrator approved a revised 8-hour ozone standard of 0.07 ppb on October 1, 2015. The new standard went into effect 60 days after publication of the Final Rule in the Federal Register. The Final Rule was published in the Federal Register on October 26, 2015, and became effective on December 28, 2015.

Source: California Air Resources Board (ARB). California Ambient Air Quality Standards. Website:

<https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards>. Accessed November 29, 2023.

Air quality monitoring stations operated by the ARB and BAAQMD measure ambient air pollutant concentrations in the SFBAAB. In general, the SFBAAB experiences low concentrations of most pollutants compared to federal or State standards.

Both the EPA and ARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. These designations identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. “Attainment” status refers to those regions that are

meeting federal and/or State standards for a specified criteria pollutant. “Nonattainment” refers to regions that do not meet federal and/or State standards for a specified criteria pollutant. “Unclassified” refers to regions with insufficient data to determine the region’s attainment status for a specified criteria air pollutant. Each standard has a different definition, or “form” of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the 3-year average of the annual average PM_{2.5} concentration is less than or equal to the standard.

Air Pollutant Standards and Attainment Designations

Table 3.2-3 shows the current attainment designations for the SFBAAB. The SFBAAB is designated as nonattainment for the State ozone, PM₁₀, and PM_{2.5} standards and the national ozone and PM_{2.5} standards. Ozone and fine particle pollution, or PM_{2.5}, are the major regional air pollutants of concern in the Bay Area. Ozone is primarily a problem in the summer, and fine particle pollution in the winter.

Table 3.2-3: Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	N/A
PM ₁₀	Nonattainment	Unclassified
PM _{2.5}	Nonattainment	Nonattainment
Sulfates	Attainment	N/A
Hydrogen Sulfates	Unclassified	N/A
Visibility-reducing Particles	Unclassified	N/A
Lead	N/A	Attainment
<p>Notes: CO = carbon monoxide N/A = information not available NO₂ = nitrogen dioxide PM₁₀ = particulate matter less than 10 micrometers in diameter PM_{2.5} = particulate matter less than 2.5 micrometers in diameter SO₂ = sulfur dioxide Source: Bay Area Air Quality Management District (BAAQMD). 2017. Air Quality Standards and Attainment Status. January 5. Website: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed November 29, 2023.</p>		

Air Pollution Sensitive Receptors

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Residences, schools, day care centers, hospitals, nursing and convalescent homes, and parks are often identified as “sensitive receptors” since their occupants are sensitive to poor air quality. The groups identified with these land uses may have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than that for other land uses. BAAQMD defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, day care centers, hospitals, and senior-care facilities.

Project Vicinity

The closest off-site air pollution sensitive receptors near the project site include residences located in a neighborhood directly adjacent to the project site to the west.

Project Site

The project site is vacant, and no sensitive receptors currently exist on the project site.

Existing Air Pollutant Emissions

Project Site Vicinity

The primary sources of air pollutants (both criteria air pollutant and TACs) in the project site vicinity include the various other surrounding residential properties, building-related energy use, and motor-related vehicle trips associated with mineral extraction operations to the east, truck storage yard to the south, and the residential neighborhood to the west of the project site. Other activities that result in emissions include space and water heating, landscape maintenance, and any surrounding industrial uses that can store, produce, decommission, or otherwise handle hazardous materials.

Project Site

The project site itself is currently vacant and does not produce any air pollutants.

3.2.2 - Regulatory Framework

Federal

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970 and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. These are particulate matter, ground level ozone, CO, sulfur oxides, nitrogen oxides, and lead. The EPA calls these pollutants criteria air pollutants and regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to prevent environmental and property damage are called secondary standards.³ The federal standards are called National Ambient Air Quality Standards (NAAQS). The

³ United States Environmental Protection Agency (EPA). 2014. Clean Air Act Requirements and History. Website: <https://www.epa.gov/clean-air-act-overview/clean-air-act-requirements-and-history>. Accessed November 29, 2023.

air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO₂)
- Lead
- Particulate matter (PM₁₀ and PM_{2.5})
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect public health.

The CAA also requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal CAA amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies.

EPA Emission Standards for New Off-Road Equipment

Before 1994, there were no standards to limit the amount of emissions from off-road equipment. In 1994, the EPA established emission standards for hydrocarbons, NO_x, CO, and PM to regulate new pieces of off-road equipment. These emission standards came to be known as Tier 1. Since that time, increasingly more stringent Tier 2, Tier 3, and Tier 4 (interim and final) standards were adopted by the EPA as well as by the ARB. Each adopted emission standard was phased in over time. New engines built in and after 2015 across all horsepower sizes must meet Tier 4 final emission standards. In other words, new manufactured engines cannot exceed the emissions established for Tier 4 final emissions standards.

State

California Air Quality Control Plan (State Implementation Plan)

An SIP is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The SIP for the State of California is administered by the ARB, which has overall responsibility for Statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts—an air district prepares their federal attainment plan, which is sent to the ARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms for attaining and maintaining air quality standards.

Areas designated nonattainment must develop Air Quality Plans (AQPs) and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting

requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional State and local regulation is required to achieve the standards. Local air districts and other agencies prepare SIP elements and submit them to ARB for review and approval. The ARB will then forward SIP revisions to the EPA for approval and publication in the Federal Register. The BAAQMD 2017 Clean Air Plan is the SIP for the SFBAAB. The 2017 Clean Air Plan accommodates growth by projecting the growth in emissions based on different indicators. For example, population forecasts adopted by the Association of Bay Area Governments (ABAG) are used to forecast population-related emissions. Through the planning process, emissions growth is offset by basin-wide controls on stationary, area, and transportation sources of air pollution.

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation and required additional actions beyond the federal mandates. The ARB administers the California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 State air pollutants are the six federal standards listed above as well as visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are more stringent than the federal CAA; therefore, consistency with the CCAA will also demonstrate consistency with the CAA.

Other ARB responsibilities include but are not limited to overseeing local air district compliance with California and federal laws; approving local AQPs; submitting SIPs to the EPA; monitoring air quality; determining and updating area designations and maps; conducting basic research aimed at providing a better understanding between emissions and public well-being, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

California Health and Safety Code Section 39655 and California Code of Regulations Title 17 Section 93000 (Substances Identified as Toxic Air Contaminants)

The ARB identifies substances as TACs as defined in Health and Safety Code Section 39655 and listed in Title 17, Section 93000 of the California Code of Regulations, "Substances Identified As Toxic Air Contaminants." A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. In general, for those TACs that may cause cancer, there are thresholds set by regulatory agencies below which adverse health impacts are not expected to occur. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the State and federal governments have set AAQS. According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risk from TACs for the State of California can be attributed to relatively few compounds, the most important of which is DPM from diesel-fueled engines.

California Low Emission Vehicle Program

The ARB first adopted Low Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State’s passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 SIP. In 2012, the ARB adopted the LEV III amendments to California’s LEV regulations. These amendments, also known as the Advanced Clean Car Program, include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and greenhouse gas (GHG) emissions for new passenger vehicles.⁴

The most recent amendments in 2022, the Advanced Clean Cars II Regulations, applies to light-duty passenger car, truck, and SUV emissions starting with the 2026 model year through 2035. It will take the State’s already growing zero-emission vehicle (ZEV) market and robust motor vehicle emission control rules and augment them to meet more aggressive tailpipe emissions standards and ramp up to 100 percent ZEVs. By 2035 all new passenger cars, trucks, and SUVs sold in California will have zero emissions.

California On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. California Code of Regulations Section 1956.8, Title 13, contains California’s emission standards for on-road heavy-duty engines and vehicles, and test procedures. The ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, the School Bus Program, and others.⁵

The Truck and Bus regulation (California Code of Regulations [CCR] § 2025) and amendments require diesel trucks and buses that operate in California to be upgraded to reduce emissions. The regulation applies to diesel-fueled trucks and buses with a gross vehicle weight of greater than 14,000 pounds to upgrade to 2010 or newer model year engines.

The California “Omnibus” regulation follows the completion of the Truck and Bus regulation with continued reduction of NO_x and PM emissions from heavy-duty gasoline and diesel on-road vehicles. Its updated standards, testing and compliance mechanisms for NO_x and PM emissions from heavy-duty on-road vehicles for model year 2024 through 2031. The rule will be implemented in phases, with the standards becoming more stringent in 2027.

The Advanced Clean Truck Regulation and recently approved Advanced Clean Fleets (ACF) regulation are part of a holistic approach to accelerate a large-scale transition of zero-emission medium- and heavy-duty vehicles. Together, these regulations will transition California’s truck fleet to ZEVs by

⁴ California Air Resources Board (ARB). 2013. Clean Car Standards—Pavley, Assembly Bill 1493. Website: <http://www.arb.ca.gov/cc/ccms/ccms.htm>. Accessed November 29, 2023.

⁵ California Air Resources Board (ARB). 2013. The California Almanac of Air Quality and Emissions—2013 Edition. Website: <http://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm>. Accessed November 29, 2023.

2045. The regulation has a manufacturer sales requirement; by 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b–3 truck sales, 75 percent of class 4–8 straight truck sales, and 40 percent of truck tractor sales. The rule also has a company and fleet requirement that gathers information about shipments and shuttle services. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

The Heavy-Duty Inspection and Maintenance regulation was approved on December 9, 2021, with implementation to be phased in starting January 2023.⁶ Its goal is to ensure that vehicles' emissions control systems are properly functioning when traveling on California's roadways. Trucks registered in other states would have to comply with the Clean Truck Check, or heavy-duty vehicle inspection and maintenance (HD I/M), regulation if they drive on California's roadways. HD I/M implements a program combining periodic vehicle testing requirements with other emissions monitoring techniques and expanded enforcement strategies. This will ensure that vehicles in need of emissions are identified and that any needed repairs are performed. When fully implemented, the program will provide the significant reductions in smog-forming and carcinogenic toxic air pollution necessary to achieve federal air quality mandates and healthy air in California's communities.

California In-Use Off-Road Diesel Vehicle Regulation

The In-Use Off-Road Diesel-Fueled Fleets (Off-Road Regulation) was enacted to accelerate retirement of older, higher-emitting engines, and increase purchases of newer, cleaner engines. It applies to all off-road, diesel, self-propelled equipment over 25 horsepower (hp) used in California that is not exempted under agricultural or cargo handling equipment provisions. This includes construction equipment such as excavators, loaders, backhoes, cranes, forklifts, oil-drilling rigs, and aircraft towing equipment.

The rule applies to fleets of construction equipment and establishes a 5-minute idling limit for off-road vehicles at construction sites as well as emission limits that become increasingly more stringent each year. These limits may be met by replacing older tier equipment with newer tiers or by installing exhaust retrofits (also known as Verified Diesel Emission Control Strategies or VDECS). Recent 2022 amendments⁷ require the use of R99 or R100 renewable diesel in off-road diesel vehicles at the beginning of 2024. Starting in 2023, older tiers are banned and only Tier 3 or higher engines may be added to any fleet. A recent requirement requires that prime contractors and public works awarding bodies obtain and retain a fleet's valid Certificate of Reported Compliance prior to awarding a contract or hiring a fleet.

Small Off-Road Engine Regulation

Small off-road engines (SORE) are spark-ignition engines with rated power at or below 19 kilowatts (25 horsepower). The SORE regulations require new engines to be certified and labeled to meet emission standards and other requirements. Typical equipment types that use SORE include lawn and garden equipment, portable generators, and pressure washers. Recent amendments to the

⁶ California Air Resources Board (ARB). 2023. Clean Truck Check (HD I/M), <https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program>. Accessed December 8, 2023.

⁷ California Air Resources Board (ARB). 2023. Website: <https://ww2.arb.ca.gov/news/carb-approves-amendments-road-regulation-further-reduce-emissions>. Accessed on November 21, 2023.

SORE regulation will require most landscaping equipment to be zero emissions beginning in 2024. Despite their small size, these engines are highly polluting. The volume of smog-forming emissions from this type of equipment has surpassed emissions from light-duty passenger cars and is projected to be nearly twice those of passenger cars by 2031. Portable generators, including those in recreational vehicles, would be required to meet more stringent standards in 2024 and meet zero-emission standards starting in 2028.⁸ Engines that use diesel fuel and engines that are used in stationary equipment, including standby generators, are not subject to the SORE regulations.

Large-Spark Ignition Regulation

The Large-Spark Ignition (LSI) Fleet Rule and Amendments, commonly referred to as the “Forklift Rule,” applies to forklifts, sweeper/scrubbers, industrial tow tractors, and airport ground support equipment. It applies to fleets (four or more vehicles) and includes off-road gasoline, propane, liquefied petroleum gas (LPG), compressed natural gas, and electric forklifts ≥ 25 hp.⁹ The regulation sets fleet average emission level requirements that decrease each year to encourage the use of electric vehicle (EV) and low-emissions engines.

Zero-Emission Forklifts

ARB is currently working on a zero-emission forklift regulation¹⁰ that would drive greater deployment of zero-emission forklifts within fleets throughout the State. This regulation, currently in draft format, is one of several near-term actions intended to facilitate further zero-emission equipment penetration in the off-road sector and is scheduled for Board consideration in June 2024.

California Airborne Toxic Control Measures

As of December 2022, the ARB had developed 26 mobile and stationary source Airborne Toxic Control Measures (ATCMs).¹¹ The following summarizes the ATCMs that are potentially applicable for land use development projects such as logistics, warehouse, residential, mixed use, and retail development. Source and industry-specific requirements apply to industrial projects, gas stations, dry cleaners, and other types of facilities which are significant sources of TACs.

Asbestos ATCM

In July 2001, ARB approved an ATCM for construction, grading, quarrying, and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of Best Management Practices (BMPs) to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification, and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and

⁸ California Air Resources Board (ARB). 2021. Website: <https://ww2.arb.ca.gov/news/carb-approves-updated-regulations-requiring-most-new-small-road-engines-be-zero-emission-2024>. Accessed November 25, 2023.

⁹ California Air Resources Board (ARB). 2023. Large-Spark Ignition Fleet Regulation Overview. Website: <https://ww2.arb.ca.gov/sites/default/files/offroadzone/landing/lfi.html>. Accessed November 25, 2023.

¹⁰ California Air Resources Board (ARB). 2023. Zero-Emission Forklifts. Website: <https://ww2.arb.ca.gov/our-work/programs/zero-emission-forklifts>. Accessed November 16, 2023.

¹¹ California Air Resources Board (ARB). 2023. Website: <https://ww2.arb.ca.gov/resources/documents/airborne-toxic-control-measures>. Accessed November 16, 2023.

engineering controls at work sites larger than 1 acre. These projects require the submission of a “Dust Mitigation Plan” and approval by the ARB prior to the start of a project.

Asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found near the project site.¹²

Verified Diesel Emission Control Strategies

The EPA and the ARB tiered off-road emission standards only apply to new engines and off-road equipment can last several years. The ARB has developed VDECS, which are devices, systems, or strategies used to achieve the highest level of pollution control from existing off-road vehicles, to help reduce emissions from existing engines. VDECS are designed primarily for the reduction of DPM emissions and have been verified by ARB. There are three levels of VDECS, the most effective of which is the Level 3 VDECS. Tier 4 engines are not required to install VDECS because they already meet the emissions standards for lower tiered equipment with installed controls.

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs in California are primarily regulated through the Tanner Air Toxics Act (Assembly Bill 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Assembly Bill 2588), also known as the Hot Spots Act. To date, the ARB has identified more than 21 TACs, and has adopted the EPA’s list of Hazardous Air Pollutants (HAPs) as TACs.

Regional

BAAQMD California Environmental Quality Act Air Quality Guidelines

The BAAQMD is the primary agency responsible for ensuring that air quality standards (NAAQS and CAAQS) are attained and maintained in the SFBAAB through comprehensive planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The BAAQMD prepares plans to attain AAQS in the SFBAAB and prepares ozone attainment plans for the national ozone standard, clean air plans for the California standard, and PM plans to fulfill federal air

¹² United States Geological Survey (USGS). 2019. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in the Conterminous United States. Website: <https://www.usgs.gov/data/reported-historic-asbestos-mines-historic-asbestos-prospects-and-other-natural-occurrences>. Accessed November 25, 2023.

quality planning requirements. The BAAQMD also inspects stationary sources of air pollution; responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements programs and regulations required by the CAA and the CCAA.

In April 2023, BAAQMD updated the California Environmental Quality Act (CEQA) Guidelines that superseded the previous guidance. BAAQMD's CEQA Guidelines for implementation of the thresholds are for informational purposes only, to assist local agencies.

BAAQMD Particulate Matter Plan

To fulfill federal air quality planning requirements, the BAAQMD adopted a PM_{2.5} emissions inventory for the year 2010 at a public hearing on November 7, 2012. The Bay Area Clean Air Plan also included several measures for reducing PM emissions from stationary sources and wood-burning. In 2013, the EPA issued a final rule determining that the Bay Area has attained the 24-hour PM_{2.5} NAAQS, suspending federal SIP planning requirements for the SFBAAB.¹³ Despite this EPA action, the SFBAAB will continue to be designated as nonattainment for the national 24-hour PM_{2.5} standard until the BAAQMD submits a redesignation request and a maintenance plan to the EPA and the EPA approves the proposed redesignation.

The Air Basin is designated nonattainment for the State PM₁₀ and PM_{2.5} standards, but the Air Basin is currently unclassified for the federal PM₁₀ standard and nonattainment for federal PM_{2.5} standards. The EPA lowered the 24-hour PM_{2.5} standard from 65 µg/m³ to 35 µg/m³ in 2006 and designated the Air Basin as nonattainment for the new PM_{2.5} standard effective December 14, 2009.

BAAQMD believes that it would be premature to submit a redesignation request and PM_{2.5} maintenance plan at this time. Therefore, BAAQMD will prepare a “clean data” SIP to address the required elements, including:

- An emission inventory for primary PM_{2.5} as well as precursors to secondary PM formation; and
- Amendments to the BAAQMD's New Source Review regulation to address PM_{2.5}.

The Air Basin will continue to be designated as nonattainment for the 24-hour PM_{2.5} NAAQS until the Air District elects to submit, and the EPA approves, a redesignation request and maintenance plan. At this time, BAAQMD does not have an applicable SIP with which the proposed project would be required to comply. However, development facilitated by the proposed project would be subject to the Bay Area Clean Air Plan, in addition to regulations set forth by BAAQMD.

BAAQMD 2017 Clean Air Plan

In May 2017, the BAAQMD adopted the final Bay Area 2017 Clean Air Plan. The BAAQMD prepared the 2017 Clean Air Plan in cooperation with the Metropolitan Transportation Commission (MTC) and the ABAG. The goals of the 2017 Clean Air Plan are to reduce regional air pollutants and climate pollutants to improve the health of Bay Area residents for the next decades. The 2017 Clean Air Plan

¹³ United States Environmental Protection Agency (EPA). 2013. Determination of Attainment for the San Francisco Bay Area Nonattainment Area for the 2006 Fine Particle Standard; California; Determination Regarding Applicability of Clean Air Act Requirements. January 9. Website: <https://www.govinfo.gov/content/pkg/FR-2013-01-09/pdf/2013-00170.pdf>. Accessed November 25, 2023.

aims to lead the region into a post-carbon economy, continue progress toward attaining all State and federal air quality standards, and eliminate health risk disparities from air pollution exposure in Bay Area communities. The Plan includes 85 distinct control measures to help the region reduce air pollutants and has a long-term strategic vision that forecasts what a clean air Bay Area will look like in the year 2050. The 2017 Clean Air Plan envisions a future whereby the year 2050:

- Buildings will be energy efficient—heated, cooled, and powered by renewable energy.
- Transportation will be a combination of EVs, both shared and privately owned, and autonomous public transit fleets, with a large share of trips by bicycling, walking, and transit.
- The Bay Area will be powered by clean, renewable electricity and will be a leading incubator and producer of clean energy technologies leading the world in the carbon-efficiency of our products.
- Bay Area residents will have developed a low carbon lifestyle by driving electric vehicles, living in zero-net-energy homes, eating low carbon foods, and purchasing goods and services with low carbon content.
- Waste will be greatly reduced, waste products will be re-used or recycled, and all organic waste will be composted and put to productive use.

The focus of control measures includes aggressively targeting the largest source of GHG, ozone pollutants, and PM emissions: transportation. This includes more incentives for electric vehicle infrastructure, off-road electrification projects such as Caltrain and shore power at ports, and reducing emissions from trucks, school buses, marine vessels, locomotives, and off-road equipment. Additionally, the BAAQMD will continue to work with regional and local governments to reduce Vehicle Miles Traveled (VMT) through the further funding of rideshare, bike and shuttle programs.

BAAQMD Regulations

Regulation 2, Rule 1 (Permits—General Requirements)

The BAAQMD regulates new sources of air pollution and the modification and operation of existing sources through the issuances of authorities to construct and permits to operate. Regulation 2, Rule 1 provides an orderly procedure which the project would be required to comply with to receive authorities to construct or permits to operate from the BAAQMD for new sources of air pollutants, as applicable.

Regulation 2, Rule 5 (New Source Review Permitting)

The BAAQMD regulates backup emergency generators, fire pumps, and other sources of TACs through its New Source Review (Regulation 2, Rule 5) permitting process.¹⁴ Although emergency generators are intended for use only during periods of power outages, monthly testing of each generator is required; however, the BAAQMD limits testing to no more than 50 hours per year. Each emergency generator installed is assumed to meet a minimum of Tier 2 emission standards (before control measures). As part of the permitting process, the BAAQMD limits the excess cancer risk from

¹⁴ Bay Area Air Quality Management District (BAAQMD). 2016. New Source Review Permitting Guidance. Website: <http://www.baaqmd.gov/permits/permitting-manuals/nsr-permitting-guidance>. Accessed November 25, 2023.

any facility to no more than 10 per 1-million-population for any permits that are applied for within a 2-year period and would require any source that would result in an excess cancer risk greater than 1 per 1 million to install Best Available Control Technology (BACT) for Toxics.

Regulation 6, Rule 1 (Particulate Matter—General Requirements)

The BAAQMD regulates PM emissions through Regulation 6 by means of establishing limitations on emission rates, emissions concentrations, and emission visibility and opacity. Regulation 6, Rule 1 provides existing standards for PM emissions that could result during project construction or operation that the proposed project would be required to comply with, as applicable, such as the prohibition of emissions from any source for a period or aggregate periods of more than 3 minutes in any hour which are equal to or greater than 20 percent opacity.

Regulation 6, Rule 6, (Particulate Matter—Prohibition of Trackout)

One rule by which the BAAQMD regulates PM includes Regulation 6, Rule 6, which prohibits PM trackout during project construction and operation. Regulation 6, Rule 6 requires the prevention or timely cleanup of trackout of solid materials onto paved public roads outside the boundaries of large bulk material sites, large construction sites, and large disturbed surface sides such as landfills.

Regulation 8, Rule 3 (Architectural Coatings)

This rule governs the manufacture, distribution, and sale of architectural coatings and limits the reactive organic gases (ROG) content in paints and paint solvents. Although this rule does not directly apply to the proposed project, it does dictate the ROG content of paint available for use during the construction.

Regulation 8, Rule 15 (Emulsified and Liquid Asphalts)

Although this rule does not directly apply to the proposed project, it does dictate the reactive organic gases content of asphalt available for use during the construction through regulating the sale and use of asphalt and limits the ROG content in asphalt.

Regulation 9, Rule 8 (Inorganic Gaseous Pollutants—Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines)

Under Regulation 9, Rule 8, the BAAQMD regulates the emissions of nitrogen oxides and carbon monoxide from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower. As such, any proposed stationary source equipment (e.g., backup generators, fire pumps) which would be greater than 50 horsepower would require a BAAQMD permit under Regulation 9, Rule 8 to operate.

Regulation 11, Rule 2 (Hazardous Pollutants—Asbestos Demolition, Renovation, and Manufacturing)

Under Regulation 11, Rule 2, the BAAQMD regulates emissions of asbestos into the atmosphere during demolition, renovation, milling, and manufacturing and establishes appropriate waste disposal procedures. Any of these activities which pose the potential to generate emissions of airborne asbestos are required to comply with the appropriate provisions of this regulation.

Regulation 1, Rule 301 (Odorous Emissions)

The BAAQMD is responsible for investigating and controlling odor complaints in the Bay Area. The agency enforces odor control by helping the public to document a public nuisance. Upon receipt of a complaint, the BAAQMD sends an investigator to interview the complainant and to locate the odor source if possible. The BAAQMD typically brings a public nuisance court action when there are a substantial number of confirmed odor events within a 24-hour period. An odor source with five or more confirmed complaints per year, averaged over 3 years, is considered to have a substantial effect on receptors.

Several BAAQMD regulations and rules apply to odorous emissions. Regulation 1, Rule 301 is the nuisance provision that states that sources cannot emit air contaminants that cause nuisance to several people. Regulation 7 specifies limits for the discharge of odorous substances where the BAAQMD receives complaints from 10 or more complainants within a 90-day period. Among other things, Regulation 7 precludes discharge of an odorous substance that causes the ambient air at or beyond the property line to be odorous after dilution with four parts of odor-free air and specifies maximum limits on the emission of certain odorous compounds.

Plan Bay Area

The Regional Transportation Plan and Sustainable Community Strategy (RTP/SCS) for the San Francisco Bay Area, named Plan Bay Area 2050, was jointly produced and adopted by the MTC and ABAG.¹⁵ On October 2021, the MTC approved Plan Bay Area 2050. Plan Bay Area includes integrated land use and transportation strategies for the region and was developed through OneBayArea, a joint initiative between ABAG, BAAQMD, MTC, and the San Francisco Bay Conservation and Development Commission. Plan Bay Area is also considered the ABAG/MTC Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). In accordance with SB 743, Plan Bay Area included elements designed to encourage the type of land use development to meet three primary objectives. First, Roadway Level of Service (LOS) could not be considered an environmental impact under CEQA. Second, it introduced changes to VMT per capita as a determinant of environmental impact. Third, the use of VMT as an environmental impact in CEQA is considered a mechanism for achieving State and regional GHG reduction goals. As a regional land use plan, Plan Bay Area aims to reduce per capita GHG emissions through the promotion of more compact, mixed-use residential and commercial neighborhoods located near transit.

Local

Alameda County General Plan

The General Plan's goals, objectives, and policies guides development decisions that are essential for responsive government.¹⁶ The following policies are relevant to the proposed project and are aimed to reduce air quality impacts.

¹⁵ Association of Bay Area Government. 2021. Plan Bay Area 2050. Website: <https://www.planbayarea.org/finalplan2050>. Accessed November 28, 2023.

¹⁶ Alameda 2040. 2023. Alameda General Plan 2040 Amended June 7, 2022. Website: https://irp.cdn-website.com/f1731050/files/uploaded/AGP_Book_June2022_Amend-1.pdf. Accessed: December 15, 2023.

Policy

HS-62 Wildfire Smoke. Prepare for future wildfire smoke events.

Actions

- c. **Indoor Air Quality.** Facilitate and expedite efforts by local property owners and businesses to improve indoor air quality and filtration systems.
- d. **Outdoor Air Quality.** Continue to work with regional and local organizations and businesses to reduce local sources of air pollutants.

Policy

CC-26 Urban Forest. Take actions to maintain and expand the number of trees in Alameda on public and private property to improve public health, reduce pollution, and reduce heat island effects.

Actions

- a. **Tree Preservation.** Continue to require and incentivize the preservation of large healthy non-invasive trees and vegetation.
- b. **New Development and Parking Lots.** Require ample tree plantings in new development and related parking lots.
- c. **Strengthen Tree Replacement Requirement.** Strengthen the tree replacement requirement for any protected trees removed due to new development or redevelopment.
- d. **Prioritize Tree Planting.** Invest in tree planting and maintenance, especially in low canopy areas and neighborhoods with under-served or under-represented communities.
- e. **Resilient Urban Forest.** Support the increase of the tree canopy in Alameda with drought-tolerant, shade producing, fire resistant tree species.**HS-63 Diesel Emissions.** Continue to work with the Bay Area Air Quality Management District (BAAQMD) to reduce diesel related air quality impacts throughout the region and in Alameda.

Policy

HS-64 Wood Smoke. Adopt ordinances and regulations to reduce wood smoke in Alameda.

Actions

- a. **Wood-Burning Fireplaces and Heaters.** Prohibit wood-burning fireplaces and heaters in all new development and remodels.

Policy

HS-65 Construction Air Pollution. Protect public health by requiring best management practices at construction sites and carefully evaluating the potential health risks of projects that generate substantial toxic air contaminants or projects that propose to place a sensitive user in proximity to an existing source of contaminants.

Actions

- a. **Construction Dust.** Reduce dust and harmful air pollutants resulting from construction activities by requiring compliance with Best Management Practices (BMPs) as recommended by the Bay Area Air Quality Management District (BAAQMD).
- b. **Health Risk Assessment.** Require preparation of a Health Risk Assessment in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and the BAAQMD. Adopt recommended health risk mitigations for projects that generate substantial toxic air contaminant (TAC) emissions within 1,000 feet of sensitive receptors or for sensitive receptor uses proposed to be located within 1,000 feet of an existing major source of toxic air contaminants.

Policy

HS-68 Toxic Air Contaminants. Minimize and avoid exposure to toxic air contaminants.

Actions

- a. **New Sources.** As a condition of approval, future discretionary projects that generate substantial toxic air contaminant (TAC) emissions (that are not regulated by the Bay Area Air Quality Management District (BAAQMD), such as construction activities lasting greater than two months or facilities that include more than 100 truck trips per day, 40 trucks with transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week)) that are located within 1,000 feet of sensitive receptors shall submit a Health Risk Assessment (HRA) prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and the BAAQMD prior to discretionary project approval. If the HRA shows that the incremental cancer risk, PM_{2.5} concentrations, or the appropriate non-cancer hazard index exceeds BAAQMD's project-level thresholds, then the applicant shall be required to identify and demonstrate that mitigation measures are capable of reducing potential PM_{2.5} concentrations, cancer risks, and non-cancer risks to below BAAQMD's project-level significance thresholds.
- b. **New Sensitive Receptors.** As a condition of approval, proposed new sensitive receptor uses proposed within 1,000 feet of existing major sources of TACs (e.g., permitted stationary sources, highways, freeways and roads with over 10,000 annual average daily traffic (AADT) shall submit an HRA to the City prior to future discretionary project approval. If the HRA shows that the incremental cancer risk, PM_{2.5} concentrations, or the appropriate non-cancer hazard index exceeds BAAQMD's cumulative-level thresholds, then the applicant shall be required to identify and demonstrate that mitigation measures (e.g., electrostatic filtering systems) are capable of reducing potential cancer and non-cancer risks to below BAAQMD's significance thresholds.

Policy

HS-69 Construction Period Air Quality Impacts. Minimize air quality impacts as the result of construction activities.

Action

- a. As a condition of approval, future discretionary projects shall implement the following measures or equivalent, expanded, or modified measures based on project- and site-specific conditions: all exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered at least two times per day; all haul trucks transporting soil, sand, or other loose material off-site shall be covered; all visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping shall be prohibited; all vehicle speeds on unpaved roads shall be limited to 15 mph; all roadways, driveways, and sidewalks to be paved shall be completed as soon as possible; idling times shall be minimized either by shutting equipment off when not in use or reducing maximum idling time to 5 minutes; clear signage shall be provided for construction workers at all access points; all construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation; 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 within 48 hours; and the Air District's phone number shall also be visible to ensure compliance with applicable regulations.

3.2.3 - Methodology

Model Selection and Guidance

Regional air pollutant emissions are composed of those on-site construction and operational emissions generated from all facets of the proposed project. Air pollutant emissions can be estimated by using emission factors and a level of activity. Emission factors represent the emission rate of a pollutant over a given time or activity, for example, grams of NO_x per vehicle mile traveled or grams of NO_x per horsepower hour of equipment operation. The activity factor is a measure of how active a piece of equipment is and can be represented as the amount of material processed, elapsed time that a piece of equipment is in operation, horsepower of a piece of equipment used, the amount of fuel consumed in a given amount of time, or VMT per day. The ARB has published emission factors for on-road mobile vehicles/trucks in the Emission Factor (EMFAC) mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. An air emissions model (or calculator) combines the emission factors and the levels of activity and outputs the emissions for the various pieces of equipment.

The current version of the California Emissions Estimator Model (CalEEMod), Version 2022 was released as part of a coordinated development effort between the California Air Pollution Control Officers Association (CAPCOA) and the California Air Districts. Regional construction and operational emissions reported in this analysis were modeled using CalEEMod Version 2022.1.1.21 (version last updated on December 5, 2023).

Criteria Pollutants Assessed

The following air pollutants are assessed in this analysis:

- Reactive organic gases (ROG)
- Nitrogen oxides (NO_x)
- Carbon monoxide (CO)
- Sulfur oxides (SO_x)
- Particulate matter less than 10 microns in diameter (PM₁₀)
- Particulate matter less than 2.5 microns in diameter (PM_{2.5})

Note that the proposed project would emit ozone precursors ROG and NO_x. However, the proposed project would not directly emit ozone since it is formed in the atmosphere during the photochemical reaction of ozone precursors.

The proposed project would emit ultrafine particles. However, there is currently no standard separate from the PM_{2.5} standards for ultrafine particles and there is no accepted methodology to quantify or assess the significance of such particles.

Modeling Assumptions—Construction

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM₁₀) from disturbed soil. Additionally, paving operations and application of architectural coatings would release volatile organic compounds (VOC) emissions. Off-site emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM₁₀ and PM_{2.5}).

The residential project site contains 194 single-family homes and the frontage improvement along Busch Road and the east boundary of the project site. Construction activities occurring on the 26.6-acre residential project site would consist of mass grading, utility trenching, building construction, paving, and architectural coating of the inside and outside of the building. Additionally, construction of off-site improvements would occur east of the residential project site. These off-site improvements include the water storage and booster pump facility, sewer treatment plant, recycled water storage facility, bioretention areas, agricultural spray fields, and trenching activities, etc. As shown in Section 2, Project Description, the proposed project includes two design options, Design Option A and Design Option B, for the primary bioretention area. Both design options include the same locations of the off-improvements (e.g., water storage and booster pump facility, sewer treatment plant, recycled water storage facility, agricultural spray field) with the exception of the primary bioretention area which would be located west of El Charro Road under Design Option A and east of El Charro under Design Option B. These design options are shown on Exhibit 2-6a and Exhibit 2-6b, respectively. As both design options would require similar construction activities, the regional emissions would be similar between Design Option A and Design Option B (which is represented by the same CalEEMod construction model). However, the construction health risk impacts to the off-site sensitive receptors would be expected to be different due to the difference in proximity between the construction equipment and the existing residential homes for the two design options. Impacts are discussed in Section 3.2.5, Sensitive Receptors Exposure to Pollutant Concentrations.

An anticipated construction schedule is provided in Table 3.2-4, which presents the duration for each construction activity. Table 3.2-4 presents the number of assumed construction equipment along with hours of operation per day, horsepower, and load factor. Where project-specific information was not available or unknown, default assumptions were used to complete emissions modeling. The activity for construction equipment is based on the horsepower and load factors of the equipment. In general, the horsepower is the power of an engine—the greater the horsepower, the greater the power. The load factor is the average power of a given piece of equipment while in operation compared with its maximum rated horsepower. A load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity. This analysis uses the CalEEMod default load factors for off-road equipment.

The anticipated construction schedule, as shown in Table 3.2-4, reflects the construction start date and construction phase durations assumed for the purposes of this environmental analysis. Based on applicant-provided information, construction would start March 2025 and conclude in August 2027.

The construction schedule used in the analysis represents a conservative analysis scenario since emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and compliance with more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule moved to later years. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required by the CEQA Guidelines.

Table 3.2-4: Construction Schedule

Construction Activity	Conceptual Construction Schedule		Working Days per Week	Working Days
	Start Date	End Date		
Main Project Site Construction				
Mass Grading	3/1/2025	6/28/2025	7	120
Utility Trenching	6/29/2025	10/26/2025	7	120
Main Site and Frontage Improvement	10/27/2025	7/23/2026	7	270
Building Construction	8/1/2025	8/21/2027	7	751
Architectural Coating	2/8/2027	8/21/2027	7	195
Off-site Improvements				
Site Preparation	6/1/2025	6/30/2025	7	30
Grading	7/1/2025	7/28/2025	7	28
Building Construction	7/29/2025	2/13/2026	7	200
Paving	2/14/2026	5/27/2026	7	103
Architectural Coating	5/5/2026	5/27/2026	7	23
Agriculture Field Trenching	7/29/2025	8/17/2025	7	20
Source: CalEEMod Output (Appendix B).				

A summary of the on-site, off-road construction equipment usage assumptions used to estimate emissions is presented in Table 3.2-5

Table 3.2-5: Project Construction Equipment Assumptions

Phase Name	Equipment Type	Number per Day	Hours Per Day	Horsepower	Load Factor	Fuel Type
Main Project Site Construction						
Mass Grading	Rubber Tired Dozers	3	8	367	0.40	Diesel
	Tractors/Loaders/Backhoes	3	8	84	0.37	Diesel
	Graders	3	8	148	0.41	Diesel
	Excavators	3	8	36	0.38	Diesel
	Scrapers	3	8	423	0.48	Diesel
Utility Trenching	Trenchers	1	8	40	0.50	Diesel
	Excavators	1	8	36	0.38	Diesel
Main Site and Frontage Improvement	Pavers	2	8	81	0.42	Diesel
	Paving Equipment	2	8	89	0.36	Diesel
	Rollers	2	8	36	0.38	Diesel
Building Construction	Cranes	1	7	367	0.29	Diesel
	Forklifts	5	8	82	0.20	Diesel
	Generator Sets	5	8	14	0.74	Diesel
	Tractors/Loaders/Backhoes	5	7	84	0.37	Diesel
	Welders	5	8	46	0.45	Electric
Architectural Coating	Air Compressors	1	6	37	0.48	Electric
Off-site Improvements						
Site Preparation	Rubber Tired Dozers	3	8	367	0.40	Diesel
	Tractors/Loaders/Backhoes	4	8	84	0.37	Diesel
Grading	Graders	1	8	148	0.41	Diesel
	Excavators	1	8	36	0.38	Diesel
	Tractors/Loaders/Backhoes	3	8	84	0.37	Diesel
	Rubber Tired Dozers	1	8	367	0.40	Diesel
	Building Construction	Forklifts	3	8	82	0.20
Generator Sets		1	8	14	0.74	Diesel
Cranes		1	7	367	0.29	Diesel
Welders		1	8	46	0.45	Diesel
Tractors/Loaders/Backhoes		3	7	84	0.37	Diesel
Paving	Pavers	2	8	81	0.42	Diesel

Phase Name	Equipment Type	Number per Day	Hours Per Day	Horsepower	Load Factor	Fuel Type
	Paving Equipment	2	8	89	0.36	Diesel
	Rollers	2	8	36	0.38	Diesel
Architectural Coating	Air Compressors	1	6	37	0.48	Diesel

Source: CalEEMod Output (Appendix B).

A summary of the construction-related vehicle trips is shown in Table 3.2-6. Based on applicant-provided information, any import and export of soil would be accomplished by using soil from a soil harvest site east of the residential project site. As such, import and export of material would not generate long haul trips but would expand the area to be disturbed to include the vacant lot located directly east of the residential project site. Potential impacts from this additional area to be disturbed was accounted for in the localized air quality impact analysis completed for the project by including the adjacent site as part of the AERMOD modeling conducted for the construction HRA. CalEEMod default values for trip lengths and vehicle fleets were used. Note that the total number of off-site construction vehicle trips would not necessarily occur on the same day since construction activities would vary each day during the construction period.

Table 3.2-6: Construction Off-site Trips

Construction Activity	Worker (Trips per day)	Vendor (Trips per day)	Haul (Trips per Day)
Main Project Site Construction			
Mass Grading	37.5	0	0
Utility Trenching	5	0	0
Main Site and Frontage Improvement	15	0	27
Building Construction	187.11	66.50	0
Architectural Coating	37.42	0	0
Off-site Improvements			
Site Preparation	17.5	0	0
Grading	15	0	0
Building Construction	0	0	7
Paving	15	0	7
Architectural Coating	0	0	0
Agriculture Field Trenching	2.5	0	0

Source: CalEEMod Output (Appendix B).

Fugitive Dust

During grading activities, fugitive dust can be generated from the movement of dirt on the project site. CalEEMod estimates dust from bulldozers moving dirt around, from graders or other construction equipment leveling the land, and from loading or unloading dirt into haul trucks. Every project within the BAAQMD's jurisdiction is required to comply with the requirements of BAAQMD Regulation 6 and Fugitive Dust BMPs to reduce emissions of fugitive dust. As shown in Appendix B, the BMPs are accounted for in CalEEMod through selection of the appropriate measures in CalEEMod ("water unpaved roads twice daily" and "limit vehicle speeds on unpaved roads to 25 miles per hour [mph]"). Development of the proposed project would include design features which would reduce fugitive dust compared to default values.

Modeling Assumptions—Operation

The major sources of operational emissions that would occur over the long-term operations of the proposed project are summarized below.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the motor vehicles that would travel to and from and within the project site. The regional emissions from the proposed project's mobile sources were estimated using CalEEMod and the daily trips estimated by traffic consultant for the proposed project. The proposed project would primarily generate passenger vehicle trips from residents and visitors traveling to and from the project site. Based on the project-specific traffic report, the project would generate 2,159 daily trips.¹⁷

Other Emission Sources

Area Sources

In addition to typical mobile- and energy-source emissions, long-term operational emissions also include area-source emissions. Area-source emissions include occasional architectural coating activities for repainting and maintenance of the residential homes and Accessory Dwelling Units (ADUs) associated with the proposed project. CalEEMod assumes that repainting occurs at a rate of 10 percent of the buildings per year. Therefore, on average, it is assumed that the building would be fully repainted every 10 years.

Other area-source emissions include consumer products that involve solvents that emit VOCs during use. CalEEMod includes default consumer product use rates based on building square footage. The default emission factors developed for CalEEMod were used for consumer products associated with parking uses. Lastly, CalEEMod default emission factors for landscape maintenance equipment were used in this analysis.

Water/Wastewater

GHG emissions from this sector are associated with the embodied energy used to supply treat and distribute water and then treat wastewater and fugitive GHG emissions from wastewater treatment. Water consumption is based on CalEEMod default values.

¹⁷ W-Trans. 2023. Transportation Impact Study for the Arroyo Lago Residential Project. November 28.

Energy

As discussed in the project description, the proposed project would utilize gas service from Pacific Gas & Electric (PG&E) via existing utility lines on the north side of the site and along Busch Road. Emissions from this sector are principally from use of electricity for space and water heating at the proposed residences. The estimated energy consumption is based on CalEEMod default values for the proposed residential land use.

Indirect Emissions

CalEEMod contains calculations to estimate indirect emissions that are only relevant to GHG emissions. Indirect emissions are emissions where the location of consumption or activity is different from where actual emissions are generated. For example, electricity would be consumed at the proposed project site; however, emissions associated with producing that electricity are generated off-site at a power plant.

CalEEMod includes calculations for indirect GHG emissions for electricity consumption, water consumption, and solid waste disposal. For water consumption, CalEEMod calculates embedded energy (e.g., treatment, conveyance, distribution) associated with providing each gallon of potable water to the project site. For solid waste disposal, CalEEMod calculates GHG emissions generated as solid waste generated by the proposed project decomposes in a landfill. For electricity-related emissions, CalEEMod contains default electricity intensity factors for various utilities throughout California. CalEEMod default values for a project serviced by PG&E in the 2027 operational year were used in the analysis.

Refrigerants

During operation, there may be leakages of refrigerants (hydrofluorocarbons) from air conditioners in the proposed single-family homes. Hydrofluorocarbons are typically used for refrigerants, which are long-lived GHGs. The type of refrigerant may vary depending on regulations in place at the time and emissions are based on leakage rates and other variables. CalEEMod defaults were used for these estimates. This presents a conservative estimate of GHG emissions, as recent GHG regulations are phasing in refrigerants with lower global warming potential.

Vegetation

The project site is currently undeveloped and contains some vegetation in the form of existing shrubbery. Therefore, there is currently some carbon sequestration occurring on-site. The project applicant proposes to plant trees and integrate landscaping into the proposed design, which would provide carbon sequestration. However, the number of trees to be planted is unknown and data are insufficient to accurately determine the impact that the existing shrubbery and proposed landscaping has on carbon sequestration. For this analysis, it was assumed that the loss and addition of carbon sequestration that are due to the proposed project would be balanced; therefore, emissions due to carbon sequestration were not included.

Dispersion Modeling

An air dispersion model is a mathematical formulation used to estimate air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and

prevailing meteorological conditions. The air dispersion model applied in this assessment was the AERMOD Version 23132. Specifically, the AERMOD model was used to estimate levels of air emissions at sensitive receptor locations from project construction PM₁₀ exhaust emissions. The AERMOD model provides a refined methodology for estimating localized construction impacts by utilizing long-term, measured representative meteorological data for the project site and representative construction and operational schedules.

Terrain elevations were obtained for the project site using United States Geological Survey (USGS) 1/3rd arc-second Digital Elevation Models (DEMs) processed by the AERMAP model, the AERMOD terrain data pre-processor. The rural dispersion option was used to describe air dispersion in the local vicinity of the project. The air dispersion model assessment utilized 5 years (2013-2017) of BAAQMD-preprocessed meteorological data for the Livermore Municipal Airport which is located approximately 1.8 miles northeast of the project site.

The AERMOD model was used to estimate levels of air emissions at sensitive receptor locations from project construction PM₁₀ exhaust and on-road diesel truck exhaust. Receptors within the AERMOD model were placed at sensitive receptor locations within approximately 1,000 feet of the project site.

Air Dispersion Modeling Assumptions—Construction

Each construction emission source to be evaluated requires geometrical and emission release specifications for use in the air dispersion model. The emission source configurations applied in this assessment are shown in Table 3.2-7.

The on-site construction area sources were assumed to cover the entire project site. Emissions from the on-site construction exhaust sources were assumed to be emitted at 5 meters above ground to account for the top of equipment exhaust stacks where emissions are released to the atmosphere and the increase in emission height due to its heated exhaust. The off-site (on-road) construction vehicle emissions were represented in the AERMOD model as line volume sources with a release height of 11.2 feet (3.4 meters) for diesel vehicles.

Table 3.2-7: Summary of Construction Diesel Emission Source Configurations

Emission Source Type	Configuration	Relevant Assumptions
Off-road Construction Equipment	Area Source (Sitewide)	<ul style="list-style-type: none"> Area Source of height 5 meters to account for plume rise from exhaust. Emission factors: CalEEMod
Heavy-duty Haul Truck Traffic	Line Volume Sources	<ul style="list-style-type: none"> Truck travel was estimated for project-generated off-site travel extending on Busch Road within 1,000 feet of the project site. Emission factors: CalEEMod (EMFAC2021)
Source: Appendix B.		

The construction emissions were assumed to be distributed over the project area with a working schedule of up to eight hours per day and five days per week. Emissions were adjusted by a factor of 3 in AERMOD “Variable Emission” Option to convert 8 hours per day, 7 days per week construction emissions for use with a 24 hours per day, 365 days per year averaging period.

Health Risk Assessment

The primary TAC of concern for the proposed project would be diesel exhaust, characterized by the emissions of DPM as a surrogate, emitted both during construction. The emissions of potential DPM associated with construction activities would be transient, temporary, and occur in varying locations within the project site. The exposure assessment for construction is limited to emissions over the time that construction is expected to occur (i.e., 2.5 years).

Exhaust emissions of DPM (as PM₁₀ exhaust) were obtained from the CalEEMod Version 2022.1 for the unmitigated emissions construction scenarios utilized for the criteria pollutant analysis (Appendix B). DPM emissions to be evaluated include on-site diesel exhaust from construction equipment and from diesel vendors and haul trucks along Busch Road. Air dispersion modeling (described above) was utilized to determine the concentration of DPM at different locations off-site from the proposed project.

The concentration output files from AERMOD were postprocessed in the Hot Spots Analysis and Reporting Program (HARP) Air Dispersion Modeling and Risk Tool (ADMRT) to determine the concentration of DPM at off-site receptors for the modeled emission scenarios. The HARP ADMRT program uses the concentrations, along with equations from the Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,¹⁸ to estimate the project’s cancer and non-cancer chronic health risks. For DPM, the only exposure pathway is inhalation, and the HARP ADMRT tool evaluates exposure from this single pathway.¹⁹ The risk assessment was carried out using recommended ARB/CAPCOA Risk Management Policy assumptions.

Estimation of Cancer Risks

Cancer risks are estimated as the upper-bound incremental probability that an individual would develop cancer as a direct result of exposure to potential carcinogens over a specified exposure duration. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). Cancer risk is expressed in terms of risk per million exposed individuals. A risk level of 10 in a million implies a likelihood (or risk) that up to 10 persons out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of TACs over a specified duration of time. This risk would be an excess cancer risk that is in addition to any environmental cancer risk borne by a person not exposed to these TACs.

¹⁸ Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program. Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments. February. Website: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>. Accessed November 28, 2023.

¹⁹ California Air Resources Board (ARB) and California Air Pollution Control Officers Association (CAPCOA). 2015. Risk Management Guidance for Stationary Sources of Air Toxics. Website: <https://ww2.arb.ca.gov/sites/default/files/classic/toxics/rma/rmgssat.pdf>. Accessed November 13, 2023.

The health risks associated with the exposure to these concentrations are then calculated for each individual receptor based on dose and response parameters. Factors such as an individual's age and body weight and breathing rate determine the dose. Individuals also have varying responses due to a number of factors, with children being more susceptible to health effects due to development. The California Office of Environmental Health Hazard Assessment (OEHHA) risk assessment procedures were modified in 2015²⁰ to account for early childhood health effects and age sensitivity factors are applied to the cancer health risk values. An age sensitivity factor of 10 is applied for infants with exposure starting in the third trimester until age two. Children from ages 2 to 16 are assumed to be three times more sensitive than adults. No adjustments are made for adult exposure for ages greater than 16. OEHHA Health Risk assessment protocols specify HRAs for residential exposure should start with exposure starting at third trimester and this approach is used for the construction HRA conducted for the project.

The analysis utilized the Risk Management Guidance for evaluating an individual receptor based on a 30-year residential exposure over a 70-year averaging period.²¹ Specifically, the policy recommends using the 95th percentile breathing rate for age groups less than 2 years old and the 80th percentile breathing rate for age groups that are greater than or equal to 2 years old. As per OEHHA guidance, exposure was evaluated starting in the third trimester and conservatively evaluated exposure for ages less than 2 years based on the 95th percentile breathing rate.

Estimation of Cancer Risk

Sensitive reporters were modeled as residential receptors to provide a conservative estimate of risks. Residents less than 16 years of age are assumed to be exposed continuously 24 hours per day, 7 days per week and represent the maximally exposed sensitive receptor. The construction HRA considers exposure for the duration of construction (2.5 years), starting at age of third trimester.

Estimation of Chronic Non-Cancer Hazards

An evaluation of potential non-cancer effects of chronic chemical exposures was also conducted. Risk characterization for non-cancer health hazards from TACs is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of the project's emissions to a concentration considered acceptable to public health professionals, termed the Reference Exposure Level (REL). The HI assumes that chronic exposures to TACs adversely affect a specific organ or organ system (toxicological endpoint) of the body. For each discrete chemical exposure, target organs presented in regulatory guidance were used. To calculate the HI, each chemical concentration or dose is divided by the appropriate toxicity REL. For compounds affecting the same toxicological endpoint, this ratio is added together. Where the total equals or exceeds one, a health hazard is presumed to exist.

²⁰ Office of Environmental Health Hazard Assessment (OEHHA). 2015. Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments. February. Website: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>. Accessed November 15, 2023.

²¹ California Air Resources Board (ARB). 2015. Risk Management Guidance for Stationary Sources of Air Toxics. May. Website: https://ww2.arb.ca.gov/sites/default/files/classic/toxics/rma/rma_guidancedraft052715.pdf. Accessed December 8, 2023.

To quantify non-carcinogenic impacts, the chronic HI is derived by using the annual average concentration of TAC as derived from the air dispersion model ($\mu\text{g}/\text{m}^3$). This value is then compared to the REL above which a significant impact is assumed to occur ($\mu\text{g}/\text{m}^3$).

OEHHA has defined a REL for diesel exhaust of $5 \mu\text{g}/\text{m}^3$. The principal toxicological endpoint assumed in this assessment was the respiratory system via the inhalation exposure pathway. DPM does not have any identified short-term or acute RELs.

Estimation of Acute Non-Cancer Hazards

The proposed project's non-cancer acute health risks were not estimated because OEHHA has not established an acute REL for DPM and there are no acute non-cancer risk values associated with DPM.

3.2.4 - Thresholds of Significance

Appendix G to the CEQA Guidelines is a sample Initial Study Checklist that includes questions for determining whether impacts to air quality are significant. These questions reflect the input of planning and environmental professionals at the California Governor's Office of Planning and Research (OPR) and the California Natural Resources Agency, based on input from stakeholder groups and experts in various other governmental agencies, nonprofits, and leading environmental consulting firms. On the subject of air quality, Appendix G states that, "[w]here available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations." As a result, many lead agencies derive their significance criteria from the questions posed in Appendix G and input from relevant air districts. The County, the lead agency for the proposed project, has chosen to do so for this project.

Additional guidance on the significance of air quality impacts is found in CEQA Guidelines Section 15065, subdivision (a)(4), which provides that a lead agency shall find that a project may have a significant effect on the environment if "the environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly." According to the California Supreme Court, this "mandatory finding of significance" applies to potential effects on public health from environmental impacts such as those associated with air pollutant emissions from projects (*California Business Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, 386–392).

In light of the foregoing, the proposed project would have a significant effect related to air quality if the project would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard;
- c) Expose sensitive receptors to substantial pollutant concentrations (and thereby possibly cause substantial adverse effects on human beings, directly or indirectly); or

- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Significance Criteria

The preceding thresholds of significance are stated in general terms. It is therefore desirable to formulate additional, more precise thresholds based on guidance from the BAAQMD, as is encouraged in Appendix G to the CEQA Guidelines. As explained earlier, BAAQMD’s 2022 CEQA Air Quality Guidelines were prepared to assist in evaluating air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air quality impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHGs. The analysis below was prepared using these BAAQMD CEQA Guidelines.

Regional Significance Criteria

Table 3.2-8 shows the BAAQMD’s criteria for regional significance for project construction and operations.

Table 3.2-8: BAAQMD Regional (Mass Emissions) Air Pollutant Significance Thresholds

Pollutant	Construction Phase	Operational Phase	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
PM ₁₀ and PM _{2.5} Fugitive Dust	Best Management Practices	None	None

Notes:
 NO_x = oxides of nitrogen
 PM₁₀ = particulate matter less than 10 micrometers in diameter
 PM_{2.5} = particulate matter less than 2.5 micrometers in diameter
 ROG = reactive organic gas
 Source: Bay Area Air Quality Management District (BAAQMD) 2022. April. California Environmental Quality Act Air Quality Guidelines.

In developing the above significance thresholds, the BAAQMD considers the emission levels for which a project’s individual emissions would be cumulatively considerable. If a project were to exceed the emission thresholds in Table 3.2-8, that project’s emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region’s existing air quality conditions. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with PM include premature

death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions thresholds shown in Table 3.2-8, it is speculative to determine how exceeding regional thresholds would affect the number of days the region is in nonattainment—as mass emissions are not linearly correlated with concentrations of emissions—or how many additional individuals in the Air Basin would be affected by the health effects cited above.

In *Sierra Club v. County of Fresno (Friant Ranch, LP)* (2018) 6 Cal.5th 502, 510, 517-522, the California Supreme Court held generally that an EIR should “make a reasonable effort to substantively connect a project’s air quality impacts to likely health consequences.” A possible example of such a connection would be to calculate a project’s “impact on the days of nonattainment per year” (*Id.* at pp. 521). But the court recognized that there might be scientific limitations on an agency’s ability to make the connection between air pollutant emissions and public health consequences in a credible fashion, given limitations in technical methodologies (*Id.* at pp. 520-521). Thus, the court acknowledged that another option for an agency preparing an EIR might be “to explain why it was not feasible to provide an analysis that connected the air quality effects to human health consequences” (*Id.* at p. 522).

For Alameda County where the proposed project is located, the BAAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of emissions in the Air Basin. At present, the BAAQMD has not provided any methodology to assist local governments in reasonably and accurately assessing the specific connection between mass emissions of ozone precursors (e.g., ROG and NO_x) and other pollutants of concern on a regional basis and any specific effects on public health or regional air quality concentrations that might result from such mass emissions. The County has therefore concluded that it is not feasible to predict how mass emissions of pollutants of regional concern from the proposed project could lead to specific public health consequences, changes in pollutant concentrations, or changes in the number of days for which the SFBAAB will be in nonattainment for regional pollutants.

Ozone concentrations, for instance, depend upon various complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground level ozone concentrations related to the NAAQS and CAAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the EPA, the air districts prepare air quality management plans that detail regional programs to attain the Ambient Air Quality Standards (AAQS). However, if a project within the BAAQMD exceeds the regional significance thresholds, the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the Air Basin.

On the other hand, it is technically feasible to predict with reasonable accuracy the potential localized health consequences of localized pollutants such as TACs and PM_{2.5}. As discussed below, the consultants who prepared this section prepared an HRA that addresses the potential for additional

incidences of cancer resulting from both the construction-related emissions and the operational emissions of the proposed project.

Consistency with Air Quality Plan

The applicable air quality plan is BAAQMD's 2017 Bay Area Clean Air Plan, which identifies measures to:

- Reduce emissions and reduce ambient concentrations of air pollutants;
- Safeguard public health by reducing exposure to the air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and
- Reduce GHG emissions to protect the climate.

A project would be determined to conflict with or obstruct implementation of an applicable air quality plan if it would result in substantial new regional emissions not foreseen in the air quality planning process.

Local CO Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the CAAQS for CO, which is 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). However, with the turnover of older vehicles, the introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in the attainment of the CAAQS and NAAQS, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, the BAAQMD does not require a CO hotspot analysis if all the following criteria are met:

- The project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans; and
- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at the affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).²²

Community Risk and Hazards

The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and the siting of a new receptor. Local community risk and hazard impacts

²² Bay Area Air Quality Management District (BAAQMD). 2022. California Environmental Quality Act Air Quality Guidelines. April. Website: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-4-screening_final.pdf?rev=ac551d35a52d479dad475e7d4c57afa6&sc_lang=en. Accessed November 29, 2023.

are associated with TACs and PM_{2.5} because emissions of these pollutants can have significant health impacts at the local level.

- The proposed project would generate TACs and PM_{2.5} during construction activities that could elevate concentrations of air pollutants at the nearby school and residential sensitive receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for project operations. Construction-related TAC and PM_{2.5} impacts should be addressed on a case-by-case basis, considering each project's specific construction-related characteristics and proximity to off-site receptors, as applicable.²³
- The proposed project involves the construction of new warehouse facilities and would be a source of operational TACs and PM_{2.5} from trucking activity. The BAAQMD thresholds related to siting new sources of TACs and PM_{2.5} near existing or planned sensitive receptors are applicable.

Since the County of Alameda does not have a qualified risk reduction plan, a site-specific analysis of TACs and PM_{2.5} impacts on sensitive receptors was conducted. The thresholds identified below are applied to the proposed project's construction and operational phases.

Community Risk and Hazards: Project

Project-level emissions of TACs or PM_{2.5} from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- An excess cancer risk level of more than 10 in one million or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a significant cumulatively considerable contribution.
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m³) annual average PM_{2.5} from a single source would be a significant cumulatively considerable contribution.

Community Risk and Hazards: Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulatively considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the proposed project, meets any of these conditions:

- Has excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0.
- Exceeds 0.8 µg/m³ annual average PM_{2.5}.

²³ Bay Area Air Quality Management District (BAAQMD). 2022. California Environmental Quality Act Air Quality Guidelines. April. Website: <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>. Accessed November 29, 2023.

In February 2015, the OEHHA adopted additional HRA guidance that includes several efforts to be more protective of children’s health. These updated procedures include age sensitivity factors to account for the higher sensitivity of infants and young children to cancer-causing chemicals and age-specific breathing rates.²⁴

Odors

The BAAQMD thresholds for odors are qualitative based on BAAQMD Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health, or safety of any such persons or the public; or which causes, or has a natural tendency to cause, injury, or damage to business or property. Under BAAQMD Rule 1-301, the BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants. Table 3.2-9 shows the screening distances for various land uses that are considered to have objectionable odors.²⁵

Table 3.2-9: BAAQMD Odor Screening-level Distances Thresholds

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile

²⁴ California Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments. February. Website: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>. Accessed November 23, 2023.

²⁵ Bay Area Air Quality Management District (BAAQMD). 2022. California Environmental Quality Act Air Quality Guidelines. April. Website: <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>. Accessed February 26, 2024.

Land Use/Type of Operation	Project Screening Distance
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles
Source: Bay Area Air Quality Management District (BAAQMD). 2022.	

3.2.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where appropriate.

Consistency with Air Quality Management Plan

Impact AIR-1: The proposed project could conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis

The BAAQMD is responsible for reducing emissions from area, stationary, and mobile sources in the SFBAAB to achieve National and California AAQS. The BAAQMD 2017 Clean Air Plan is a regional and multiagency effort to reduce air pollution in the Air Basin. A consistency determination with the Air Quality Management Plan (AQMP) plays an important role in local agency project review by linking local planning and individual projects to the 2017 Clean Air Plan. It fulfills the CEQA goal of informing decision-makers of the proposed project's environmental effects under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the 2017 Clean Air Plan.

The BAAQMD compiles the regional emissions inventory for the SFBAAB. In part, the regional population, housing, and employment projections developed by the ABAG are based on cities' general plan land use designations. These projections form the foundation for the emissions inventory of the 2017 Clean Air Plan. These demographic trends are incorporated into Plan Bay Area, compiled by ABAG and the MTC, to determine priority transportation projects and VMT in the Bay Area. Projects consistent with the local general plan are considered consistent with the regional air quality plan. Large projects that exceed regional employment, population, and housing planning projections have the potential to be inconsistent with the regional inventory compiled as part of the 2017 Clean Air Plan.

The proposed project would build 194 single-family houses on approximately 26.6 acres. As previously described, demographics trends such as employment and population growth were estimated in ABAG's Plan Bay Area 2040 based on local general plan land use patterns, which the BAAQMD utilized in part to inform the emissions inventory and projections contained in the 2017 Clean Air Plan.

Land Use Designation

According to the County’s ECAP, the residential project site’s land use designation is Medium Density Residential (MDR).²⁶ The MDR designation allows for densities between 4.1 and 8.0 units per acre. Land uses allowed within this designation include single-family detached and attached homes, multiple family residential units, group quarters, public and quasi-public uses, limited agricultural uses, community and neighborhood commercial uses, neighborhood support uses, and similar compatible uses.²⁷ Land use designations for the site and surrounding parcels are shown in Exhibit 2-3, Existing Land Use Designations.

Zoning

The project site is zoned Agriculture (A).²⁸ Although the proposed project would not be consistent with the minimum lot size required for the A zoning designation, rezoning is not required because the proposed project is consistent with the site’s ECAP land use designation.²⁹

As noted in Impact AIR-2 below, project-generated construction- and operational emissions would not exceed BAAQMD’s project-level significance thresholds and impacts would be less than significant.

Table 3.2-10 identifies the project-applicable control measures in the 2017 Clean Air Plan required by BAAQMD to reduce emissions for a wide range of stationary and mobile sources and the project’s consistency analysis with these control measures. As shown in Table 3.2-10, the proposed project would not conflict with the control measures of the 2017 Clean Air Plan.

Table 3.2-10: Consistency With 2017 Clean Air Plan Control Measures

Type	Measure Number/Title	Consistency Analysis
Stationary Source Control Measure	SS18: Basin-Wide Combustion Strategy. Stabilize and then reduce emissions of GHGs, criteria air pollutant and toxic emissions from stationary combustion sources throughout the Air District by first establishing carbon intensity caps on major GHG sources, and then adopting new rules to (1) reduce fuel use on a source-type by source-type basis, and (2) evaluate alternatives to decarbonize abatement devices.	Consistent. Stationary sources are regulated directly by the BAAQMD, which routinely adopts/revises rules or regulations to implement the Stationary Source (SS) control measures to reduce stationary source emissions. Therefore, any new stationary sources associated with the proposed project would be required to comply with BAAQMD’s regulations. Based on the proposed residential use for the project site, it is not anticipated that the

²⁶ County of Alameda. 2023. Unincorporated Alameda County Public Access Map (PAM). Website: <https://acpwa.maps.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773>. Accessed February 26, 2024.

²⁷ County of Alameda. 1994. East County Area Plan. May 5.

²⁸ County of Alameda. 2023. Unincorporated Alameda County Public Access Map (PAM). Website: <https://acpwa.maps.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773>. Accessed February 26, 2024.

²⁹ County of Alameda. 2022. Alameda County Zoning Ordinance, Chapter 17.06. Website: https://library.municode.com/ca/alameda_county/codes/code_of_ordinances?nodeId=TIT17ZO_CH17.06ADI. Accessed February 26, 2024.

It is well settled law that zoning codes must be consistent with general plans. (Government Code Section 65860(a).) The general plan controls when in conflict with a zoning ordinance. (ee, e.g., Government Code Section 65860(c); Sierra Club v. Board of Supervisors (1981) 126 Cal.App. 3d 698, 704; City of Morgan Hill v. Bushey (2018) 5 Cal.5th 1068, 1080.)

Type	Measure Number/Title	Consistency Analysis
	<p>SS21: New Source Review for Air Toxics. Propose revisions to Air District Rule 2-5, New Source Review of Toxic Air Contaminants, based on OEHHA’s 2015 Health Risk Assessment Guidelines and ARB/CAPCOA’s 2015 Risk Management Guidance. Revise the Air District’s health risk assessment trigger levels for each toxic air contaminant using the 2015 Guidelines and most recent health effects values.</p>	<p>proposed project would result in any new major stationary source emissions. Additionally, in the event stationary equipment is installed on-site, it is anticipated that the equipment would be small-quantity emitters and would require review by BAAQMD for permitted sources of air which would ensure consistency with the 2017 Clean Air Plan.</p>
	<p>SS 36: PM from Trackout. Develop new Air District rule to prevent mud/dirt and other solid trackout from construction, landfills, quarries and other bulk material sites.</p>	<p>Consistent with mitigation. BAAQMD’s recommended mitigation measures for construction fugitive dust control, incorporated as MM AIR-1 for this project, would be implemented to reduce fugitive dust and trackout during project construction. In addition, mud and dirt that may be tracked out onto the nearby public roads during construction activities shall be removed promptly by the contractor based on BAAQMD’s requirements.</p>
	<p>SS 37: PM from Asphalt Operations. Develop an Air District rule to require abatement/control of blue smoke emissions related to asphalt delivery to roadway paving projects.</p>	<p>Consistent. Asphalt application during the construction of the proposed project would be subject to BAAQMD Regulation 8, Rule 15-Emulsified and Liquid Asphalts.</p>
<p>Transportation Control Measures</p>	<p>TR 9: Bicycle and Pedestrian Access and Facilities. Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities.</p>	<p>Consistent. Transportation (TR) control measures are strategies to reduce vehicle trips, vehicle use, VMT, vehicle idling, and traffic congestion to reduce motor vehicle emissions. Although most of the TR control measures are implemented at the regional level—that is, by MTC or California Department of Transportation (Caltrans)—the 2017 Clean Air Plan relies on local communities to assist with the implementation of some measures. The proposed project would provide pedestrian circulation throughout the project site in accordance with applicable standards. The proposed project would include frontage improvements along Busch Road, including the construction of an approximately 8-foot-wide sidewalk, an approximately 6-foot-wide Class II bicycle lane, and street landscaping. In front of the project site, Busch Road would be redeveloped into a two-lane road with a split median. The street would have a width of 100 feet and would not provide on-street parking. The</p>

Type	Measure Number/Title	Consistency Analysis
		bicycle improvements would extend approximately 1,000 feet, from the southeast corner of the project site to Ironwood Drive, located west of the project.
Energy and Climate Control Measures	<p>EN1: Decarbonize Electricity Production. Engage with PG&E, municipal electric utilities and CCEs to maximize the amount of renewable energy contributing to the production of electricity within the Bay Area as well as electricity imported into the region. Work with local governments to implement local renewable energy programs. Engage with stakeholders including dairy farms, forest managers, water treatment facilities, food processors, public works agencies, and waste management to increase use of biomass in electricity production.</p> <p>EN2: Decrease Electricity Demand. Work with local governments to adopt additional energy efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.</p>	Consistent. The Energy and Climate (EN) control measures are intended to reduce energy use as a means of reducing adverse air quality emissions. The proposed single-family homes and Accessory Dwelling Units (ADUs) would comply with 2022 Building Energy Efficiency Standards’ solar requirements.
Buildings Control Measures	<p>BL2: Decarbonize Buildings. Explore potential Air District rulemaking options regarding the sale of fossil fuel-based space and water heating systems for both residential and commercial use. Explore incentives for property owners to replace their furnace, water heater, or natural gas powered appliances with zero-carbon alternatives. Update Air District guidance documents to recommend that commercial and multi-family developments install ground source heat pumps and solar hot water heaters.</p>	Consistent. The proposed project would not include natural gas plumbing or appliances and is therefore consistent with this measure.
Natural and Working Lands Control Measures	<p>NW 3—Carbon Sequestration in Wetlands. Identify federal, State, and regional agencies, and collaborative working groups that the Air District can assist with technical expertise, research or incentive funds to enhance carbon sequestration in wetlands around the Bay Area. Assist agencies and organizations that are working to secure</p>	Consistent. The control measure focuses on increasing carbon sequestration on wetlands. The proposed project would not be constructed on wetlands. Moreover, the proposed project would include the planting of various ornamental and shade trees throughout the project site. Constructing the proposed project on a site

Type	Measure Number/Title	Consistency Analysis
	the protection and restoration of wetlands in the San Francisco Bay.	without wetlands would support the State’s working lands and would therefore make the proposed project consistent with this measure.
Waste Management Control Measures	WA 4–Recycling and Waste Reduction. Develop model policies to facilitate local adoption of ordinances and programs to reduce the amount of green waste going to landfills.	Consistent. The control measure includes strategies to increase waste diversion rates through efforts to reduce, reuse, and recycle. The proposed project would be served by the Pleasanton Garbage Service (PGS), which would provide both solid waste and recycling services. Garbage and recycling services would be provided on a weekly basis.
Water Control Measures	WR 2–Support Water Conservation. Develop a list of best practices that reduce water consumption and increase on-site water recycling in new and existing buildings; incorporate into local planning guidance.	Consistent. The 2017 Clean Air Plan includes measures to reduce water use. The proposed project would include water efficiency measures required under CALGreen. The proposed project would include water-efficient indoor fixtures consistent with the requirements of CALGreen and water-efficient landscaping outdoors.
Super GHG Control Measures	SL 1–Short-Lived Climate Pollutants. Reduce methane from landfills and farming activities through various control measures listed under waste and agriculture sectors. Develop a rule to reduce methane emissions from natural gas pipelines and processing operations and amend regulations to reduce emissions of methane and other organic gases from equipment leaks at oil refineries. Enforce applicable regulations on the servicing of existing air conditioning units in motor vehicles, support the adoption of more stringent regulations by ARB and/or U.S. EPA, and encourage better HFC disposal practices.	Consistent. Super-GHGs include methane, black carbon, and fluorinated gases. These compounds are sometimes referred to as short-lived climate pollutants because their lifetime in the atmosphere is generally fairly short. Measures to reduce super-GHGs are addressed on a sector-by-sector basis in the 2017 Clean Air Plan. As the project is residential in nature, it is not expected to be a notable source of super-GHGs.

Notes:

AG = Agricultural BL = Buildings EN = Energy and Climate
 FSM = Further Study Measures NW = Natural and Working Lands
 SL = Super GHG (Short-Lived) SS = Stationary Sources
 TR = Transportation WA = Waste Management
 WR = Water Control Measures

Source: Bay Area Air Quality Management District (BAAQMD). 2017, April 19. Final 2017 Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area. Website: https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed November 30, 2023.

As shown in Table 3.2-10, the proposed project would not conflict with the relevant clean air measures contained in the Clean Air Plan after mitigation. Nonetheless, the BAAQMD's CEQA Air Quality Guidelines further recommend determining a project's consistency with the 2017 Clean Air Plan, in part, by determining a project's consistency with the regional significance thresholds presented in Table 3.2-8.³⁰ As discussed under Impact AIR-2, the proposed project emissions are below BAAQMD's significance thresholds would be considered less than significant.

To determine the impacts related to construction fugitive dust, BAAQMD requires that a project to implement construction BMPs to lead to less than significant impact regarding construction fugitive dust. Therefore, Mitigation Measure (MM) AIR-1 would be required to ensure implementation of construction BMPs recommended by the BAAQMD.

Consequently, implementation of MM AIR-1 would sufficiently maintain project construction emissions at less than significant levels. As previously discussed, the BAAQMD's CEQA Air Quality Guidelines recommend determining a project's consistency with the 2017 Clean Air Plan, in part, by determining a project's consistency with the BAAQMD significance thresholds. As discussed under Impact AIR-2, the proposed project would not generate emissions which would exceed the BAAQMD's significance thresholds. Therefore, the proposed project would not conflict with the applicable air quality plan and impacts would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-1 Implement BAAQMD Best Management Practices to Control Dust During Construction

The following dust control measures, as recommended by the Bay Area Air Quality Management District (BAAQMD), shall be included in the design of the proposed project and implemented during construction:

- All exposed non-paved surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and access roads) shall be watered at least two times per day and/or non-toxic soil stabilizers shall be applied to exposed non-paved surfaces.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered and/or shall maintain at least 2 feet of freeboard.
- All visible mud or dirt tracked 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.

³⁰ Bay Area Air Quality Management District (BAAQMD). 2022. California Environmental Quality Act Air Quality Guidelines.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes, as required by the California Airborne Toxics Control Measure (ATCM) Title 13, Section 2485 of the California Code of Regulations. Clear signage regarding idling restrictions shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- The prime construction contractor shall post a publicly visible sign with the telephone number and person to contact regarding dust complaints. The construction contractor shall take corrective action within 48 hours. The BAAQMD's and the County's phone numbers shall also be visible to ensure compliance with applicable regulations.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Cumulative Criteria Pollutant Emissions Impacts

Impact AIR-2: **The proposed project could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.**

Impact Analysis

This impact is related to the cumulative effect of a project's regional criteria pollutant emissions. By its nature, air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region. The nonattainment status of regional pollutants results from past and present development within the Air Basin, and this regional impact is a cumulative impact. Therefore, new development projects (such as the proposed project) within the Air Basin would contribute to this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when evaluated in combination with past, present, and future development projects.

Potential localized and regional impacts would result in exceedances of State or federal standards for NO_x, particulate matter (PM₁₀ and PM_{2.5}), or CO. NO_x emissions are of concern because of potential health impacts from exposure to NO_x emissions during both construction and operation and as a precursor in the formation of airborne ozone. PM₁₀ and PM_{2.5} are of concern during construction because of the potential to emit exhaust emissions from the operation of off-road construction equipment and fugitive dust during earth-disturbing activities (construction fugitive dust). CO emissions are of concern during project operation because operational CO hotspots are related to increases in on-road vehicle congestion and potential health effects.

ROG emissions are also important because of their participation in the formation of ground level ozone. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children.

The cumulative analysis focuses on whether a specific project would result in cumulatively considerable emissions. According to Section 15064(h)(4) of the CEQA Guidelines, the existence of significant cumulative impacts caused by other projects alone does not constitute substantial evidence that the project's incremental effects would be cumulatively considerable. Rather, the determination of cumulative air quality impacts for construction and operational emissions is based on whether the project would result in regional emissions that exceed the BAAQMD regional thresholds of significance for construction and operations on a project level. The significance thresholds represent the allowable amount of emissions each project can generate without generating a cumulatively considerable contribution to regional air quality impacts. Therefore, a project that would not exceed the BAAQMD thresholds of significance on the project level also would not be considered to result in a cumulatively considerable contribution to these regional air quality impacts. Construction and operational emissions are discussed separately below.

Construction

During construction, fugitive dust would be generated from site grading and other earthmoving activities. The majority of this fugitive dust would remain localized and deposited near the project site; however, fugitive dust's potential impacts exist unless control measures are implemented to reduce this source's emissions. Exhaust emissions would also be generated from the operation of the off-road construction equipment and on-road construction vehicles.

Construction Fugitive Dust

As discussed in Impact AIR-1, if all appropriate emissions control measures are implemented for a project as recommended by the BAAQMD, then fugitive dust emissions during construction are not considered significant. Therefore, MM AIR-1 would be required to ensure implementation of construction BMPs recommended by the BAAQMD irrespective of the emissions reductions achieved by those BMPs. With the incorporation of this mitigation, short-term construction impacts associated with violating an air quality standard or contributing substantially to an existing or projected air quality violation would be less than significant for fugitive dust.

Construction Air Pollutant Emissions: ROG, NO_x, PM₁₀, and PM_{2.5}

CalEEMod, Version 2022.1, was used to estimate the proposed project's construction emissions. CalEEMod provides a consistent platform for estimating construction and operational emissions from various land use projects and is the model recommended by the BAAQMD for estimating project emissions. Estimated construction emissions are compared with the applicable thresholds of significance established by the BAAQMD to assess ROG, NO_x, exhaust PM₁₀, and exhaust PM_{2.5} construction emissions to determine significance for this impact.

At the time of this analysis, the construction of the proposed project was anticipated to begin in first quarter of 2025 and last 30 months. If the construction schedule moves to later years, construction emissions would likely decrease because of improvements in technology and more stringent regulatory requirements.

Construction activities such as grading, excavation, and travel on unpaved surfaces would generate dust and lead to elevated concentrations of PM₁₀ and PM_{2.5}. As previously discussed, the proposed project includes two design options, Design Option A and Design Option B, for the location of the primary bioretention facility. All other off-site improvements (e.g., water storage and booster pump facility, sewer treatment plant, recycled water storage facility, and agricultural spray fields) would be in the same locations east of the residential project site under both design options. These design options are shown on Exhibit 2-6a and Exhibit 2-6b, respectively. The regional construction emission estimates would remain the same under both design options. According to the applicant-provided information, the grading would not lead to significant import or export material. Material movement would be limited to an off-site location, which is within 1 mile of the residential project site. As the BAAQMD dust control measures would be required to ensure fugitive dust impacts are less than significant, the emission estimates shown below account for the implementation of MM AIR-1. The operation of construction equipment results in exhaust emissions, which include ROG and NO_x. Table 3.2-11 presents construction-period emissions that would result from the development of the proposed project.

Table 3.2-11: Construction Emissions

Construction Activity	Criteria Pollutant Emissions			
	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
Residential Project Site Construction				
Mass Grading (2025)	829.1	7,561.2	324.8	298.8
Utility Trenching (2025)	36.5	255.8	10.0	9.2
Main Site and Frontage Improvement (2025)	67.6	651.1	25.4	23.5
Main Site and Frontage Improvement (2026)	199.9	1,928.1	72.5	64.9
Building Construction (2025)	295.2	2,536.4	104.0	95.8
Building Construction (2026)	668.3	5,737.5	220.6	203.1
Building Construction (2027)	413.2	3,506.7	127.3	117.3
Architectural Coating (2027)	9,466.6	6.0	0	0
Off-site Improvements				
Site Preparation (2025)	101.0	950.7	41.0	37.7
Grading (2025)	50.4	463.0	20.3	18.6
Agriculture Field Trenching (2025)	3.5	22.6	1.0	0.9
Building Construction (2025)	177.5	1,725.1	68.8	63.4
Building Construction (2026)	47.6	459.8	17.1	15.6

Construction Activity	Criteria Pollutant Emissions			
	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
Paving (2026)	94.6	798.3	33.9	30.9
Architectural Coating (2026)	64.6	19.7	0.5	0.5
Average Daily Emissions				
Total Construction Emissions (Pounds)	12,515.5	26,622.0	1,067.1	980.3
Average Daily Construction Emissions (Pounds/Day)	14	29	1	1
BAAQMD Significance Thresholds	54	54	82	54
Significant Impact?	No	No	No	No
Notes: This analysis relies on a 903-day construction schedule, consistent with the construction schedule and modeling results contained in Appendix B. BAAQMD = Bay Area Air Quality Management District NO _x = nitrogen oxides PM ₁₀ = particulate matter less than 10 micrometers in diameter PM _{2.5} = particulate matter less than 2.5 micrometers in diameter ROG = reactive organic gases Source: Appendix B.				

Operation

Operational Air Pollutant Emissions: ROG, NO_x, PM₁₀, and PM_{2.5}

Operational emissions would include area, energy, and mobile sources. Area sources would include emissions from architectural coatings, consumer products, and landscape equipment. Energy sources include emissions from the combustion of natural gas for water heaters and other heat sources. Mobile sources include exhaust and road dust emissions from the automobiles that would travel to and from the project site. Pollutants of concern include ROG, NO_x, PM₁₀, and PM_{2.5}.

Project operations were analyzed at full buildout immediately following the completion of construction in August 2027 as a conservative estimate. During full operation, the proposed project is expected to generate 2,159 daily trips, which includes trips from the 194 single-family houses and the associated 49 ADUs.³¹ The default trip lengths for Alameda County for residential uses were applied in the CalEEMod modeling.

The off-site improvement area to the east of the project site includes the water storage and booster pump facility, sewer treatment plant, recycled water storage facility, agricultural irrigation fields, and bioretention areas. As described in Chapter 2, Project Description, the operation of the off-site improvement (including water treatment plant, bioretention, etc.) would primarily use electricity and would only generate a few trips each month for maintenance purposes. Additionally, the operation of the sewer treatment plant, which is a package membrane bioreactor sewage treatment system including odor control and ultraviolet disinfection with a treatment capacity of 50,000 gallons of wastewater per day, would potentially generate a small amount of ammonia, hydrogen sulfide,

³¹ W-Trans. 2023. Draft Report: Transportation Impact Study for the Arroyo Lago Residential Project. August.

and other gaseous and aerosol emissions. However, these emissions are not criteria pollutants nor toxic air contaminants and their adverse health effects are considered insignificant.³² Therefore, the operation of the off-site area would not result in significant criteria pollutant emissions and is not included as part of the operational emissions shown below.

Operational emission estimates for the proposed project are contained in Table 3.2-12. For detailed assumptions used to estimate emissions, see Appendix B.

Table 3.2-12: Operational Emissions

Emissions Source	ROG	NO _x	PM ₁₀ Total	PM _{2.5} Total
	Tons per Year			
Mobile	1.16	1.00	2.08	0.54
Area	3.14	0.01	0.00071	0.00059
Energy	0.02	0.41	0.03	0.03
Total (tons/year)	4.32	1.42	2.11	0.57
Significance Threshold (tons/year)	10	10	15	10
Exceeds Significance Threshold?	No	No	No	No
Total Average (pounds/day)²	23.70	7.80	11.58	3.13
Significance Threshold (tons/year)	54	54	82	54
Exceeds Significance Threshold?	No	No	No	No
Notes: lb. = pounds ND = No Data NO _x = oxides of nitrogen PM ₁₀ = particulate matter less than 10 microns in diameter PM _{2.5} = particulate matter less than 2.5 microns in diameter ROG = reactive organic gases ¹ Totals may not sum exactly due to rounding. Calculations use unrounded results. ² Pounds/day emissions data is derived from tons/year emissions data by converting tons to pounds. 365 working days per year is assumed to estimate average daily emission rates. Source: CalEEMod Output (see Appendix B).				

Table 3.2-12 indicates that the proposed project would result in operational-related criteria air pollutants or ozone precursors below the BAAQMD’s thresholds of significance for all criteria pollutants.

³² United States Environmental Protection Agency (EPA). 2017. National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works Residual Risk and Technology Review. Website: <https://www.govinfo.gov/content/pkg/FR-2017-10-26/pdf/2017-23067.pdf>. Accessed May 6, 2024.

Operational Carbon Monoxide Hotspot

The CO emissions from traffic generated by the proposed project are a concern at the local level. Congested intersections can result in high, localized concentrations of CO.

The BAAQMD recommends a screening analysis to determine whether a project has the potential to contribute to a CO hotspot. The screening criteria identify when site-specific CO dispersion modeling is necessary. The proposed project would result in a less than significant impact to air quality for local CO if all the following screening criteria are met:

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

In accordance with SB 743, the proposed project's traffic study does not use delay-based metrics such as congestion to analyze project impacts. According to the traffic study, the proposed project would not conflict with a program, plan, ordinance, or policy of the circulation system, including transit, roadway, bicycle, and pedestrian facilities. As the project construction would direct most of the traffic to El Charro Road, which would minimize truck traffic impacts on residential neighborhoods, the project construction would not have a significant impact on the traffic. Additionally, the proposed project would widen and pave the road sections on Busch Road and the east boundary of the project site and associated sidewalks, which would accommodate the 2,159 trips generated by the proposed project per day.

Interstate 580 (I-580), located approximately 1.37 miles north of the project site, would experience the most traffic volume as compared to other roadways in the vicinity. According Caltrans' published 2022 peak-hour volume data for State Highways, the portion of I-580 near the project area experiences fewer than 20,000 peak-hour trips.³³ The proposed project would only generate approximately 200 trips during peak-hours. Therefore, the proposed project would not result in any nearby intersection having peak-hour traffic volumes exceeding 44,000 vehicles per hour.

Nonetheless, CO hotspots can occur when a transportation facility's design or orientation prevents the adequate dispersion of CO emissions from vehicles, resulting in the accumulation of local CO concentrations. The design or orientation of a transportation facility that may prevent the dispersion of CO emissions include tunnels, parking garages, bridge underpasses, natural or urban canyons, below-grade roadways, or other features where vertical or horizontal atmospheric mixing is

³³ California Department of Transportation (Caltrans). Traffic Census Program. Website: <https://dot.ca.gov/programs/traffic-operations/census>. Accessed May 7, 2024.

substantially limited. Adjacent roadways that would receive new vehicle trips generated by the proposed project do not include roadway segments where vertical or horizontal atmospheric mixing is substantially limited. As discussed above, the segment of I-580 near the project area experiences fewer than 20,000 peak-hour trips and the proposed project would only generate approximately 200 peak-hour trips. Therefore, the proposed project would not result in any nearby intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited.

Therefore, based on the above criteria, the proposed project would not exceed the CO screening criteria and would have a less than significant impact related to CO.

The proposed project would generate criteria pollutant and ozone precursor emissions during construction and operation. The BAAQMD does not have a quantitative emissions threshold for determining potentially significant impacts related to construction fugitive dust. Instead, the BAAQMD determines a project to result in a potentially significant impact if that project were not to implement construction BMPs to minimize the extent of fugitive dust emissions, such as soil erosion, sediment migration, roadway dust re-entrainment, and soil trackout, during project construction. In the absence of specific information related to the proposed project's intended implementation of construction BMPs to minimize fugitive dust emissions, the proposed project is assumed to not include any construction BMPs. Therefore, MM AIR-1, discussed above, would be required to ensure implementation of construction BMPs recommended by the BAAQMD irrespective of the emissions reductions achieved by those BMPs. Consequently, implementation of MM AIR-1 would sufficiently reduce project construction emissions to less than significant levels.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM AIR-1.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Sensitive Receptors Exposure to Pollutant Concentrations

Impact AIR-3: **The proposed project could expose sensitive receptors to substantial pollutant concentrations.**

Impact Analysis

The proposed project could expose sensitive receptors to elevated pollutant concentrations if it causes or contributes significantly to elevated pollutant concentration levels. As described in Section 3.2.1, Environmental Setting, beneath Table 3.2-1, the closest sensitive receptors include single-family residences located immediately west of the project site. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects. As the proposed project would develop 194 single-family homes with associated 49 ADUs and the off-site improvements (including a water storage and booster pump

facility, sewer treatment plant, recycled water storage facility, agricultural spray fields, bioretention areas, etc.), a construction HRA was prepared where PM₁₀ is evaluated as the surrogate of DPM, which is the major TAC during construction. As the project operation would not generate significant TAC emissions, an operational HRA is not required. The results of the HRA are summarized below.

Construction

Table 3.2-13 presents a summary of the results of the HRA prepared for the proposed project during project construction. As shown in Section 2, Project Description, the proposed project includes two design options, Design Option A and Design Option B, for the location of the primary bioretention area. Design Option A would locate the primary bioretention area west of El Charro Road, and Design Option B would locate the primary bioretention area east of El Charro Road. All other off-site improvements (e.g., water storage and booster pump facility, sewer treatment plant, recycled water storage facility, agricultural spray fields) would remain in the same locations east of the residential project site under both design options. These design options are shown on Exhibit 2-6a and Exhibit 2-6b, respectively.

The regional construction emission estimates would remain the same under both design options; however, health risk impacts are influenced by the distance between the source of the pollutant(s) and the receptors. Therefore, health risk impacts are expected to vary slightly between the two design options. As Design Option A would place construction activity closer to existing sensitive receptors, health risk impacts for this option would present a conservative estimate of health risk impacts for the project. As the emissions of concern would be emitted during project construction, the HRA analyzes the proposed project’s emissions over a period of 30 months (2.5 years) consistent with the BAAQMD’s Health Risk Assessment Guidelines.³⁴ An analysis of the proposed project’s cumulative impacts at the maximally impacted receptor (MIR) is also presented below.

Table 3.2-13: Summary of Construction Health Risks at the Maximally Impacted Receptor—Unmitigated Scenario

Impact Scenario	Latitude (UTMX)	Longitude (UTMY)	Cancer Risk ¹ (risk per million)	Chronic Non-Cancer Hazard Index ²	Annual PM _{2.5} Concentration (µg/m ³)
Residential MIR Impact	37.67843 (600737)	-121.85761 (4170751)	15.6	0.009	0.044
Thresholds of Significance			10	1	0.3
Exceeds Individual Source Threshold?			Yes	No	No
Notes: REL = Reference Exposure Level DPM = diesel particulate matter TAC = toxic air contaminants MIR = Maximally Impacted Receptor µg/m ³ = micrograms per cubic meter ¹ Cancer risk is identified by multiplying the risk sum from HARP2 by 1,000,000.					

³⁴ Bay Area Air Quality Management District (BAAQMD). 2016. BAAQMD Air Toxics NSR Program Health Risk Assessment Guidelines. December. Website: https://www.baaqmd.gov/~media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en. Accessed September 16, 2023.

Impact Scenario	Latitude (UTMX)	Longitude (UTMY)	Cancer Risk ¹ (risk per million)	Chronic Non-Cancer Hazard Index ²	Annual PM _{2.5} Concentration (µg/m ³)
² Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as PM _{2.5} exhaust) by the DPM REL of 5 µg/m ³ . Source: Appendix B. Thresholds Source: Bay Area Air Quality Management District (BAAQMD). 2022. California Environmental Quality Act Air Quality Guidelines. April. Website: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines . Accessed November 30, 2023.					

As shown in Table 3.2-13, the cancer risk resulting from the construction of the proposed project would exceed the BAAQMD’s project-level significance thresholds. The MIR is a single-family residence located in the cul-de-sac that is 60 feet west of the project site. The majority of the construction DPM is the exhaust from the construction equipment. Therefore, mitigation measures shall be implemented to reduce the equipment exhaust emissions and mitigate cancer risks below the BAAQMD threshold. MM AIR-3 requires that all applicable construction equipment utilized in mass grading, paving, and building construction phases to be Tier IV or Tier IV Equivalent. The results from the mitigated scenario are provided in Table 3.2-14, which shows that, with the implementation of MM AIR-3, the cancer risk resulting from project construction would be below the BAAQMD health risk threshold.

Table 3.2-14: Summary of Construction (Main Site and Off-site Option A) Health Risks at the Maximally Impacted Receptor–Mitigated Scenario

Impact Scenario	Latitude (UTMX)	Longitude (UTMY)	Cancer Risk ¹ (risk per million)	Chronic Non-Cancer Hazard Index ²	TAC Concentration ³ (µg/m ³)
Residential MIR Impact	37.67843 (600737)	-121.85761 (4170751)	3.85	0.002	0.0108
Thresholds of Significance			10	1	0.3
Exceeds Individual Source Threshold?			No	No	No
Notes: DPM = diesel particulate matter MIR = Maximally Impacted Receptor REL = Reference Exposure Level TAC = toxic air contaminants µg/m ³ = micrograms per cubic meter ¹ Cancer risk is identified by multiplying the risk sum from HARP2 by 1,000,000. ² Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as PM _{2.5} exhaust) by the DPM REL of 5 µg/m ³ . Emissions Source: Appendix B. Thresholds Source: Bay Area Air Quality Management District (BAAQMD). 2022. California Environmental Quality Act Air Quality Guidelines. April. Website: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines . Accessed November 30, 2023.					

Community Health Risk Assessment

A community HRA was conducted in accordance with BAAQMD recommendations. The cumulative health risk values were determined by adding the health risk values from refined modeling of the

proposed project to the screening-level health risk values from each individual stationary and mobile source within a 1,000-foot radius of the site. The HRA revealed that the main sources of health risks come from existing sources (i.e., roadways) rather than the proposed project. The analysis results presented in the HRA, contained in Appendix B, are shown in Table 3.2-15. As shown therein, health risks to nearby sensitive receptors would not exceed the BAAQMD community health risk significance thresholds. As discussed previously, the construction activities in the HRA includes the residential project site and the off-site improvements under Design Option A as a more conservative estimate compared with the residential project site and off-site improvements under Design Option B. Because the more conservative case did not exceed the significance threshold, the residential project site and the off-site improvements under Design Option B construction would not exceed the threshold either.

As the proposed project did not result in an exceedance of project-level BAAQMD significance thresholds, the proposed project would not result in a potentially significant impact and the proposed project’s impacts would not be cumulatively considerable. Therefore, this impact would be less than significant.

Table 3.2-15: Summary of Construction (Main Site and Off-site Option A) Health Risks at the Maximally Impacted Receptor–Mitigated Scenario

Source	Cancer Risk (per million)	Chronic HI	PM _{2.5} Concentration ¹ (µg/m ³)
Project			
Mitigated Diesel Construction Equipment, Material Hauling	3.85	0.002	0.0108
Existing Sources			
Pleasanton Garbage Service Inc.	8.112	0.035	0
City of Pleasanton Service Center	1.092	0.005	0
Roadways	3.252	0.0118	0.0952
Railroads	0.89	0.0002	0.0011
Cumulative Health Risks			
Cumulative Maximum with Project DPM Emissions	17.20	0.054	0.1071
BAAQMD’s Cumulative Thresholds of Significance	100	10	0.8
Threshold Exceedance?	No	No	No
Notes: BAAQMD = Bay Area Air Quality Management District DPM = diesel particulate matter MIR = Maximally Impacted Receptor ND = No Data PM _{2.5} = particulate matter less than 2.5 micrometers in diameter µg/m ³ = micrograms per cubic meter HI = health index ¹ The PM _{2.5} concentration is the same as PM ₁₀ as a conservative estimate. ² The residential MIR located at 37.67843, -121.85761 was identified as the primary MIR here as it would experience the greatest health impact between the sensitive receptors evaluated. ² Assumes emissions remain constant with time. Values represent the greatest identified among all MIRs presented in this analysis, including the two previously identified residences and the previously identified school.			

Source	Cancer Risk (per million)	Chronic HI	PM _{2.5} Concentration ¹ (µg/m ³)
Emissions Source: Appendix B. Thresholds Source: Bay Area Air Quality Management District (BAAQMD). 2022. California Environmental Quality Act Air Quality Guidelines. April. Website: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines . Accessed November 30, 2023.			

Toxic Air Contaminant Operational Analysis

As the project applicant indicates, the First Production Phase (in the northwest part of the project site) would start in October 2025 and be completed in late May 2026, and the first group of occupants would be expected to move into the completed houses and the surrounding vertical construction would continue until late August 2027. By late May 2026, the most intensive construction with overlapped phases, including mass grading and surcharge, paving, frontage road construction, and construction of the off-site improvements (sewer treatment plant, recycled water storage facility, water storage and booster pump facility, agricultural spray fields, bioretention areas, etc., to the east of the residential project site) would be completed. Additionally, MM AIR-3 requires that all applicable off-road equipment in the vertical construction phase be Tier IV or equivalent. As shown in Table 3.2-15 above, the MIR, which is a single-family residence 60 feet west of the project site, would not exceed the BAAQMD health risk threshold for DPM resulting from the entire project construction of two and half years. Therefore, it is reasonable to expect that the first group of occupants’ exposure would not exceed the BAAQMD health risk threshold from DPM generated during the subsequent 15-month vertical construction. The DPM health risk impact for the first group of occupants would be less than significant.

After the completion of the entire proposed project, for project operation, potential TAC emissions would be from the exhaust of the vehicle trips entering, exiting, and idling on the project site. As mentioned before, the project site is not a significant source of TAC or DPM, and the operational TAC impact would be less than significant.

Carbon Monoxide Hotspot

As discussed in Impact AIR-2, the proposed project would not generate sufficient vehicle traffic during project operation to substantiate creating a CO hotspot. Therefore, this impact would be less than significant with regard to exposing sensitive receptors to substantial concentrations of CO emissions. As such, the proposed project would result in less than significant impacts related to exposing sensitive receptors to substantial pollutant concentrations.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-3 The following measure shall be implemented during mass grading, paving, and building construction phases of construction to reduce potential exposure of diesel particulate matter (DPM) and particulate matter less than 2.5 micrometers in diameter (PM_{2.5}) emissions to nearby sensitive receptors:

- Prior to the issuance of any demolition, grading, or building permits (whichever occurs earliest), the project applicant and/or construction contractor shall prepare a construction operations plan that, during construction activities, requires all off-road equipment with engines greater than 50 horsepower to meet particulate matter emissions standards for Tier 4 Interim engines. The construction contractor shall maintain records documenting its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information shall include, but are not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number. The project applicant and/or construction contractor shall submit the construction operations plan and records of compliance to the County.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Objectionable Odors Exposure

Impact AIR-4: **The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.**

Impact Analysis

Construction

During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. As previously discussed, the proposed project includes two design options, Design Option A and Design Option B, for the location of the primary bioretention area. Design Option A would locate the primary bioretention area west of El Charro Road, and Design Option B would locate the primary bioretention area east of El Charro Road. All other off-site improvements (e.g., water storage and booster pump facility, sewer treatment plant, recycled water storage facility, agricultural spray fields, etc.) would remain in the same locations under both design options east of the residential project site. These design options are shown on Exhibit 2-6a and Exhibit 2-6b, respectively. The construction-related odor impacts are expected to be similar under both design options as construction activities would be similar under both design options. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. It is anticipated that by the time such emissions reach any sensitive receptor sites, they would be diluted to well below any air quality or odor concern level. Therefore, construction odor impacts would be less than significant.

Operation

Land uses typically associated with objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities, as shown in the 2022 BAAQMD CEQA Guidelines. The proposed project would involve the development of residences whose operations

could lead to odors from associated laundry cleaning, vehicle exhaust, outdoor cooking, and waste disposal. However, such odors generated by project operation would be small in quantity and duration and would not pose an objectionable odor impact to future and existing receptors.

The proposed project, during operation, would also be an odor receptor because it includes a sewer treatment plant. The location of the water storage and booster pump facility would remain the same under both Design Option A and Design Option B. Under Design Option A (Exhibit 2-6a), the sewer treatment plant would be located west of El Charro Road in the northern portion of APN 946-4634-2, west of the primary bioretention area. Under Design Option B (Exhibit 2-6b), the sewer treatment plant would be located slightly farther east, closer to El Charro Road. The sewer treatment plant included as part of the project would be placed approximately 1,076 feet west of the residential homes under the worst-case scenario. The sewer treatment plant could be a potential source of odor. However, due to the small scale and the dominant west-to-east wind, the odor impact would be largely less than significant. If odor issues occur, BAAQMD Regulation 1 Rule 301 (odorous emissions) could be utilized to resolve the odor impacts.

Using Google Maps, one building material manufacturer, Vulcan Materials Company, is identified within 1.5 miles of the project's east boundary, which is less than the associated screening distances (2 miles) as provided in 2022 BAAQMD CEQA Guidelines, as shown in Table 3.2-9.

Public records retrieved from the BAAQMD show that 81 confirmed odor complaints about "burning rubber" and "asphalt" were reported on June 29, June 30, and July 1, 2021, at Vulcan Materials Company (501 El Charro Road, Pleasanton, 94588). However, zero confirmed complaints in the year 2022 were filed for this facility. Based on the odor guidelines by BAAQMD, odor impacts would be significant if more than five confirmed odor complaints are received for a facility or location per year averaged over the past three years. Therefore, the odor impact for the project operation could be significant if Vulcan Materials Company continues the odor-generating activities without control measures. However, public records show that no additional odor complaints were filed for Vulcan Materials Company in the year 2022, and it is reasonable to assume that Vulcan Materials Company had taken control measures to reduce the odor impact. Should Vulcan Materials Company cause any nuisance for future residents, Vulcan Materials Company shall comply with BAAQMD Regulation 1 Rule 301 (odorous emissions) and implement applicable control measures to reduce the odor impacts. Therefore, provided that no more confirmed odor complaints are filed for Vulcan Materials Company in year 2022, based on the collective information received at which this analysis was prepared, the odor impact would be less than significant for future residents at the proposed project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.2.6 - Cumulative Impacts

The geographic scope of the cumulative air quality analysis is the SFBAAB, which covers all or portions of the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Sonoma, and Solano. Air quality is impacted by topography, dominant air flows, atmospheric inversions, location, and season; therefore, using the Air Basin represents the area most likely to be impacted by air emissions. The BAAQMD CEQA Guidelines cumulative significance criteria are used in the cumulative analysis of air quality.

In developing thresholds of significance for air pollutants, BAAQMD established numerical thresholds for determining when a project's individual contributions would be cumulatively considerable. If a project does not exceed the identified significance thresholds, its emissions would not be cumulatively considerable, resulting in less than significant air quality impacts to the region's existing air quality conditions.

Criteria Pollutants

By its nature, air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region. The nonattainment status of regional pollutants is a result of past and present development within an air basin, and this regional impact is a cumulative impact. In other words, new development projects (such as the proposed project) within the SFBAAB would contribute to this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited but cumulatively considerable when taken in combination with past, present, and future development projects. All new development that would result in an increase in air pollutant emissions above those assumed in regional AQPs would contribute to cumulative air quality impacts.

The cumulative analysis focuses on whether the project would result in cumulatively considerable emissions. According to Section 15064(h)(4) of the State CEQA Guidelines, the existence of significant cumulative impacts caused by other projects alone does not constitute substantial evidence that a project's incremental effects would be cumulatively considerable. Rather, the determination of cumulative air quality impacts for construction and operational emissions is based on whether a project would result in regional emissions that exceed the BAAQMD regional thresholds of significance after incorporation of MM AIR-1. Projects, such as the proposed project, which generate emissions below the significance thresholds would be considered consistent with regional air quality planning efforts and would not generate cumulatively considerable emissions. The proposed project would generate emissions below the significance thresholds under both Design Option A and Design Option B. Therefore, the proposed project would not have a cumulative impact related to construction or operational criteria pollutants.

Toxic Air Contaminants

Construction and Operational Emissions at the Site and Maximum Impacted Receptor

As discussed previously, localized risks are primarily associated with exposure to TAC emissions. The operations of the project site would not contribute to significant operation TAC emissions. Potential

cumulative sources of TAC emissions could occur during construction or operation impacting the future residences or nearby receptors. Sensitive receptors could be impacted by new stationary sources in the vicinity of the site (e.g., dry cleaners, diesel backup generators, and gasoline stations) or by the construction or operation of other developments. Any proposed new stationary source of TAC emissions would be subject to BAAQMD permit requirements, which involves New Source Review for air toxics and an evaluation of health risks.³⁵ Freeways, major roadways, and railroads are also significant sources of TAC emissions of diesel particulate; however, land use and zoning restrictions preclude these from becoming new significant sources of TAC exposure in the areas and they do not figure into cumulative considerations. The final potential sources of TACs for a cumulative risk would be diesel exhaust exposure from off-road sources such as construction equipment from other land use development. New construction from other development projects are a potential additional source of TAC emissions and risk to sensitive receptors, however, the CEQA process and current BAAQMD thresholds for cumulative community risk would consider these impacts. In these cases, sensitive receptors for other cumulative projects would be considered in their environmental planning analysis under BAAQMD risk thresholds. This would ensure that there are no significant impacts to these sensitive receptors and risks would be less than significant. At the project level, impacts from the generation of TACs were found to be less than significant after the incorporation of MM AIR-3. With incorporation of MM AIR-3, cumulative impacts would be considered less than significant.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM AIR-1 and MM AIR-3.

Level of Cumulative Significance After Mitigation

Less than significant impact with mitigation incorporated.

³⁵ Bay Area Air Quality Management District (BAAQMD). 2023. Regulation 2 Rule 2: New Source Review. Website: <https://www.baaqmd.gov/rules-and-compliance/rules/reg-2-rule-2-new-source-review>. Accessed November 17, 2023.

3.3 - Biological Resources

3.3.1 - Introduction

This section describes the existing biological setting and potential effects from project implementation on the Study Area, which includes the project site and project impact area. The Study Area consists of 150.25 acres of undeveloped land. The project site is the 26.6-acre subset of the greater Study Area where all project-related activities (e.g., the project impact area/limit of disturbance) would occur. The project impact area includes the project site and any associated off-site improvements.

This section also identifies mitigation measures to reduce potential effects, including those that differ within Design Option A and Design Option B (as referenced on Exhibit 3.3-3a and Exhibit 3.3-3b in Impact BIO-2, below) to less than significant levels. Descriptions and analysis in this section are based in part on the field surveys performed by a qualified FirstCarbon Solutions (FCS) Biologist on March 31, July 27, and November 14, 2023.

The Study Area is located within unincorporated Alameda County but is directly east of the City of Pleasanton city limits and is therefore within the City's Sphere of Influence (SOI). The Study Area is located within the *Livermore California*, United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map (Latitude 37° 40' 38.28" North; Longitude 121° 51' 22.68" West).

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to biological resources. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should prepare a Biological Resources Assessment.
- The Draft EIR should analyze impacts to the western burrowing owl, tricolored blackbird, and California tiger salamander.
- The Draft EIR should evaluate potential impacts to Cope Lake from the sewer treatment plant.
- The Draft EIR should discuss the previously-filled wetlands and state of "seasonal wetlands" on the Study Area.
- The Draft EIR should evaluate the findings of organizations which study seasonal wildlife and habitats.
- The Draft EIR should analyze the proposed project's impacts to endangered trees, wildlife, migratory birds, and wetlands.
- The Draft EIR should evaluate land use changes, riparian habitats, special-status species, habitat disturbances, movement corridors, and cumulative impacts.
- The Draft EIR should include baseline habitat assessments and site surveys for special-status species, aquatic habitats, and botanical resources.
- The Draft EIR should evaluate water bodies and the protection of habitations within them.

- The Draft EIR should discuss endangered trees, wetlands, and animals that were potentially removed from the Study Area without approval.
- Expresses concern regarding wild geese and birds that were previously occupying the Study Area.
- The Draft EIR should evaluate biodiversity and ecological resilience.
- Provides information about regulatory requirements for nesting birds, protected species, lakes, and streambeds.
- The Draft EIR should submit any relevant data to the California Natural Diversity Database (CNDDB).

3.3.2 - Environmental Setting

Literature Review

FCS Biologists reviewed existing environmental documentation for the Study Area and immediate vicinity. This documentation included literature pertaining to the habitat requirements of special-status species potentially occurring on or near the site and Federal Register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW).

FCS Biologists reviewed the *Livermore, California* USGS 7.5-minute Topographic Quadrangle Map and aerial photographs as a preliminary analysis of the existing conditions within the Study Area and immediate vicinity. Information obtained from the review of the topographic maps included elevation range, general watershed information, and potential drainage feature locations.¹ Aerial photographs provide a perspective of the most current site conditions relative to on-site and off-site land use, plant community locations, and potential locations of wildlife movement corridors. FCS also reviewed United States Department of Agriculture (USDA) soil surveys to determine whether the soil conditions on-site are suitable for any special-status plant species.

FCS Biologists compiled a list of threatened, endangered, and otherwise special-status species previously recorded within the project vicinity. The list was based on a search of the CDFW's, a special-status species and plant community account database;² the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPSEI);³ and a USFWS Information Planning and Conservation Report Search for the *Livermore, California* USGS 7.5-minute Topographic Quadrangle Map. The database search results can be found in Appendix C of this Draft EIR.

¹ United States Geological Survey (USGS). 2024. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed March 20, 2024.

² California Department of Fish and Wildlife (CDFW). 2023. Natural Communities List, Sacramento: California Department of Fish and Wildlife. Website: <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities>. Accessed December 8, 2023.

³ California Native Plant Society (CNPS). 2023. California Native Plant Society Rare and Endangered Plant Inventory. Website: <http://www.rareplants.cnps.org/>. Accessed December 8, 2023.

Elevation and Drainage

The majority of the Study Area lies at approximately 372 feet above sea level in elevation. Toward the eastern portion of the site, the terrain dips slightly, falling to around 348 feet above sea level. The Study Area and vicinity are generally flat, which is typical for the developed areas within the adjacent City of Pleasanton. The eastern portion of the Study Area contains a potential depressional wetland and two drainage swales that generally convey water to the south.

The project site is entirely within the larger Study Area and drains to the south. A man-made stormwater swale bisects the project site. Grading of this feature along its current alignment was originally completed in 2019 and re-graded again in 2023 to provide stormwater drainage across the project site following removal of a large mining pit that was once associated with the mining activities on this site. There has been some form of stormwater control swale bisecting the site for years. This swale is maintained on an annual basis to keep the channel clear of obstructions and to maintain flows for stormwater drainage.

The larger Study Area contains a potential depressional wetland within its eastern portion and two drainage swales run through the northeastern to southern portions of the Area. The drainage swale generally conveys water to the south.

Soil

The USDA, Natural Resources Conservation Service indicates that the soils within the Study Area are generally comprised of gravel pits (Gp), water (W) which has been subsequently reclaimed, Yolo loam, calcareous substratum (YmA), 0-6 percent slope, Yolo loam over gravel (Yo), 0-3 percent slope, and Yolo gravelly loam (Yr), 0-3 percent slope.

Field Survey

A qualified FCS Biologist surveyed the proposed Study Area on March 31, July 27, and November 14, 2023. The purpose of these surveys was to assess general site conditions, identify vegetation and wildlife habitats, and identify any potentially suitable habitat areas for various special-status plant and wildlife species. Special-status species were identified during the literature review, and special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

Common plant species observed during the surveys were identified by visual characteristics and morphology in the field and recorded in a field notebook. Uncommon and less familiar plants were identified later with the use of taxonomical guides.^{4,5,6,7} Taxonomic nomenclature used in analysis follows The Jepson Manual: Vascular Plants of California.⁸ Common plant names, when not available from The Jepson Manual, were taken from other regionally specific references.

⁴ Clarke, O.F., D. Svehla, G. Ballmer, and A. Montalvo. 2007. Flora of the Santa Ana River and Environs: With References to World Botany. Berkeley, California: Heyday Books.

⁵ Hitchcock, A. 1971. Manual of the Grasses of the United States in Two Volumes, Volume One. Second Edition. New York: Dover Publications, Inc.

⁶ McAuley, M. 1996. Wildflowers of the Santa Monica Mountains, Second Edition. Canoga Park, California: Canyon Publishing Company.

⁷ Munz, P. 1974. A Flora of Southern California. Berkeley: University of California Press.

⁸ Baldwin, B. et al. 2012. The Jepson Manual: Vascular Plants of California. Berkeley: University of California Press. County of San Bernardino (Bernardino). 2007 (amended 2015).

Wildlife species detected during the field-level surveys by sight, calls, tracks, scat, or other signs were recorded in a field notebook. Notations were made regarding suitable habitat for those special-status species determined to have the potential to occur within the Study Area. Appropriate field guides were used to assist with species identification during surveys.

Physical Habitat/Vegetation

Ruderal

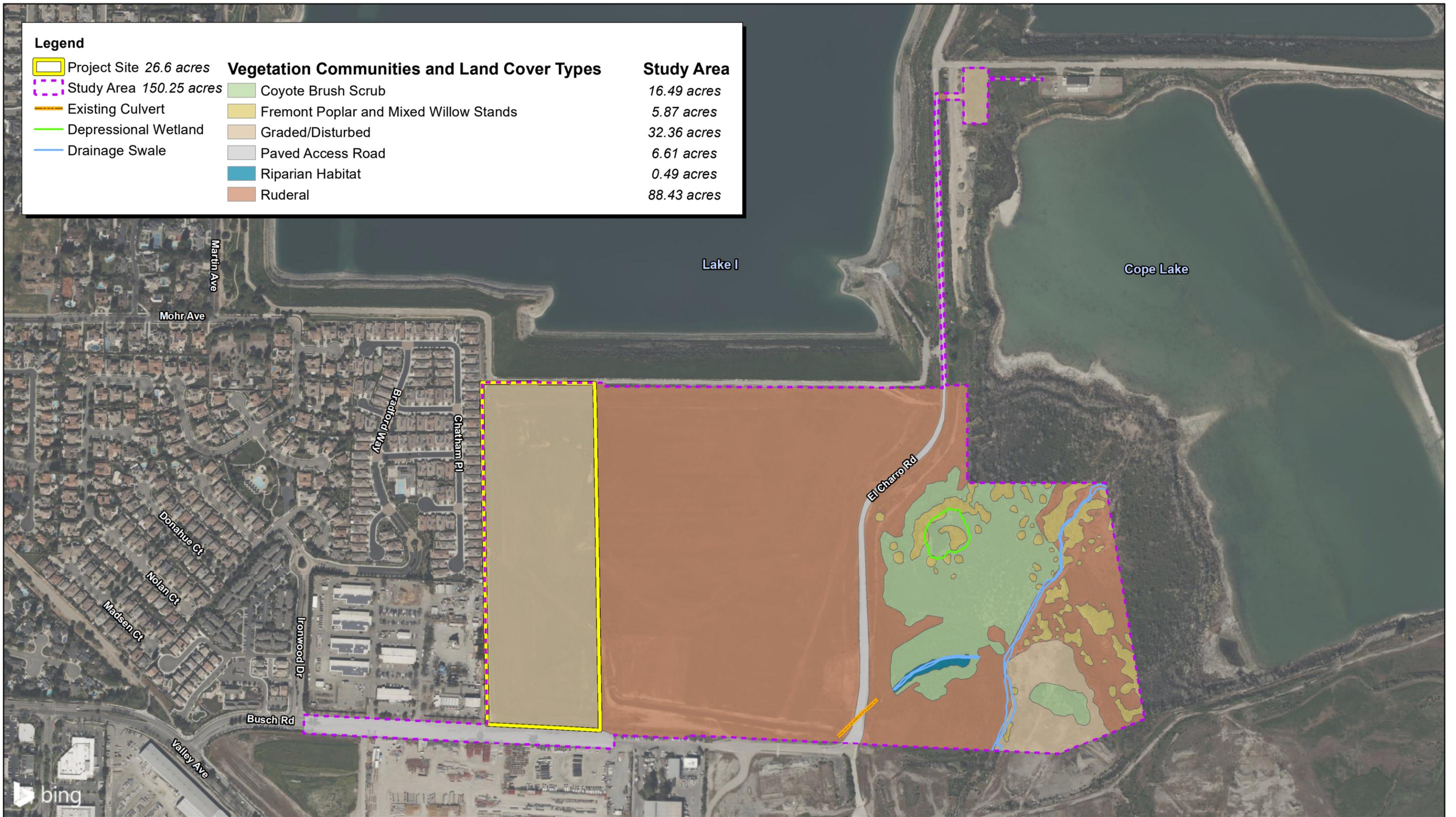
Ruderal habitat is classified as areas that are no longer recognizable as a native or naturalized vegetation association, but which continue to retain a soil substrate. Vegetation, if present, is typically composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance or show signs of past or present animal usage that precludes them from providing viable natural habitat for uses other than dispersal. The vast majority of the Study Area contains ruderal habitat, specifically within the central and eastern portion of the Study Area (Exhibit 3.3-1).

Vegetation observed consisted of cheeseweed mallow (*Malva neglecta*), stinkwort (*Dittrichia graveolens*), slender wild oat (*Avena barbata*), wild radish (*Raphanus raphanistrum*), bur clover (*Medicago polymorpha*), Russian thistle (*Salsola tragus*), prickly sow thistle (*Sonchus asper*), shortpod mustard (*Hirschfeldia incana*), yellow star thistle (*Centaurea solstitialis*), field bindweed (*Convolvulus arvensis*), artichoke thistle (*Cynara cardunculus L*), and others.

Graded/Disturbed

Graded/disturbed habitat is classified as areas that have undergone significant anthropogenic disturbances and no longer contain native or naturalized vegetation associations, usually through the process of mass grading. The project site designated for primary development has been graded and all present vegetation removed. WRA conducted a field survey on November 8, 2023, to inspect the constructed stormwater drainage swale that bisects a portion of the project site and authored a subsequent jurisdictional memorandum on November 20, 2023. The purpose of the memorandum was to discuss the jurisdictional status of the aquatic features identified within the project site. The memorandum concluded that the man-made ditch/stormwater drainage swale is not considered a jurisdictional water of the United States or State. As such, an emergency use authorization was granted by Alameda County to grade the project site to provide positive drainage and conduct maintenance of the man-made stormwater drainage swale to prevent flooding this winter.

In addition to the entirety of the project site, the larger Study Area contains graded and disturbed landcover within the northeastern and southeastern corners. These areas are devoid of vegetation except for a small section of coyote brush scrub (*Baccharis pilularis*) in the southeastern graded portion of the Study Area. The northeastern section of the Study Area follows El Charro Road and turns toward Cope Lake. This section contains graded and disturbed habitat throughout its entirety.



Source: Bing Aerial Imagery, CBG Civil Engineers 10/31/2023.



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Paved Access Road

Adjacent to the southeastern boundary of the project site is a developed off-site roadway and frontage improvement area (Exhibit 3.3-1). This area currently contains Busch Road and associated ornamental trees. Moving through the center of the Study Area is El Charro Road, which travels from the southern to northern portion of the Study Area. Vegetation observed lining the road consists of coyote brush, artichoke thistle, stinkwort, slender wild oat, among others.

Depressional Wetland

Wetlands are characterized as areas permanently or periodically inundated by water and may have been modified by human activity. Depressional wetlands usually occur in topographic lows with closed or nearly closed elevation contours. These areas can be unvegetated but may also contain scattered native or non-native vegetation. The eastern portion of the Study Area contains a 1.09-acre potential depressional wetland. This wetland is surrounded by Fremont poplar (*Populus fremontii*) and mixed willow stands.

Fremont Poplar and Mixed Willow Stands

The eastern portion of the Study Area contains approximately 5.87 acres of scattered Fremont poplar and mixed willow stands best designated as *Populus fremontii*–*Salix gooddingii* Woodland Alliance under the CDFW California Sensitive Natural Community database (Ca Code: 61.211.04) (Exhibit 3.3-1). The canopy is dominated by Fremont poplar and goddings willow (*Salix gooddingii*) with the understory dominated by species such as wild oat, yellow star thistle, stinkwort, coyote brush, and others.

Drainage Swale

Drainage swales are characterized as linear ground depressions that usually convey direct precipitation. The eastern portion of the Study Area contains two drainage swales. The easternmost swale runs from the northeastern corner of the Study Area and conveys water to the south, outside of the boundary of the Study Area. The northern reach of this swale is bounded by Fremont poplar and mixed willow stands. The swale joins with ruderal and graded habitat types toward its southern reach.

The second drainage swale is located to the west and is likely fed through an existing culvert that conveys flows under El Charro Road in an easterly fashion where it terminates before joining the swale to the east. This reach of the swale contains riparian habitat (Exhibit 3.3-1).

Coyote Brush Scrub

Coyote brush scrub is found in a wide variety of habitats, primarily along coastal bluffs, terraces, stabilized dunes of coastal bars, spits along the coastline, river mouths, stream sides, open exposed slopes, ridges, or gaps in forest stands. The eastern portion of the Study Area contains large areas of coyote brush scrub. This area is primarily located east of El Charro Road, separating the depressional wetland from the drainage swales. A smaller section of coyote brush is surrounded by graded/disturbed habitat in the far southeastern corner of the Study Area.

Sensitive Natural Communities

Sensitive natural communities are vegetation communities or special wildlife habitats that are rare or occur in limited distributions or provide specific habitat requirements for special-status plant or wildlife species. The CDFW identifies sensitive natural communities based on the Manual of California Vegetation (MCV), and ranks a subset based on rarity. Communities identified on CDFW's list as "sensitive" and/or communities ranked S1-S3 are considered sensitive natural communities under the California Environmental Quality Act (CEQA).⁹ Sensitive natural communities are addressed below.

Fremont Poplar and Mixed Willow Stands

As described above, the eastern portion of the Study Area contains approximately 5.87 acres of Fremont poplar and mixed willow stands, best designated as *Populus fremontii*–*Salix gooddingii* Woodland Alliance under the CDFW California Sensitive Natural Community database. However, the proposed project would actively avoid any impacts to this sensitive natural community. Additionally, neither Design Option A nor Design Option B are expected to impact this sensitive natural community. Therefore, it is not expected that any Fremont poplar and mixed willow stands would be removed or disturbed through project-related construction.

Common Wildlife

The vegetation community and land cover types discussed above provide habitat for numerous wildlife species. Wildlife activity consisted primarily of avian species, including American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), pigeon (*Columbidae* sp.), snowy egret (*Egretta thula*), yellow-breasted warbler (*Phylloscopus montis*), killdeer (*Charadrius vociferus*), California gull (*Larus californicus*), western meadowlark (*Sturnella neglecta*), turkey vulture (*Cathartes aura*), Canada goose (*Branta canadensis*), western kingbird (*Tyrannus verticalis*), red tail hawk (*Buteo jamaicensis*).

Additional species observed on-site during the field survey include the western fence lizard (*Sceloporus occidentalis*), black-tailed jackrabbit (*Lepus californicus*), and California mule deer (*Odocoileus hemionus californicus*).

Special-status Species

Special-status species include those species listed by the federal and state governments as endangered, threatened, or rare or candidate species for these lists. Endangered or threatened species are protected by the federal Endangered Species Act of 1973 as amended, the California Native Plant Protection Act of 1977, and the California Endangered Species Act of 1970. CEQA provides additional protection for unlisted species that meet the "rare" or "endangered" criteria defined in Title 14, California Code of Regulations Section 15380. Special-status species also include those species listed by the CDFW as Species of Concern which face extirpation in California if current population and habitat trends continue, those identified as Fully Protected in the California Fish and Game Code (a designation that provides additional protection to those animals that are rare or face

⁹ California Department of Fish and Wildlife (CDFW). 2024. Natural Communities List, Sacramento: California Department of Fish and Wildlife. Website: <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities>. Accessed February 8, 2024.

possible extinction), and bird species designated as Bird Species of Conservation Concern by the USFWS. These State and federal Species of Concern must be evaluated in the context of evaluation under CEQA. Under Title 14, California Code of Regulations Section 15380, mentioned above, many Biologists and the lead agencies for whom they work evaluate impacts to plant species on CNPS Lists 1 and 2. Special-status species included in CEQA review also include bat species that have been designated with conservation priority by the Western Bat Working Group.

The CDFW maintains records for the distribution and known occurrences of special-status species and sensitive habitats in the CNDDDB. The CNDDDB is organized into map areas based on 7.5-minute topographic quadrangle maps produced by the USGS. All known occurrences of special-status species are mapped onto quadrangle maps maintained by the CNDDDB. The database gives further detailed information on each occurrence, including specific location of the individual, population, or habitat (if possible) and the presumed current state of the population or habitat.

Special-Status Plant Species

The CNDDDB and CNPS list 46 special-status or sensitive plant species that have been recorded within the *Livermore, California* USGS 7.5-minute Topographic Quadrangle Map and the eight surrounding quadrangles (Exhibit 3.3-2) (Appendix C)^{10,11,12} No rare or special-status plant species were observed during the general biological survey.

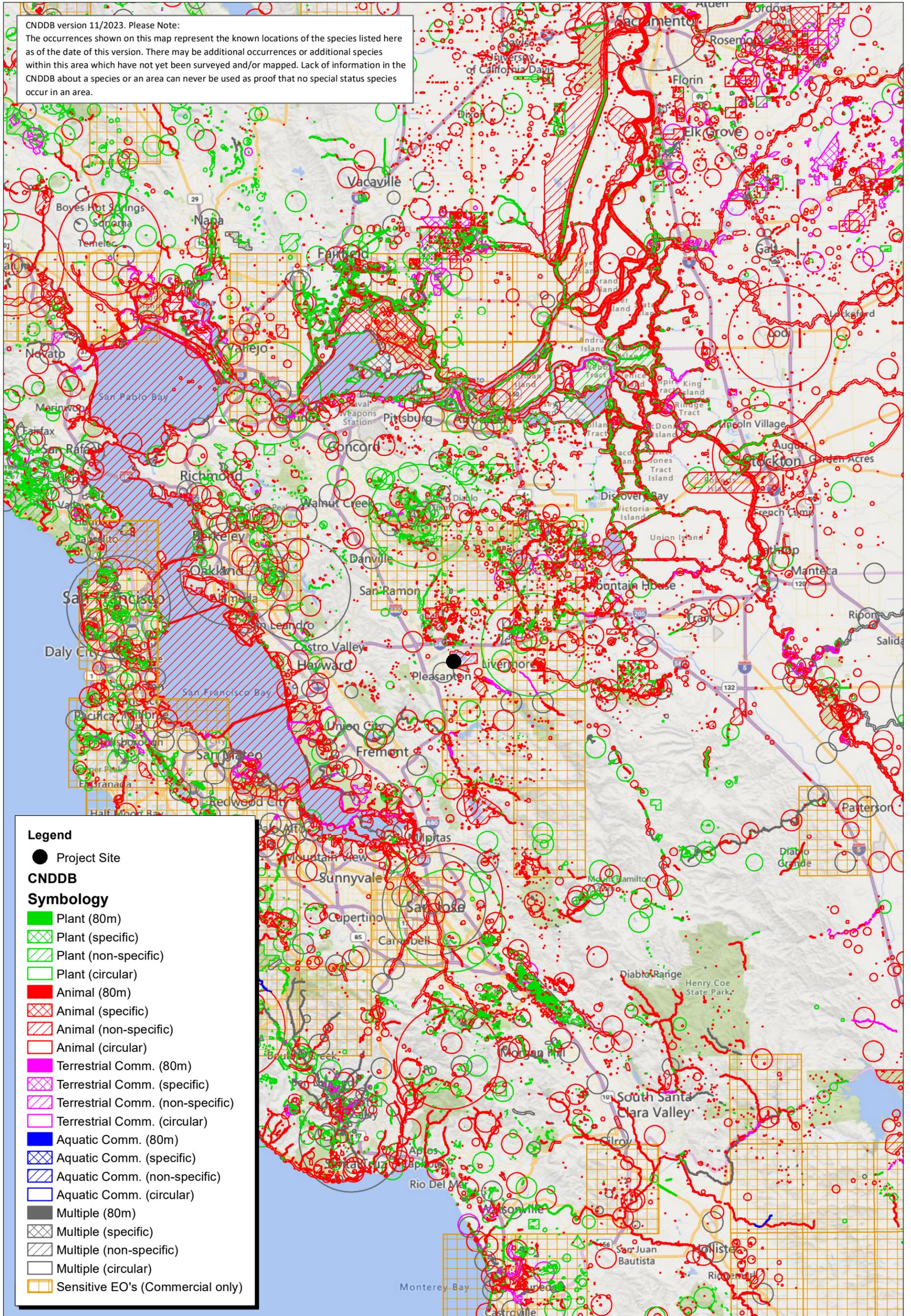
¹⁰ United States Geological Survey (USGS). 2022. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed March 20, 2024.

¹¹ California Department of Fish and Wildlife (CDFW). 2023. CNDDDB RareFind 5 California Natural Diversity Database Query for Special-status Species. Website: <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>. Accessed December 8, 2023.

¹² California Native Plant Society (CNPS). 2022. California Native Plant Society Rare and Endangered Plant Inventory. Website: <http://www.rareplants.cnps.org/>. Accessed December 8, 2023.

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CNDDDB version 11/2023. 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 CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.



Legend

● Project Site

CNDDDB

Symbology

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

Source: Bing Street Imagery. California Natural Diversity Database (CNDDDB), November 2023.



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Based upon the field survey, literature review, and professional experience, no special-status plant species occur or are expected to occur within the Study Area due to the absence of suitable habitat, previous land uses, and the extent and frequency of ground disturbance. Much of the Study Area has been subjected to decades of disturbance events from grading and past mining operations. For these reasons, the Study Area does not promote the establishment of, or provide suitable conditions for rare plants, which are typically sensitive to these types of disturbances. Moreover, the Study Area lacks microhabitats such as vernal pools, chenopod scrub, and alkaline or acidic soils that are typically necessary to support many rare plants. For the reasons outlined above, it is reasonable to conclude that special-status plant species are determined to be absent from the Study Area.

Special-status Wildlife Species

CNDDDB identifies 36 federal and State-listed threatened and/or endangered wildlife species and State Species of Special Concern that have been recorded within the *Livermore, California* USGS 7.5-minute Topographic Quadrangle Map and eight surrounding quadrangles (Exhibit 3.3-2). Thirty-four of these species are unlikely to occur on-site, as discussed in the Special-Status Species Occurrence Evaluation (Appendix C). Specifically, the project site does not contain aquatic resources with emergent vegetation suitable for the tricolored blackbird. There were past occurrences of the tricolored blackbird found within the project site, but mining operations eliminated the potential habitat for this species and no occurrences have been recorded in the last 20 years. Similarly, there is no recorded occurrence of the California tiger salamander on-site and the site lacks suitable breeding habitat (vernal pools, ponds, or other standing bodies of water). The nearest recorded occurrence of this species is 1.8 miles away to the north and is separated from the project site by a major freeway. This is far greater than the average dispersal distance (1.37 miles) of most tiger salamanders.¹³ The project site does not contain vernal pools to support this species. No ground squirrel burrows were observed and the site lacks any suitable upland refuge habitat.

Two species, burrowing owl and white-tailed kite (and functional groups like nesting birds that include special-status species) could have the potential to occur on-site, perhaps as vagrant, dispersing, nesting, or foraging individuals, and are therefore discussed in more detail below.

Burrowing Owl

The western burrowing owl (*Athene cunicularia*) is a California “species of special concern.” Its nest, eggs, and young are also protected under California Fish and Game Code (FGC § 3503, § 350 3.5, and § 3800). The burrowing owl is also protected from direct take under the Migratory Bird Treaty Act (MBTA) (50 Code of Federal Regulations [CFR] 10.13).

Burrowing owl habitat is usually found in annual and perennial grasslands, characterized by low growing vegetation. Often, the burrowing owl utilizes rodent burrows, typically California ground squirrel (*Otospermophilus beecheyi*) burrows, for nesting and cover. They may also on occasion dig their own burrows or use man-made objects such as concrete culverts or rip-rap piles for cover. They exhibit high site fidelity, reusing burrows year after year. Burrowing owls typically are not observed

¹³ Orloff, S.G, 2009. Movement Patterns and Migration Distances in an Upland Population of California Tiger Salamander (*Ambystoma californiense*). *Herpetological Conservation and Biology* Vol. 6, No. 2.

in grasslands with tall vegetation or wooded areas because the vegetation obscures their ability to detect avian and terrestrial predators.

The closest CNDDDB record was documented 0.85 miles northeast of the Study Area (Occurrence No. 530). Additionally, there were 16 recent recorded occurrences of this species within five miles of the Study Area. No burrowing owl, signs of burrowing owl, or burrows suitable for burrowing owl were observed during the FCS field surveys. However, the species may utilize the site in a foraging capacity within the low growing ruderal vegetation currently present. Because of the marginal foraging habitat present and the number of recent occurrences within the vicinity of the Study Area, this species has a low potential to be present on-site. Therefore, out of an abundance of caution, it cannot be ruled out that this species may disperse through the Study Area before construction-related activities occur.

Protected Nesting Birds (Including All Special-status Bird Species)

Special-status species such as the white-tailed kite (*Elanus leucurus*), and active nests of most resident and migratory (game and non-game) birds are protected by the MBTA and/or Fish and Game Code; and are therefore categorized as “special-status” wildlife functional group during this time.

The Study Area provides nesting opportunities for different taxa of birds, including ground nesters (e.g., killdeer). The ruderal vegetation within the Study Area, along with the Fremont poplar and mixed willow stands and understory shrubbery could provide nesting and foraging opportunities to support successful nesting and rearing habitat. Therefore, it is likely that protected bird nests are present on-site during the nesting season (typically considered to last from February 1 to August 31 for most species). The presence or absence of nesting birds should be confirmed through a pre-construction survey (and protection buffers if found).

Wetlands and Waters of the United States and the State

WRA conducted a field survey on November 8, 2023, to inspect the constructed stormwater drainage swale that bisects a portion of the project site and authored a subsequent jurisdictional memorandum on November 20, 2023 (Appendix C3).¹⁴ The memorandum surmised that the constructed stormwater drainage swale is not a regulated water due to the United States Army Corps of Engineers (USACE) long-standing practice that views stormwater control features were not built in waters of the United States as non-jurisdictional features. The following are not considered waters of the United States:

- Stormwater control features constructed or excavated in upland or non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff.

Historic aerial imagery of the project site illustrates that no stream or other aquatic features occurred in the vicinity of these constructed features. The alignment of the stormwater drainage

¹⁴ Kingma, H., 2023. Jurisdictional Memorandum. WRA Environmental Consultants. November 20, 2023.

swale does not fall within the footprint of a historical stream, marsh, or wetland boundary, and is not a relocated tributary.

The California State Water Resources Control Board (State Water Board) adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials into Waters of the State on April 2, 2019 (the Procedures). The stormwater drainage swale does not meet the definition of a wetland under the State Wetland Definition since these features are artificial and are subject to ongoing operation and maintenance. As indicated in the Procedures, stormwater ditches are not waters of the State since they are artificial wetlands that were constructed, and are currently used and maintained, primarily for one or more of the following purposes:

- Settling of sediment
- Detention, retention, infiltration, or treatment of stormwater runoff
- Treatment of surface waters.

The Procedures provide a jurisdictional exemption for artificial wetlands that are currently used and maintained for detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program. As such, the stormwater drainage swale is not a State or federally protected water.

The eastern portion of the Study Area contains a potential depressional wetland and two drainage swales that are potentially regulated as a State and federally protected wetland and waters, respectively. Neither Design Option A nor Design Option B are expected to have direct or indirect impacts on the potential depressional wetland feature, although under Design Option B, the proposed project may result in indirect impacts to the adjacent drainage swale and associated riparian vegetation due to the location of the proposed bioretention area.

Wildlife Movement Corridors and Nursery Sites

An FCS Biologist evaluated the ground and database research of CDFW's BIOS 6 information on wildlife linkages within the Study Area and concluded that the proposed project does not have the potential to interfere with the movement of native wildlife.¹⁵ The Study Area has a history of disturbance associated with previous mining activity and continued disturbance associated with semi-regular grading events for flood control purposes. Currently, the Study Area primarily consists of a majority vacant, disturbed land with limited habitat value.

Additionally, the Study Area is surrounded by urban and industrial developments, man-made lakes with limited habitat value, and active roadways which limit the potential for wildlife movement through the site. Although the eastern reaches of the Study Area contain a riparian vegetation and Fremont poplar and mixed willow stands, these habitats do not connect two significant and undeveloped habitat areas or allow connection between wildlife populations separated by human

¹⁵ California Department of Fish and Wildlife (CDFW). 2024. BIOS 6 Viewer: Alameda County, California. Website: <https://apps.wildlife.ca.gov/bios6/>. Accessed March 20, 2024.

activity. Therefore, the Study Area does not act as a wildlife movement corridor and no further analysis is required.

Wildlife nursery sites include nesting birds and maternity bat roosts, aquatic breeding habitats, and special-status and non-special-status wildlife breeding or nesting colonies. No significant breeding/nesting colonies were observed during the wildlife surveys. However, individual nesting birds have the potential of being present on-site and within disturbance distance seasonally. For example, songbirds adapted to urban settings likely nest in on-site trees, both ornamental and native, that occur within the Study Area.

Protected Trees

The Alameda County Ordinance Code Chapter 12.11 stipulates tree protection ordinances. These ordinances define protected trees as trees along a public right-of-way. While there are ornamental trees located along the periphery of Busch Road, no trees would be removed as part of the proposed project, including under Design Option A and Design Option B. Therefore, no protected trees under the Alameda County Ordinance Code would be impacted by the proposed project.

3.3.3 - Regulatory Framework

Federal

Endangered Species Act

The United States Congress passed the Endangered Species Act in 1973 to protect those species that are endangered or threatened with extinction. The Endangered Species Act is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

The Endangered Species Act prohibits the “take” of endangered or threatened wildlife species. “Take” is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (16 United States Code [USC] § 1531 *et seq.*). “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR § 17.3). “Harass” is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR § 17.3). Actions that result in a take can result in civil or criminal penalties.

The Endangered Species Act and the Clean Water Act (CWA) Section 404 guidelines prohibit the issuance of wetland permits for projects that jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species. The USACE must consult with the USFWS and/or the National Marine Fisheries Service (NOAA Fisheries) when threatened or endangered species under their jurisdiction may be affected by a proposed project. In the context of the proposed project, Endangered Species Act consultation would be initiated if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species.

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of State and federal laws. The federal MBTA prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior.

Clean Water Act

Section 404

The USACE administers Section 404 of the federal CWA, which regulates the discharge of dredge and fill material into waters of the United States.

As of the preparation of this report, the final “Revised Definition of Waters of the United States” rule was published in the Federal Register on January 18, 2023, and took effect on March 20, 2023. However, the final rule is not currently operative in certain states and for certain parties due to litigation. Moreover, the United States Environmental Protection Agency (EPA) and USACE (hereafter known as the agencies) are in receipt of the U.S. Supreme Court’s May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*. In light of this decision, the agencies will interpret the phrase “waters of the United States” consistent with the Supreme Court’s decision in *Sackett*.¹⁶ As a result of ongoing litigation, the agencies are interpreting “waters of the United States” consistent with the pre-2015 regulatory regime until further notice.

Therefore, since the agencies are interpreting “waters of the United States” consistent with the pre-2015 regulatory regime until further notice, our analysis follows 40 Code of Federal Regulations 230.3(s) in effect under the pre-2015 regulatory regime, which defines “waters of the United States” as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
2. All interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
 - a) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - b) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - c) Which are used or could be used for industrial purposes by industries in interstate commerce.

¹⁶ United States Environmental Protection Agency (EPA). 2023. Website: <https://www.epa.gov/wotus/current-implementation-waters-united-states>. Accessed December 8, 2023.

4. All impoundments of waters otherwise defined as waters of the United States under this definition.
5. Tributaries of waters identified in paragraphs(s) (1) through (4) of this section.
6. The territorial sea.
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs(s) (1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 Code of Federal Regulations 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA and/or USACE.

“Wetland” refers to areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. Wetlands are considered jurisdictional if they fall under one of the categories of waters of the United States defined above. The USACE jurisdiction typically extends up to the ordinary high water mark (OHWM).

In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the impacted acreage, the purpose of the proposed fill, and other factors.

Section 401

As stated in Section 401 of the CWA, “any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.” Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).

State

California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing CEQA documents. The purpose of CESA is to ensure that the lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (FGC § 2080). CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether

jeopardy would occur, and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State’s prohibition against take of a listed species if the take is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC § 2081).

California Fish and Game Code

Under CESA, the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC § 2070). Fish and Game Code Sections 2050 through 2098 outline the protection provided to California’s rare, endangered, and threatened species. Fish and Game Code Section 2080 prohibits the taking of plants and animals listed under the CESA. Fish and Game Code Section 2081 established an incidental take permit program for State-listed species. The CDFW maintains a list of “candidate species,” which it formally notices as being under review for addition to the list of endangered or threatened species.

In addition, the Native Plant Protection Act of 1977 (NPPA) (FGC § 1900, *et seq.*) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered (as defined by the CDFW). An exception to this prohibition in the NPPA allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. Fish and Game Code Section 1913 exempts from “take” prohibition “the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right-of-way.” Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

In addition to formal listing under the Endangered Species Act and CESA, some species receive additional consideration by the CDFW and local lead agencies during the CEQA process. Species that may be considered for review are those listed as a “Species of Special Concern.” The CDFW maintains lists of “Species of Special Concern” that serve as species “watch lists.” Species with this status may have limited distributions or limited populations, and/or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA, and specific protection measures may be warranted. In addition to Species of Special Concern, the CDFW Special Animals List identifies animals that are tracked by the CNDDDB and may be potentially vulnerable but warrant no federal interest and no legal protection.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines Section 15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for the assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the CNPS List ranked 1A, 1B, and 2 would typically require evaluation under CEQA.

Fish and Game Code Sections 3500 to 5500 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. The CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Fish and Game Code Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. To comply with the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project Study Area and determine whether the proposed project would have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. “Take” of protected species incidental to otherwise lawful management activities may be authorized under Fish and Game Code Section 206.591. Authorization from the CDFW would be in the form of an Incidental Take Permit.

Fish and Game Code Section 1602 requires any entity to notify the CDFW before beginning any activity that “may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake” or “deposit debris, waste, or other materials that could pass into any river, stream, or lake.” “River, stream, or lake” includes waters that are episodic and perennial and ephemeral streams, desert washes, and watercourses with a subsurface flow. A Lake or Streambed Alteration Agreement would be required if the CDFW determines that project activities may substantially adversely affect fish or wildlife resources through alterations to a covered body of water. CDFW jurisdiction typically extends to the edge or “drip line” of the riparian habitat or top of bank.

California Department of Fish and Wildlife Species of Concern

In addition to formal listing under the Endangered Species Act and CESA, certain species receive additional consideration by CDFW and local lead agencies during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW that tracks species in California whose numbers, reproductive success, or habitats may be threatened. In addition to Species of Special Concern, the CDFW identifies animals that are tracked by the CNDDDB but warrant no federal interest and no legal protection. These species are identified as “California Special Animals.”

Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, within any region that could affect the water of the State” (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. “Waters of the State” are defined as “any

surface water or groundwater, including saline waters, within the boundaries of the State” (Water Code § 13050(e)). In 2019, the California State Water Resources Control Board (State Water Board) published the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) to guide wetland/waters of the State determinations and the permitting process.¹⁷

California Native Plant Society

The CNPS maintains a rank of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS ranks:

- **Rank 1A:** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B:** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A:** Plants presumed extirpated in California but common elsewhere
- **Rank 2B:** Plants rare, threatened, or endangered in California, but more numerous elsewhere
- **Rank 3:** Plants about which more information is needed
- **Rank 4:** Watch List: Plants of limited distribution

Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. All plants appearing on the CNPS List ranked 1 or 2 are considered to meet the CEQA Guidelines Section 15380 criteria. Rank 3 and 4 plants do not automatically meet this definition. Rank 4 plants do not clearly meet CEQA standards and thresholds for impact considerations. Nevertheless, some level of CEQA review is justified for California Rare Plant Rank (CRPR) 4 taxa, and under some circumstances, a full impact analysis is warranted. Taxa that can be shown to meet the criteria for endangered, rare, or threatened status under CEQA Section 15380(d) or that can be shown to be regionally rare or unique as defined in CEQA Section 15125(c) must be fully analyzed in a CEQA document. Some circumstances, such as local rarity, having occurrences peripheral to the taxon’s distribution, or having occurrences on unusual substrates or rare and declining habitats, provide justification for treating some CRPR 4 taxa occurrences as regionally rare or unique. One limitation to fully analyzing impacts on CRPR 4 taxa is the difficulty in obtaining current data on the number and condition of the occurrences.¹⁸

Local

East Alameda County Conservation Plan

The East Alameda County Conservation Strategy (EACCS) intends 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. The City of Pleasanton is a partner in the EACCS and uses the document to

¹⁷ California State Water Resources Control Board (State Water Board). 2021. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted 2019 and Revised 2021. Website: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf. Accessed November 17, 2023.

¹⁸ California Native Plant Society (CNPS). 2020. Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis. Website: https://www.cnps.org/wp-content/uploads/2020/02/crpr4_technical_memo.pdf. Accessed November 17, 2023.

provide a baseline inventory of biological resources and conservation priorities during project-level planning and environmental permitting. The EACCS is a framework for guidance by regulatory agencies and does not include incidental take permits for threatened or endangered species similar to that provided by a Habitat Conservation Plan. Compliance with the EACCS is voluntary but doing so streamlines the regulatory permitting process.

The Study Area is located within Conservation Zone 2 of the EACCS, which recognizes this area as highly developed while still providing pockets of habitat for several special-status species. The EACCS describes the following conservation priorities for Conservation Zone 2:

- Protection of burrowing owl nesting and foraging habitat.
- Protection of and restoration opportunities in mixed willow riparian scrub along Arroyo del Valle and Arroyo Mocho.
- Protection of and restoration opportunities along Arroyo Seco and Arroyo Mocho to support California red-legged frog and future central California coast steelhead habitat.
- Surveys for San Joaquin spearscale and protection of extant populations.
- Surveys for Congdon's tarplant and protection of extant populations.
- Protection of vernal pool habitat.

East County Area Plan (Alameda County)

The East County Area Plan (ECAP) is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area.

- Goal** To preserve a variety of plant communities and wildlife habitat.
- Policy 121** The County shall secure open space lands, through acquisition of easements or fee title, specifically for the preservation and protection of indigenous vegetation and wildlife.
- 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 123** Where site-specific impacts on biological resources resulting from a proposed land use outside the Urban Growth Boundary are identified, the County shall encourage that mitigation is complementary to the goals and objectives of the ECAP. To that end, the County shall recommend that mitigation efforts occur in areas designated as "Resource Management" or on lands adjacent to or otherwise contiguous with these lands in order to establish a continuous open space system in East County and to provide for long-term protection 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.
- Policy 127** The County shall encourage the preservation of East County's oak woodland plant communities.
- Policy 128** The County shall ensure that, where quarries will be reclaimed as open space, reclamation plans are designed to restore biological value to sites through appropriate revegetation, contouring of lakes to simulate natural bodies of water, and protection or in-kind replacement of significant trees.
- Policy 129** The County shall protect existing riparian woodland habitat present along the Arroyo Mocho, Arroyo Del Valle, Arroyo Las Positas, Arroyo de la Laguna; and Alamo, Tassajara, and Alameda Creeks. Exceptions to these requirements shall apply for those portions of the Arroyo del Valle to be excavated for water transfer Lakes A and B under the Specific Plan for the Livermore Amador Valley Quarry Area Reclamation, which shall instead be subject to riparian habitat restoration as specified by Policies 128 and 164; and for any approved quarry operations in Regionally Significant Construction Aggregate Resource Sector C (Arroyo Mocho) or any other streambeds, which shall also be subject to habitat restoration under Policies 128 and 164, and according to applicable State Public Resources Code requirements, to the extent that proposed reclamation specifies riparian habitat as the end use.
- Policy 130** The County shall preserve an open space corridor connecting the Bird's Beak Preserve with lands designated "Resource Management." This open space corridor shall vary in width between 50 and 150 feet.
- Policy 131** The County shall require that roadways be designed to minimize impacts to wildlife corridor and regional trails. Where appropriate, grade-separated crossings and/or other features shall be used to maintain the viability of the affected corridor.
- Policy 132** The County shall designate a zone of approximately 200 yards around the perimeter of the defined Bird's Beak Preserve in North Livermore as a Special Management Area. Within this zone, all proposed land uses, and project designs shall be evaluated regarding their potential to affect the viability of the Springtown valley sink scrub habitat, and mitigation shall be incorporated into the approval of detailed development plans within this 200 yard zone to avoid the impact. Mitigation may take the form of clustering development to avoid sensitive areas, management

practices, land swap with the FCC Monitoring Station, or other appropriate measures.

Policy 133 The County shall require that the impacts of wind turbine operations on bird populations are minimized.

Alameda County Ordinance Code

The Alameda County Ordinance Code Chapter 12.11 defines trees as a woody perennial plant with a single or multiple trunks which typically develop a mature size of over seven inches in diameter and 10 or more feet in height. Palms, Yuccas, and any plant required to be planted as a replacement tree shall be considered trees. Trees protected under this ordinance are those on a public right-of-way. The planting, maintenance, removal, or replacement of any tree located in a right-of-way between a private property line and the edge of the paved street shall be the responsibility of the adjacent property owner on whose frontage the tree is located irrespective of who planted said tree. The planting, maintaining, or removing of any tree in the right-of-way, and all associated facilities, such as irrigation systems, tree wells, root barriers and supports, are encroachments subject to the permitting and other requirements of this chapter.

3.3.4 - Impacts and Mitigation Measures

Significance Criteria

The lead agency derives its significance from the criteria based on the questions in the CEQA Guidelines Appendix G Environmental Checklist. Accordingly, impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?
- c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan?

Approach to Analysis

Impacts on biological resources were evaluated based on the likelihood that special-status species, sensitive habitats, wildlife corridors, and protected trees are present on the Study Area, and the likely effects of project construction or operation on these resources. For the purposes of this EIR, the word “substantial” as used in the significance thresholds above is defined by the following three principal components:

- Magnitude and duration of the impact (e.g., substantial/not substantial),
- Uniqueness of the affected resource (rarity), and
- Susceptibility of the affected resource to disturbance.

In this Biological Resources Analysis, the Study Area is defined as all areas directly affected by project development.

Guidance for Evaluating Thresholds of Significance

Additional guidance on the significance of biological impacts is found in CEQA Guidelines Section 15065, subdivision (a)(1), which provides that a lead agency shall find that a project may have a significant effect on the environment if “[t]he project has the potential to: . . . substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; [or]substantially reduce the number or restrict the range of an endangered, rare or threatened species[.]” The “mandatory findings of significance” are also found in the Appendix G sample Initial Study checklist, though near the end.

Accordingly, for purposes of this analysis, the following factors are used to evaluate the level of significance of biological resources impacts resulting from implementation of the proposed project. Specifically, a potentially significant impact may occur if the project would:

Result in direct take or habitat removal or alteration for candidate, sensitive, or special-status species:

- Remove vegetation or damage water quality related to riparian habitat or other sensitive natural community.
- Remove, fill, or damage a federally protected wetland.
- Interrupt fish movement in an aquatic channel or impede terrestrial movement via a land corridor.
- Remove, damage, or replace trees designated by the Alameda County Ordinance Code.
- Conflict with the provisions of an applicable Habitat Conservation Plan.
- Substantially reduce the habitat of a fish or wildlife species.
- Cause a fish or wildlife population to drop below self-sustaining levels.
- Threaten to eliminate a plant or animal community.
- Substantially reduce the number or restrict the range of an endangered, rare or threatened species.

3.3.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Special-status Species

Impact BIO-1: **The proposed project could 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 United States Fish and Wildlife Service.**

The following discussion addresses potential project impacts on sensitive biological resources, including special-status species, and recommends measures to avoid and/or mitigate impacts to a less than significant level under CEQA.

Special-status Plant Species

No rare or special-status plant species were observed during the biological survey and the site lacks suitable habitat such as vernal pools, chenopod scrub, and alkaline or acidic soils to support special-status plant species. Therefore, based on field surveys, literature review, and professional experience, it was determined that special-status species are absent from the site. Therefore, no impacts on special-status or rare plant species are expected to occur due to project construction or operation.

Special-status Wildlife Species

Burrowing Owl

Although no suitable burrows for owls have been observed on the site, a limited amount of marginal foraging habitat is present on the site in the form of ruderal grasslands. Though owls are not expected to breed or nest within the Study Area, they may use the area for short periods during migratory movements. Implementation of Mitigation Measure (MM) BIO-1a would lower potential project-related impacts on burrowing owls that may temporarily utilize the site. Therefore, with implementation of MM BIO-1a, impacts to burrowing owls would be reduced to a less than significant level.

Protected Nesting Birds (Including white-tailed kite)

The vegetated habitats within the Study Area provide suitable nesting habitat for a variety of species of nesting birds. Ruderal grasses, Fremont poplar and mixed willow stands, and riparian habitat provide potential nesting opportunities for ground and tree nesting birds, including special-status species such as the white-tailed kite. Construction activities that occur during the avian nesting season (generally February 1 to August 31) could disturb protected nesting sites within the construction footprint and within disturbance distance. Grading and the removal of vegetation during the nesting season could result in direct harm to nesting birds, while noise, light, and other construction-related disturbances may cause nesting birds adjacent to the vegetation removal areas to abandon their nests.

With implementation of MM BIO-1b, requiring pre-construction nesting bird surveys and avoidance of direct and indirect impacts on nests, potential project-related impacts on protected bird nests would be reduced to a less than significant level under CEQA. Potential impacts and mitigation are the same for the proposed project, including both Design Option A and Design Option B.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-1a Burrowing Owl

- To avoid potential impacts to active burrowing owl nests and adult owls, a qualified Biologist shall conduct protocol-level burrowing owl surveys in accordance with the California Department of Fish and Wildlife (CDFW) 2012 Staff Report.
- If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season (March 15 to September 1), a no-activity zone will be established by a qualified Biologist. The no-activity zone shall be large enough to avoid nest abandonment and shall, at a minimum, be a 250-foot radius from the nest.
- If the burrowing owls are present at the site during the nonbreeding period, a qualified Biologist shall establish a no-activity zone of at least 150 feet.
- If an effective no-activity zone cannot be established in either case, an experienced burrowing owl Biologist shall develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitive and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls.

MM BIO-1b Protection of Active Bird Nests (includes pre-construction survey and implementation of avoidance buffer, if found).

1. Removal of trees shall be limited to only those necessary to construct the proposed project as reflected in the relevant project approval documents.
2. If the proposed project requires vegetation to be removed during the nesting season (February 1 to August 31), pre-construction surveys shall be conducted no more than 7 days prior to the start of ground or vegetation disturbance (including tree removal) to determine whether or not active nests are present.
3. If an active nest is located during pre-construction surveys, a qualified Biologist shall determine an appropriately sized avoidance buffer based on the species and anticipated disturbance level. (The California Department of Fish and Wildlife [CDFW] recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors.) A qualified Biologist shall delineate the avoidance buffer using Environmentally Sensitive Area fencing, pin flags, and/or yellow caution tape. The buffer zone shall be maintained around

the active nest site(s) until the young have fledged and are foraging independently. No construction activities or construction foot traffic is allowed to occur within the avoidance buffer(s).

4. The qualified Biologist shall monitor the active nest during construction activities and modify the protection zone accordingly to prevent project-related nest disturbance, until the young have fledged.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Sensitive Natural Communities or Riparian Habitat

Impact BIO-2: **The proposed project could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.**

As discussed above in *Sensitive Natural Communities*, the eastern portion of the Study Area contains approximately 5.87 acres of Fremont poplar and mixed willow stands, best designated as *Populus fremontii*–*Salix gooddingii* Woodland Alliance under the CDFW California Sensitive Natural Community database.

Additionally, as discussed above in *Physical Habitat/Vegetation*, the second drainage swale that is located to the east of the Study Area and is likely fed through an existing culvert that conveys flows under El Charro Road, contains riparian habitat.

Design Option A

The proposed project with Design Option A would actively avoid any direct or indirect impacts to the *Populus fremontii*–*Salix gooddingii* Woodland Alliance (Exhibits 3.3-3a). Additionally, project-related construction would avoid the drainage swale and associated riparian vegetation within the eastern portion of the Study Area as project construction would be mostly sequestered to the western side of El Charro Road. Therefore, project-related construction does not have the potential to directly or indirectly impact sensitive natural communities, including riparian habitats. As such, no impacts to these communities would occur with the implementation of the proposed project with Design Option A.

Design Option B

The proposed project with Design Option B would avoid any direct or indirect impacts to *Populus fremontii*–*Salix gooddingii* Woodland Alliance (Exhibit 3.3-3b). Therefore, no impacts to this sensitive natural community are expected under Design Option B. However, Design Option B does have the potential to indirectly impact the water quality of the drainage swale and associated riparian vegetation within the eastern portion of the Study Area. The proposed bioretention area under this design option is located approximately 25 feet from the adjacent drainage swale and approximately 15 feet from the riparian vegetation associated with the drainage swale. As such, potential temporary indirect impacts (during construction) and permanent indirect impacts (during project

operation) include pollutant loading, increased erosion and sedimentation, and trash or debris dispersal in the adjacent drainage swale. However, MM BIO-2a and MM BIO-2b include protection for riparian habitats and with their implementation, impacts to riparian communities would be reduced to a less than significant level.

Therefore, FCS recommends implementing MM BIO-2a and MM BIO-2b if the proposed project with Design Option B is implemented to limit temporary indirect impacts and permanent indirect impacts to the drainage swale within the eastern portion of the Study Area. With implementation of MM BIO-2a and MM BIO-2b, project-related impacts to riparian habitats would be reduced to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM BIO-2a Avoidance and Minimization of Indirect Temporary Impacts to Water Quality and Riparian Vegetation (Design Option B)

The project applicant shall obtain a Construction General Permit from the Regional Water Quality Control Board (RWQCB) if Design Option B is selected. The applicant shall ensure that the project Civil Engineer prepares all required stormwater planning documents consistent with the requirements of the RWQCB (e.g., a Storm Water Pollution Prevention Plan [SWPPP] that complies with current National Pollutant Discharge Effluent Standards [NPDES]; Best Management Practices [BMPs] to control the pollutants in stormwater runoff; and/or a Storm Water Management Plan [SWMP]) shall be developed and integrated into the project plan.

MM BIO-2b Avoidance and Minimization of Indirect Permanent Impacts to Water Quality and Riparian Vegetation (Design Option B)

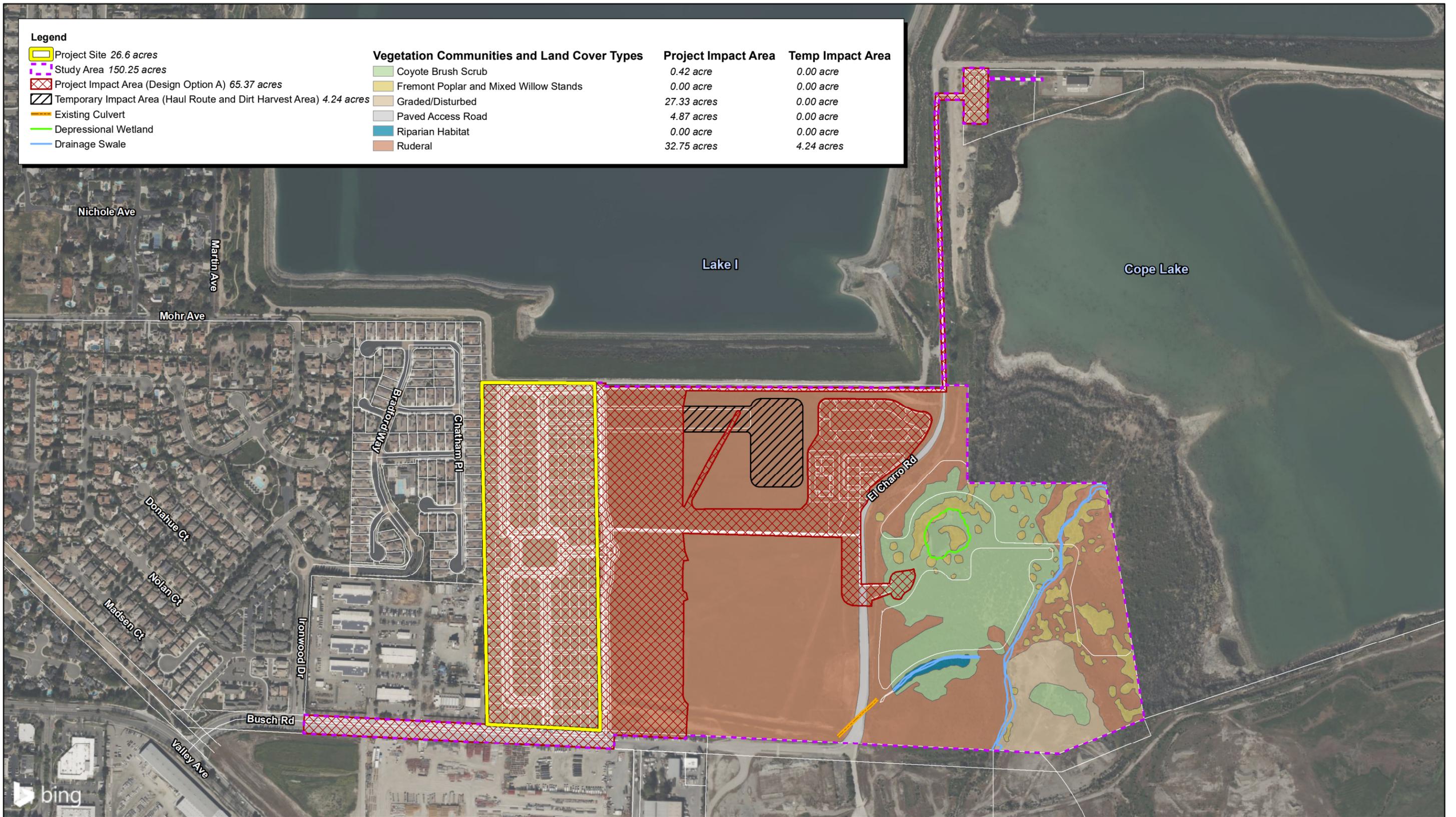
Prior to construction the applicant shall install silt fencing including the placement of straw wattles between all construction areas and the adjacent drainage swales to avoid impacts to water quality by grading and construction if Design Option B is selected. A qualified Biologist shall be on-site to monitor the installation of fencing. Fencing shall be in place and regularly maintained during project implementation.

The project applicant shall install post-construction stormwater management measures and establish a long-term maintenance plan if Design Option B is selected. This requirement is intended to ensure that the post-construction conditions at the Study Area do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream and downstream. Specifically, the discharger shall demonstrate compliance with the post-construction standards set forth in the General Permit.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

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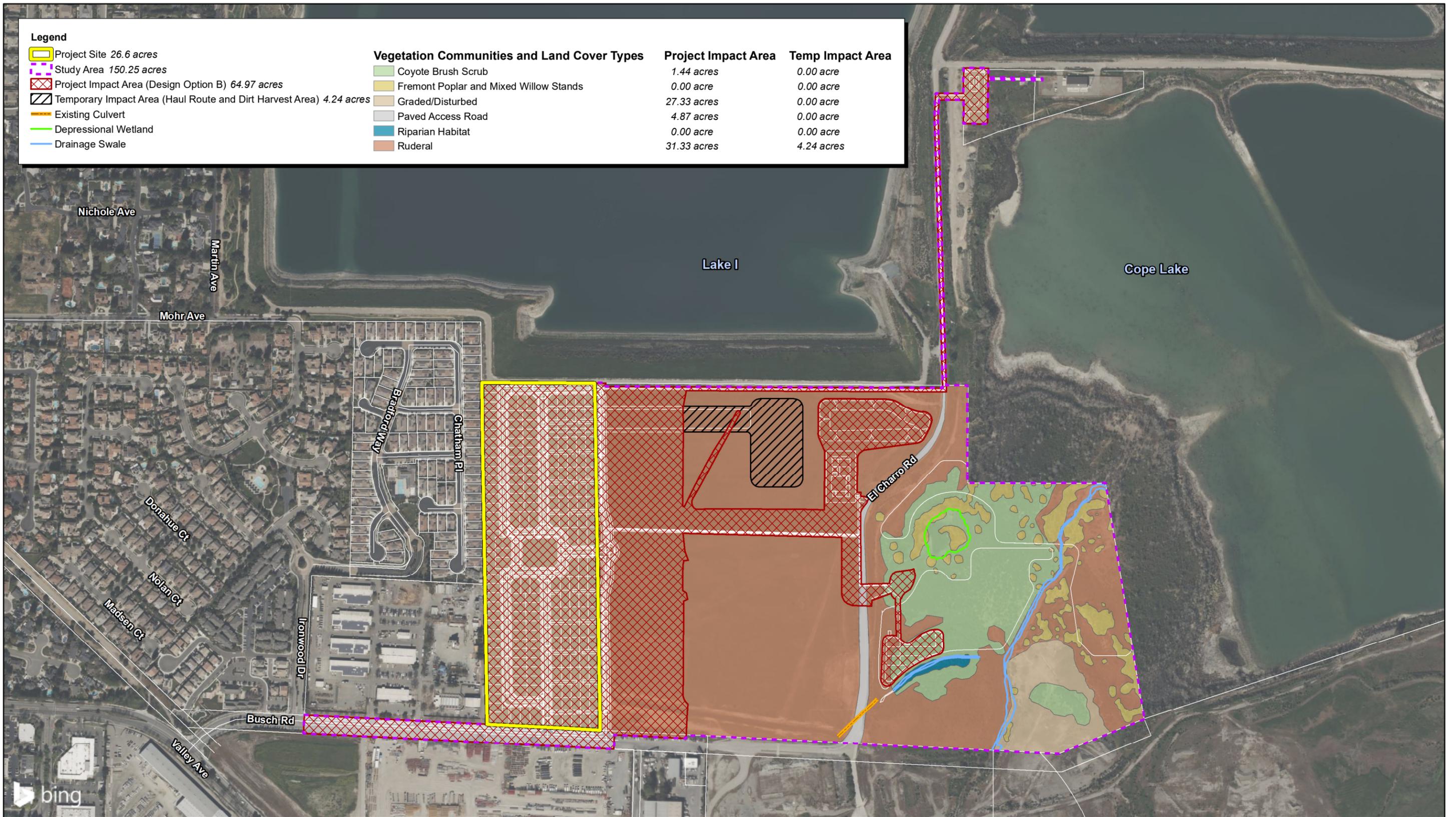
Source: Bing Aerial Imagery. Source: CBG Civil Engineers. 12/2023.



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Exhibit 3.3-3a
Biological Impacts Map - Design Option A

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Source: Bing Aerial Imagery. CBG Civil Engineers. 12/2023.



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Exhibit 3.3-3b
Biological Impacts Map - Design Option B

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Wetlands and Jurisdictional Features

Impact BIO-3: **The proposed project would not have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

The proposed project would avoid any direct and indirect impacts to State or federally protected waters and/or wetlands (Exhibits 3.3-3a and 3.3-3b). The proposed project with either Design Option A or Design Option B would not impact the water quality of the potential depressional wetland within the eastern portion of the Study Area. While the proposed project with Design Option B proposes a larger off-site infrastructure footprint to the east of El Charro Road, these design features would avoid any potential State or federally protected wetlands. The proposed storm drain outfall contemplated under the proposed project with either Design Options A or Design Option B is located more than 120 feet from the potential depressional wetland feature. Therefore, no mitigation measures are proposed related to State or federally protected waters and/or wetlands for the proposed project with either Design Options A or Design Option B. Impacts to State or federally protected wetlands would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Fish and Wildlife Movement Corridors

Impact BIO-4: **The proposed project could 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 wildlife nursery sites.**

The site does not function as a critical wildlife movement corridor, as discussed in *Wildlife Movement Corridors and Nursery Sites*, above. Certain common wildlife may move within or cross the site; however, it does not function to connect valuable habitats together. The Study Area is surrounded by urban and industrial developments, man-made lakes with limited habitat value, and active roadways which limit the potential for wildlife movement through the site. Although the eastern reaches of the Study Area contain a riparian vegetation and Fremont poplar and mixed willow stands, these habitats do not connect two significant and undeveloped habitat areas or allow connection between wildlife populations separated by human activity. Therefore, potential project-related impacts on wildlife movement are less than significant.

No substantial wildlife nursery sites, including breeding or nesting colonies, breeding ponds, or dens are present on-site. However, individual nesting birds have the potential of being present within disturbance distances seasonally. Potential impacts to individual nesting birds and roosting bats are addressed through the implementation of MM BIO-1a through MM BIO-1b (see above for details). As such, impacts to nursery sites would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact

Mitigation Measures

Implement MM BIO-1a and MM BIO-1b.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Local Policies or Ordinances

Impact BIO-5: The proposed project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Local policies or ordinances applicable to the proposed project include the East Alameda County Area Plan, and the Alameda County Ordinance Code Chapter 12.11. The proposed project would meet the Alameda East County Area Plan through the implementation of MM BIO-1a and MM BIO-1b as well as MM BIO-2a and MM BIO-2b if Design Option B is selected, which would protect and preserve sensitive habitat and special-status species with the potential to occur within the Study Area. Additionally, the Alameda County Ordinance Code Chapter 12.11 which sets forth the City's Tree Preservation Guidelines would be met as no trees stipulated as protected under the Chapter would be affected by the proposed project. Therefore, with adherence to the Alameda County Ordinance Code, the Alameda East County Area Plan, and implementation of MM BIO-1a and MM BIO-1b as well as MM BIO-2a and MM BIO-2b if Design Option B is selected, the proposed project would not conflict with the County's local policies or ordinances.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-1a and MM BIO-1b. If Design Option B is selected, implement MM BIO-2a and MM BIO-2b.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Local, Regional, or State Habitat Conservation Plan

Impact BIO-6: The proposed project could conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

The Study Area is located within the boundaries of the EACCS. The strategy has been developed 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 is a framework for guidance

by regulatory agencies and does not include incidental take permits for threatened or endangered species similar to that provided by a Habitat Conservation Plan. In addition to the mitigation measures outlined above, it is recommended that the project adhere to the following general avoidance and minimization measures identified in the EACCS. Some modifications to the EACCS measures are provided here to reflect project-specific circumstances. Implementation of the mitigation, avoidance, and MM BIO-1a and MM BIO-1b as well as MM BIO-2a and MM BIO-2b if Design Option B is selected, as outlined above would mitigate all potentially significant biological impacts to a less than significant level and ensure that the project would be in compliance with the EACCS.

Avoidance and Minimization Measures

- EACCS Measure GEN-01:** Employees and contractors performing construction activities will receive environmental sensitivity training. Training will include review of environmental laws and avoidance and minimization measures that must be followed by all personnel to reduce or avoid effects on covered species during construction activities.
- EACCS Measure GEN-02:** Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects to these species during construction activities. Directors, managers, superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.
- EACCS Measure GEN-03:** Contracts with contractors, construction management firms, and subcontractors will obligate all contractors to comply with the Project avoidance, minimization, and mitigation measures.
- EACCS Measure GEN-04:** The following will not be allowed at or near work sites for covered activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).
- EACCS Measure GEN-05:** Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
- EACCS Measure GEN-06:** Off-road vehicle travel will be minimized.
- EACCS Measure GEN-07:** Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during off-road travel.
- EACCS Measure GEN-08:** Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area is constructed.

EACCS Measure GEN-09: Vehicles will be washed at off-site facilities. Vehicles will not be washed at the project site.

EACCS Measure GEN-10: To discourage the introduction and establishment of invasive plant species, seed mixtures/straw used within natural vegetation will be either rice straw or weed-free straw.

EACCS Measure GEN-11: Pipes, culverts and similar materials greater than four inches in diameter, will be stored so as to prevent covered wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.

EACCS Measure GEN-12: Erosion control measures will be implemented to reduce sedimentation in wetland habitat occupied by covered animal and plant species when activities are the source of potential erosion problems. Plastic mono-filament netting (erosion control matting) or similar material containing netting shall not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

Wetlands that contain habitat for covered species are not present within the Study Area. However, this general measure is still applicable to protect sedimentation from intruding into adjacent aquatic features identified within this report.

EACCS Measure GEN-13: Stockpiling of material will occur such that direct effects to covered species are avoided. Stockpiling of material in riparian areas will occur outside of the top of bank, and preferably outside of the outer riparian dripline and will not exceed 30 days.

EACCS Measure GEN -14: Grading will be restricted to the minimum area necessary.

EACCS Measure GEN-15: Prior to ground-disturbing activities in sensitive habitats, Project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.

EACCS Measure GEN-16: Significant earthmoving-activities will not be conducted in riparian aquatic areas within 24 hours of predicted storms or after major storms (defined as 1 inch of rain or more).

This measure also applies to the aquatic features found within the Study Area that do not contain riparian vegetation.

EACCS Measure GEN-17: Trenches will be backfilled as soon as possible. Open trenches will be searched each day prior to construction to ensure no covered species are trapped. Earthen escape ramps will be installed at intervals prescribed by a qualified Biologist.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-1a and MM BIO-1b. If Design Option B is selected, implement MM BIO-2a and MM BIO-2b.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

3.3.6 - Cumulative Impacts

The cumulative analysis considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project. Two of the projects listed on the cumulative impact table (No. 4 Senior East County Lakes and No. 5 Chain of Lakes Conveyance Project) would be located within the Study Area evaluated within this section of the Draft EIR. The geographic scope of the cumulative biological resources analysis is the project vicinity as the project activity would only affect the surrounding project area. Cumulative projects in the geographic scope of the biological resources analysis consist of developed and undeveloped lands primarily near the edge of existing urban development.

This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, could result in a cumulatively significant impact with respect to biological resources. This analysis also considers whether incremental contribution of impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of a significant impact. If there is no impact associated with respect to a particular CEQA threshold, discussion of cumulative impacts is not required. Accordingly, this cumulative discussion is limited to the potential impacts discussed above.

Special-status Species

Cumulative projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1 are predominantly located in areas within or adjacent to urban development with limited potential to support special-status species. As described in the Regulatory Framework section herein, numerous laws and regulations are in place to protect biological resource within the cumulative project area, including, but not limited to CESA, the Endangered Species Act, CWA, and applicable County Area Plan and Ordinance code requirements. Future projects within the cumulative geographic context would be required to comply with applicable federal, State, and local laws, regulations and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources. Standard pre-construction surveys and, if necessary, avoidance procedures would be required for cumulative projects with the potential to impact special-status species. Because cumulative development has limited potential to support special-status species and would be required to comply with the above requirements, cumulative impacts related to special-status species would be less than significant.

The proposed project's incremental contribution to these less than significant cumulative impacts would not be significant with adherence to the mitigation measures related to special-status species identified above (see MM BIO1a through MM BIO-1b) and compliance with other applicable standards and requirements under the comprehensive regulatory framework. Therefore, the proposed project's contribution to cumulative impacts related to special-status species would be less than significant.

Sensitive Natural Communities

As described Impact BIO-2, the proposed project would not impact any sensitive natural communities within the Study Area. Therefore, the proposed project's contributions to cumulative impacts related to sensitive natural communities would be less than significant.

Waters of the United States and Riparian Habitat

The cumulative project area contains undeveloped areas that may support wetlands, jurisdictional features, or riparian habitats. In addition, the Arroyo Valle and Arroyo Mocho rivers are located within the cumulative project area. Any future development that occurs within the cumulative analysis area would have to take into account the potential impacts to wetlands, riparian habitats, and jurisdictional features and mitigate as required under applicable laws and regulations. As such, cumulative impacts to wetlands, riparian habitats, and jurisdictional features would be less than significant.

As indicated under Impact BIO-2, the proposed project could, under Design Option B, produce temporary indirect impacts (during construction) and permanent indirect impacts (during project operation) to both the drainage swale and associated riparian vegetation. However, through implementation of MM BIO-2a and MM BIO-2b if Design Option B is selected, impacts to riparian habitats would be reduced to less than significant levels. Cumulative Project No. 5 (Chain of Lakes Conveyance Project) is proposed to run underground through the general area where drainage swales and associated riparian vegetation have been identified in this section of the Draft EIR. However, Cumulative Project No. 5 is still being studied for feasibility, reviewing alternative alignments, and working to obtain full funding. At the time this Draft EIR has been drafted, it is too speculative to evaluate the exact alignment of the pipeline and any impacts it could have to the drainage swale and riparian vegetation identified. Furthermore, as stated above, Cumulative Project No. 5 would have to analyze any potential impacts to wetlands, riparian habitats, and jurisdictional features and mitigate as required under applicable laws and regulations through its own environmental review process. As such the proposed project would not combine with other reasonably foreseeable projects and would have less than significant contribution to the related impacts. Therefore, the proposed project's contribution to the less than significant cumulative impact related to wetlands, riparian habitats, and jurisdictional features would not be cumulatively considerable.

Local Policies or Ordinances

Projects listed in Table 3-1 are all located within Alameda County and therefore would be required to abide by applicable local policies and ordinances such as the County's Tree Ordinance. Consistency with the East County Area Plan and Ordinance Code would also be required. Compulsory adherence

to these regulations related to biological resources would ensure that impacts would be less than significant in this regard.

As discussed under Impact BIO-5, the proposed project would not remove any County protected trees and would be consistent with the East County Area Plan and Ordinance Code designations. Furthermore, the project is consistent with applicable County Area policies regarding biological resources including assessment of such resources and wetland avoidance. Therefore, the proposed project's contribution to the less than significant cumulative impact related to local policies and ordinances would not be cumulatively considerable.

Fish and Wildlife Movement Corridors

The larger geographic scope for cumulative projects contains various areas that may provide movement corridors for fish and wildlife, including the Arroyo Valle, Arroyo Mocho, and hillsides surrounding Pleasanton. However, none of the identified cumulative projects include wildlife corridors that connect to the proposed Study Area. Other areas surrounding the Study Area consist primarily of urban development or undeveloped land significantly surrounded by urban development. Any future development that occurs within the cumulative analysis area would have to take into account the potential impacts to these corridors and mitigate as required under applicable laws and regulations. The cumulative projects are primarily located in urban or commercially developed areas and therefore are not likely to significantly impact wildlife movement corridors. Therefore, it can be reasonably assumed that there would be no cumulative impacts to fish and wildlife movement corridors.

As discussed under Impact BIO-4, the site does not function as a critical wildlife movement corridor, is not connected to any corridors present on cumulative project sites and does not otherwise connect valuable habitats together; accordingly, there would be no impacts to wildlife movement corridors. Therefore, the proposed project's contribution to cumulative impacts related to fish and wildlife movement would not be cumulatively considerable.

Habitat and Natural Community Conservation Plan Consistency

Projects listed in Table 3-1 are all located within the East Alameda County Conservation Plan and therefore would be required to abide by applicable policies within the Plan. As discussed under Impact BIO-6, the proposed project would comply with the Conservation Plan. With compulsory adherence to policies listed in the Plan, impacts would be less than significant in this regard. Therefore, the proposed project's contribution to the less than significant cumulative impact related to a Habitat or Natural Community Conservation Plan would not be cumulatively considerable.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-1a and MM BIO-1b. If Design Option B is selected, implement MM BIO-2a and MM BIO-2b.

Level of Cumulative Significance After Mitigation

Less than significant with mitigation incorporated.

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3.4 - Cultural Resources and Tribal Cultural Resources

3.4.1 - Introduction

This section describes the existing cultural resources and Tribal Cultural Resources (TCRs) setting and the potential effects of project implementation on the project site and its surrounding area. The descriptions and analysis in this section are based, in part, on information provided by the Native American Heritage Commission (NAHC), a records search conducted at the Northwest Information Center (NWIC), archival research, and a pedestrian survey as presented in the Phase I Cultural Resources Assessment (Phase I CRA) prepared for the proposed project, which is included in the confidential Appendix D. The applicable regulatory framework is also discussed below. In addition, recommendations provided in the 2023 Phase I CRA pertaining to feasible mitigation of identified potential significant impacts to cultural resources are also addressed in this section.

The following comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to cultural resources. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should evaluate significant impacts to cultural resources.
- The Draft EIR should analyze the proposed project’s consistency with Assembly Bill (AB) 52 and Senate Bill (SB) 18.
- The Draft EIR should prepare a Cultural Resources Assessment.
- The Draft EIR should comply with the NAHC’s recommendations for Cultural Resources Assessments.
- The Draft EIR should discuss the incorporation of traditional ecological knowledge and tribal perspectives.

3.4.2 - Environmental Setting

Overview

The term “cultural resources” encompasses historic, archaeological, tribal cultural resources, and burial sites containing human remains. Below is a brief summary of each component:

- **Historical Resources:** Historical resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State’s history and are generally less than 200 years old. Under the California Environmental Quality Act (CEQA), “historical resources” is a defined legal term of art (CEQA Guidelines § 15064.5(a)). In practice, historic resources focus primarily on the built environment (i.e., historic-era buildings, structures, etc.)
- **Archaeological Resources:** Archaeology is the study of artifacts and material culture with the aim of understanding human activities and cultures in the past. Archaeological resources may be associated with prehistoric indigenous cultures as well as historic periods. By statute, CEQA

is concerned with “unique archaeological resources,” a defined legal term of art (Public Resources Code [PRC] § 21083.2[g]). The CEQA Guidelines are also concerned with “historical resource(s) of an archaeological nature” (CEQA Guidelines § 15126.4(b)(3)).

- **Tribal Cultural Resources:** TCRs include sites, features, places, or objects that are of cultural value to one or more California Native American Tribes. Under CEQA, “tribal cultural resources” is also a legal term of art (PRC § 21074).
- **Burial Sites and Cemeteries:** Burial sites and cemeteries are formal or informal locations where human remains have been interred. Native American burial sites are also considered TCRs of cultural value to one or more California Native American Tribe. Both Federal and California law deal with burial sites and cemeteries through a series of statutes and regulations detailed in Section 3.4.3.

More specifically, cultural resources may be understood as resources that have been formally recognized by a lead agency and/or are listed or determined eligible for listing on the California Register of Historical Resources (CRHR) (PRC § 5024.1, Title 14 California Code of Regulations [CCR] § 4852). However, the fact that a resource is not yet identified as a historical resource or found eligible for the CRHR does not preclude a lead agency from determining that said resource is a historical resource pursuant to Public Resources Code Sections 5020.1(j) or 5024.1. Under CEQA, a substantial adverse change in the significance of a historical resource would constitute a significant effect on the environment.

Cultural Setting

Following is a brief overview of the prehistory, ethnography, and historic background, providing a context in which to understand the background and relevance of sites found in the general project vicinity. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview. Unless otherwise stated, information contained in this section is drawn directly from the Phase I CRA conducted by FirstCarbon Solutions (FCS).¹ Further details can be found in ethnographic studies, mission records, and major published sources in the Phase I CRA.

Pre-Contact Archaeological Setting

In general, archaeological research in the greater San Francisco Bay Area has focused on coastal areas, where large shell mounds were relatively easily identified on the landscape. This research and its chronological framework, however, is relevant to and has a bearing on our understanding of prehistory in areas adjacent to the San Francisco Bay, including modern Alameda County.

The San Francisco Bay Area supported a dense population of hunter-gatherers over thousands of years, leaving a rich varied archaeological record. The Bay Area was a place of incredible language diversity, with seven languages spoken at the time of Spanish settlement in 1776. The diverse ecosystem of the bay and surrounding lands supported an average of three to five persons per square mile but reached 11 persons per square mile in the North Bay. At the time of Spanish contact, the people of the Bay Area were organized into local tribelets that defended fixed territories under

¹ FirstCarbon Solutions (FCS). 2024. Arroyo Lago Residential Project Phase I Cultural Resources Assessment (Phase I CRA). March.

independent leaders. Typically, individual Bay Area tribelets included 200 to 400 people distributed among three to five semi-permanent villages, within territories measuring approximately 10 to 12 miles in diameter.

Native American occupation and use of the greater Bay Area, including the regions comprising modern Burlingame, extends over 5,000 to 7,000 years and possibly longer. Early archaeological investigations in Central California were conducted at sites located in the Sacramento-San Joaquin Delta region. The first published account documents investigations in the Lodi and Stockton area. The initial archaeological reports typically contained descriptive narratives with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, the University of California at Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in recognizing archaeological site patterns based on a variation of intersite assemblages. Research during the 1930s identified temporal periods in Central California prehistory and provided an initial chronological sequence. In 1939, researcher Jeremiah Lillard of Sacramento Junior College noted that each cultural period led directly to the next and that influences spread from the Delta region to other regions in Central California. In the late 1940s and early 1950s, researcher Richard Beardsley of the University of California, Berkeley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that ultimately became known as the Central California Taxonomic System (CCTS). This system proposed a uniform, linear sequence of cultural succession.

To address some of the flaws in the CCTS system, D.A. Fredrickson introduced a revision that incorporated a system of spatial and cultural integrative units. Fredrickson separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (12000 to 8000 years Before Present [BP]); Lower, Middle, and Upper Archaic (8000 to 1500 BP), and Emergent (Upper and Lower, 1500 to 250 BP). The suggested temporal ranges are similar to earlier horizons, which are broad cultural units that can be arranged in a temporal sequence. In addition, Fredrickson defined several patterns—a general way of life shared within a specific geographical region. These patterns include:

- Windmill Pattern or Early Horizon (4500 to 3500 BP)
- Berkeley Pattern or Middle Horizon (3500 to 1500 BP)
- Augustine Pattern or Late Horizon (1500 to 250 BP)

Brief descriptions of these temporal ranges and their unique characteristics follow.

Windmill Pattern or Early Horizon (4500 to 3500 BP)

Characterized by the Windmill Pattern, the Early Horizon was centered in the Cosumnes District of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests the exploitation of numerous types of terrestrial and aquatic species. Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a

westerly orientation and a high number of grave goods. Trade networks focused on the acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicate an extensive trade network that may represent the arrival of Utian populations into Central California. Also indicative of this period are rectangular Haliotis and Olivella shell beads and charmstones that usually were perforated.

Berkeley Pattern or Middle Horizon (3500 to 1500 BP)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. Fredrickson suggests that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, the practice of spreading ground ochre over the burial was common at this time. Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles occasionally were present, which suggest the religious or ceremonial significance of the individual. During this period, larger populations are suggested by the number and depth of sites compared with the Windmill Pattern. According to Fredrickson, the Berkeley Pattern reflects gradual expansion or assimilation of different populations, rather than sudden population replacement, and a gradual shift in economic emphasis.

Augustine Pattern or Late Horizon (1500 to 250 BP)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow-and-arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of Haliotis ornaments of many elaborate shapes and forms. According to Moratto, burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation. Judging from the number and types of grave goods associated with the two types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. Johnson suggests that the Augustine Pattern represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of prehistoric populations. Although debate continues over a single model or sequence for California, the general framework consisting of three

temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

Native American Background

The Ohlone (Costanoan)

At the time of European contact in the eighteenth century, the San Francisco Bay and Monterey Bay areas was occupied by the Costanoan-speaking Native American tribelets. The Costanoan group designates a linguistic family consisting of eight different, yet related, languages. The eight languages are the Karkin, Ramaytush, Chochenyo, Tamyen, Awaswas, Chalon, Mutsun, and Rumsen. The Costanoan languages were quite different from one another, with each language being related to its geographically contiguous neighbors. The term “Costanoan” comes from the Spanish word “*Costanos*” which means ‘coast people’. There are two other terms that were used to identify the Costanoan-speaking people, Olhonian and Mutsun. Olhonian is the name of a tribelet, *Olxon*, that is in San Mateo County near the San Gregorio Creek. Mutsun is the name of the village in a place called Natividad, which is in the hills that are between the Salinas and Pajaro Rivers.

The arrival of Costanoan-speaking groups into the Bay Area appears to be temporally consistent with the appearance of the Late Horizon artifact assemblage in the archaeological record, as documented at sites such as the Emeryville Shellmound or the Ellis Landing Shellmound. It is probable that the Costanoan moved south and west from the Delta region of the San Joaquin-Sacramento River region into the Bay Area. The tribal group that most likely occupied the project site is the Chochenyo or East Bay Costanoan language group, whose territory extended from the southern end of the Carquinez Strait south and the east shore of the San Francisco Bay between Richmond and Mission San Jose (present-day Fremont), extending to present-day Livermore.

The various Costanoan tribes subsisted as hunter-gatherers and relied on local terrestrial and marine flora and fauna for subsistence. The predominant plant food source was the acorn, but they also exploited a wide range of other plants, including various seeds, buckeye, berries, and roots. Protein sources included grizzly bear, elk, sea lions, antelope, and black-tailed deer, as well as smaller mammals such as raccoon, brush rabbit, ground squirrels, and wood rats. Waterfowl, including Canadian geese, mallards, green-winged teal, and American widgeon, were captured in nets using decoys to attract them. Fish also played an important role in the Costanoan diet and included steelhead, salmon, and sturgeon.

The Costanoan constructed watercraft from tule reeds and possessed bow-and-arrow technology. They fashioned blankets from sea otter pelts, fabricated basketry from twined reeds of various types, and assembled a variety of stone and bone tools in their assemblages. Costanoan villages typically consisted of domed dwelling structures, communal sweathouses, dance enclosures, and assembly houses constructed from thatched tule reeds and a combination of wild grasses, wild alfalfa, and ferns.

The Costanoan were politically organized into autonomous tribelets that had distinct cultural territories. Individual tribelets contained one or more villages with several seasonal camps for resource procurement within the tribelet territory. The tribelet chief could be either male or female,

and the position was inherited patrilineally, but approval of the community was required. The tribelet chief and council were essentially advisers to the community and were responsible for feeding visitors and directing hunting and fishing expeditions, ceremonial activities, and warfare on neighboring tribelets.

The first European contact with the Costanoan, specifically the Rumsen tribelets, was in 1602, when Sebastian Vizcaíno's expedition arrived in Monterey. The estimated Costanoan population in 1770—when the first mission was established in Ohlone territory—was approximately 10,000. By 1832, the population had declined to fewer than 2,000, mainly due to diseases introduced by the European explorers and settlers. When the Spanish mission system rapidly expanded across California, the Costanoan traditional way of life was irreversibly altered. The pre-contact hunter-gatherer subsistence economy was replaced by an agricultural economy, and the Spanish missionaries prohibited traditional social activities. After secularization of the missions between 1834 and 1836, some Native Americans returned to traditional religious and subsistence practices while others labored on Mexican ranchos. Thus, multi-ethnic Indian communities grew up in and around the area and provided informant testimony to ethnologists from 1878 to 1933.

The California Gold Rush brought further disease to the native inhabitants, and by the 1850s, nearly all the Costanoan-speaking groups had adapted in some way or another to economies based on cash income. Hunting and gathering activities continued to decline and were rapidly replaced with economies based on ranching and farming. The Costanoan languages most likely went extinct by 1935. By the 1970s the estimated number of Costanoan descendants or Ohlone descendants in the San Francisco Bay Area was approximately 200. The descendants of the Costanoan united to form the Ohlone Indian Tribe and received ownership of the Ohlone Indian Cemetery where their ancestors of Mission San Jose are buried. Some of the Costanoan descendants in the Monterey Bay area prefer the term "Ohlone," which comes from the name of a village on the San Francisco Peninsula.

Historic Background

Spanish and Mexican Exploration and Settlement

Spanish exploration into the Central Valley dates back to the late 1700s, and Spanish mission records indicate that local Native American inhabitants were being taken to Mission San Jose until secularization of the missions in 1833. Many Native Americans were not willing converts. There are numerous accounts of neophytes fleeing the missions, and a series of "Indian Wars" broke out when the Spanish tried to return them to the missions. During this period, Native American populations were declining rapidly from an influx of Euro-American diseases. In 1832, a party of trappers from the Hudson's Bay Company, led by John Work, traveled down the Sacramento River, unintentionally spreading a malaria epidemic to Native Californians.

The Mexican revolt against Spain in 1822 and the secularization of the missions in 1834 changed land ownership patterns in California. The Spanish philosophy of government was directed at the founding of presidios, missions, and secular towns with the land held by the Crown, whereas the later Mexican policy stressed individual ownership of the land. Following Mexico's independence from Spain in 1822, the vast mission lands were granted to private citizens. The last of the mission

land holdings were relinquished in 1845, which led the way for the large ranchos common to California in the mid-1800s.

Mission San Jose was one of the most prosperous missions in California because of its fertile land, excellent water supply, large numbers of Native American laborers, and proximity to San Francisco Bay. In 1824, when a map was drawn of the Mission San Jose territory, it included the San Ramon Valley, which at that time was called Yngerto Cañada, its original Spanish name.

During the Mexican Period, vast tracts of land, including former Mission lands that had reverted to public domain, were granted to individuals. The San Ramon Valley contained three large ranchos: San Ramon (Amador), 16,517 acres; San Ramon (Carpentier), 8,917 acres; and San Ramon (Norris), 4,451 acres. In 1846, on the eve of the U.S.-Mexican War (1846 to 1848), the estimated population of California was 8,000 non-natives and 10,000 Native Americans. However, these estimates have been debated. Cook suggests the Native American population was 100,000 in 1850; the U.S. Census of 1880 reports the Native American population as 20,385.

Gold Rush and American Expansion

In 1848, James W. Marshall discovered gold at Coloma in modern-day El Dorado County, which started the Gold Rush in the region that forever altered the course of California's history. The arrival of thousands of gold seekers in the territory contributed to the exploration and settlement of the entire State. By late 1848, approximately four out of five men in California were gold miners. The Gold Rush originated along the reaches of the American River and other tributaries to the Sacramento River, and Hangtown, present-day Placerville, became the closest town offering mining supplies and other necessities for the miners in El Dorado County. Gold subsequently was found in the tributaries to the San Joaquin River, which flowed north to join the Sacramento River in the Great Delta east of San Francisco Bay.

By 1864, the California Gold Rush had essentially ended. The rich surface and river placers were largely exhausted and the miners either returned to their homelands or stayed to start new lives in California. After the Gold Rush, people in towns such as Jackson, Placerville, and Sonora turned to other means of commerce, such as ranching, agriculture, and timber production. With the decline of gold mining, agriculture and ranching came to the forefront in the State's economy. California's natural resources and moderate climate proved well-suited for cultivation of a variety of fruits, nuts, vegetables, and grains.

Local History

Alameda County

Alameda County (County) occupies the eastern portion of the East Bay region of the San Francisco Bay Area region. The County was formed in March of 1853 from portions of Contra Costa and Santa Clara counties. Alameda County, like much of California, was seen as a land of economic opportunity, not just for its mining resources but also for its productive land where farmers could cultivate a variety of crops. Agriculture became important in the California economy in the late 1850s, and through to the 1860s, homesteading became a means by which people could own and operate a family farm. The decidedly agricultural focus also underpins the historical significance of the Spanish

colonial and Mexican era of land grants. The variety of cultural traditions, technological developments, and ideological views further underwrite the County’s agricultural history. The County’s rural setting continues to support farming and ranching operations.

As early as 1887, special interests advertised the County’s virtues as a place to cultivate. Early settlers began to speak of beneficial soils that support a range of crops—oranges, lemons, olives, pomegranates, figs, and grapes flourished—with seasonal rainfall, and suitable climates. In addition, the welcoming character of towns, regional accessibility, and schools further encouraged westward migration.

A variety of crops flourished in the County because of favorable sub-climate conditions. Cultivated lands expanded with changes and advancements in the agricultural industry that encouraged farmers to adapt operations and remain relevant. More generally, staple crops such as wheat and specialty crop agriculture were an important component of California’s agricultural history. Between 1880 and 1900, for example, farmers shifted from apples to such fruits as peaches, plums, prunes, apricots, and pears. The shift boosted California’s orchard industries, coinciding with accelerated growth in local drying and canning industries. The development of these specialized crops gave California an economic buffer when wheat prices declined in the early twentieth century.

Large-scale commercial operations began to capitalize on mechanical innovations just as irrigation developed in the early 1880s. Consequently, competing economic interests caused land prices to increase and make family farming a less profitable enterprise. Following the world wars, large companies followed their employees to suburban areas east of San Francisco. The establishment of large population centers fostered the development of equally large shopping centers. To meet demand on infrastructure, the State modernized highways and roadways. With the establishment of the Bay Area Rapid Transit (BART) system, the central county cities turned to spawn their own suburbs. The once outlying rural areas of Antioch, Oakley, and Brentwood continue to grow.

3.4.3 - Methodology

Records Searches and Pedestrian Survey to Identify Existing Cultural Resources

The information in this section is based, in part, on the Phase I CRA prepared for the proposed project by FCS in March 2024. The Phase I CRA used the methods below to analyze the potential impacts of project implementation.

Northwest Information Center

On February 16, 2023, a records search was conducted at the NWIC located at Sonoma State University in Rohnert Park, California, for the project site and a 0.50-mile radius beyond the project boundaries. To identify any historic properties or resources, the current inventories of the National Register of Historic Places (NRHP), the CRHR, the California Historic Landmarks (CHL) list, the California Points of Historical Interest (CPHI) list, and the California Built Environment Resource Directory (BERD) for Alameda County were reviewed to determine the existence of previously documented local historical resources.

The results of the records search indicated that three cultural resources have been recorded within the 0.50-mile search radius surrounding the project site (Table 3.4.3-1). All the resources are historic-era in nature and consist of railroad grades and commercial buildings. None of these resources are located within the project site. In addition, 14 area-specific survey reports are on file with the NWIC for the project site and its 0.50-mile search radius; Two reports (S-017781 and S-030892) are immediately adjacent to the western project boundary and partially address the project site. One report (S-24986) intersects the limit of disturbance area along El Charro Road. However, the entire project site has not previously been surveyed for cultural resources (Table 3.4-1).

Table 3.4-1: Cultural Resources Within 0.5-mile Radius of the Project Site

Resource No.	Resource Description	Date Recorded
P-01-000193	CA-ALA-000475H Remillard Brick Yard: AH02 Foundations/ structure pads, AH07 Roads/ trails/railroad grades, AH11 Walls/ fences, AH16 Other	1986, 1987
P-01-001783	CA-ALA-000623H Southern Pacific Railroad: AH07 Roads/ trails/railroad grades, AH16 Other, HP11 Engineering structure, HP19 Bridge, HP39 Other	1990, 1994, 1996, 1997, 1998, 1999, 2001, 2002, 2003, 2006, 2008, 2009, 2010, 2015, 2017, 2022
P-01-002190	CA-ALA-000582H Western Pacific Railroad: AH07 Roads/ trails/ railroad grades, AH16 Religious building, HP11 Engineering structure, HP19, HP37, HP39 Other	1994, 1997, 1998, 1999, 2002, 2005, 2006, 2009, 2014
Source: Northwest Information Center (NWIC) Records Search. February 16, 2023.		

Table 3.4-2: Previous Investigations Within 0.5-mile Radius of the Project Site

Report No.	Report Title/Project Focus	Author	Date
S-001330	An Archaeological Investigation of the Sunol–Pleasanton–Livermore Railroad Consolidation Project, Alameda County, California	Peter M. Banks	1978
S-002224	An Archaeological Survey for the Proposed Shadow Cliffs Waterslide, Near Pleasanton, Alameda County, California	Steven Kuhn	1980
S-007084	Devor Property Archaeological Reconnaissance (letter report)	Miley Paul Holman	1985
S-008130	A Cultural Resources Assessment of Disposal Site for Embankment Construction Located on Stanley Blvd., Alameda County, California	Rebecca Loveland Anastasio and Stuart A. Guedon	1986
S-009087	Cultural Resources Evaluation for the Shadow Cliffs Regional Recreation Area, Alameda County, California	David Chavez & Associates	1987

Report No.	Report Title/Project Focus	Author	Date
S-009087a	Shadow Cliffs Regional Recreation Area Resource Analysis	Jones & Stokes Associates, Inc.	1987
S-017781	Archaeological Field Inspection and Archival Research for the Busch Property, Pleasanton, Alameda County, California (letter report)	Miley Paul Holman	1994
S-017993	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project	Brian Hatoff, Barb Voss, Sharon Waechter, Stephen Wee, and Vance Bente	1995
S-017993a	<i>Proposed Mojave Northward Expansion Project: Appendix A—Native American Consultation</i>	Woodward-Clyde Consultants	1995
S-017993b	<i>Proposed Mojave Northward Expansion Project: Appendix B—Looping Segments—Class 1</i>	Woodward-Clyde Consultants	1995
S-017993c	<i>Proposed Mojave Northward Expansion Project: Appendix C—Monitoring and Emergency Discovery Plan</i>	Woodward-Clyde Consultants	1995
S-017993d	<i>Proposed Mojave Northward Expansion Project: Appendix D—General Construction Information</i>	Woodward-Clyde Consultants	1995
S-017993e	<i>Proposed Mojave Northward Expansion Project: Appendix E—Archaeological Site Records</i>	Woodward-Clyde Consultants	1995
S-017993f	<i>Proposed Mojave Northward Expansion Project: Appendix F—Historic Features Evaluation Forms</i>	Woodward-Clyde Consultants	1995
S-017993g	<i>Proposed Mojave Northward Expansion Project: Appendix G—Railroad Crossing Evaluation Forms</i>	Woodward-Clyde Consultants	1995
S-017993h	<i>Proposed Mojave Northward Expansion Project: Appendix H—Crossing Diagrams and Plan View Maps</i>	Woodward-Clyde Consultants	1995
S-017993i	<i>Proposed Mojave Northward Expansion Project: Appendix I—Railroad Depot NRHP Nomination Forms and Related Records</i>	Woodward-Clyde Consultants	1995
S-017993j	<i>Proposed Mojave Northward Expansion Project: Appendix J—Looping Segment and Compressor Station Site Records</i>	Woodward-Clyde Consultants	1995
S-017993k	<i>Proposed Mojave Northward Expansion Project: Appendix K—Historic Site Records/Isolate Forms</i>	Woodward-Clyde Consultants	1995
S-017993l	<i>Proposed Mojave Northward Expansion Project: Appendix L—Photodocumentation</i>	Woodward-Clyde Consultants	1995
S-017993m	<i>Proposed Mojave Northward Expansion Project: Appendix M—Curricula Vitae of Key Preparers</i>	Woodward-Clyde Consultants	1995
S-019017	Historic Property Survey Report (HPSR) for the First Street at Arroyo del Valle Project, City of Pleasanton, Alameda County, California	William Self Associates	1996

Report No.	Report Title/Project Focus	Author	Date
<i>S-019017a</i>	<i>Negative Archaeological Survey Report, First Street Bridge Project, City of Pleasanton, Alameda County, California</i>	<i>William Self Associates</i>	<i>1996</i>
<i>S-019017b</i>	<i>Historic Architectural Survey Report, First Street Bridge Project, City of Pleasanton, Alameda County, California</i>	<i>Ward Hill</i>	<i>1996</i>
<i>S-019017c</i>	<i>FHWA970414A: Historic Property Survey Report, First Street at Arroyo Del Valle, Pleasanton, Alameda County</i>	<i>Cherilyn Widell</i>	<i>1997</i>
S-024986	Cultural Resources Assessment, PG&E Proposed Tri-Valley 2002 Electric Power Capacity Increase Project	Basin Research Associates, Inc.	2000
S-030892	New Tower ("NT") Submission Packet FCC Form 620, Busch Road, SF-16000A, 3333 Busch Road, Pleasanton, Alameda County.	Scott Billat	2005
S-031639	Collocation ("CO") Submission Packet, FCC Form 621, Boulder Street, SF-16000B	Lorna Billat	2006
S-033520	New Tower ("NT") Submission Packet, FCC Form 620, Boulder Street, SF-16000C	Lorna Billat	2007
S-036780	Cultural Resources Records Search and Site Visit Results for T-Mobile West Corporation, a Delaware Corporation Candidate BA12473 (Public Storage), 3470 Boulder Street, Pleasanton, Alameda County, California (letter report)	Wayne Bonner and Sarah Williams	2009
S-048957	Archaeological Monitoring Report for the Vintage Village Project (PL#3011-01)	Elena Reese	2016

Source: Northwest Information Center (NWIC) Records Search. February 16, 2023.
Reports listed in **Bold** are within the project site. Reports listed in *Italicized* text with a sequential lowercase letter are supplemental reports that are not included in the total count of recorded reports within the 0.5-mile search radius

Historic Maps and Aerial Photographs

A review of 20 historic aerial photographs from 1949 until 1981 depicts the project site and the surrounding area (limit of disturbance area and the off-site roadway and frontage improvements) as vacant and the use of the property was a mining quarry. Sometime between 1980 and 1981 the project site was excavated and in 1982 the project site was filled to contain two large bodies of water. From 1982 to 2009 the water was gradually removed, and artificial fill soil was added. From 2010 to 2018 the project site remained unchanged. As of the 2020 aerial photograph to the present day the project site is vacant land.

Native American Heritage Commission Record Search

On February 7, 2023, FCS sent a letter to the NAHC in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project site. A response was received on February 20, 2023, indicating that the Sacred Lands File search is negative for the presence of Native American

cultural resources in the immediate project area. The NAHC included a list of 15 tribal representatives available to provide additional information pertaining to TCRs. To ensure that all Native American knowledge and concerns over potential TCRs that may be affected by the proposed project are addressed, a letter containing project information and requesting any additional information was sent to each tribal representative on February 27, 2023. No responses have been received to date.

Cultural Resources Pedestrian Survey

On March 31, June 30, and July 27, 2023, FCS Director of Cultural Resources/Principal Investigator, Dr. Dana DePietro conducted a series of pedestrian surveys for unrecorded cultural resources within the proposed residential development area and adjacent improvement areas associated with the project. On March 31, 2023, Dr. DePietro surveyed the rectangular residential development area in its entirety, beginning in the southwest corner and moving north, using east–west transects spaced at 15-meter intervals whenever possible. The visibility of native soils was moderate, ranging from 30 to 40 percent across the site. Observed soils were largely composed of silty, medium gray/brown (Munsell 10YR 6/2) soil with low clay content, interspersed with small (3 to 7-centimeter) stones primarily composed of quartz and schist.

On June 30, 2023, Dr. DePietro returned to the project site in order to survey the proposed off-site improvement areas, which lie east of the residential project site. At that time, Dr. DePietro surveyed the sites for the proposed recycled water storage, sewer treatment plant, agricultural irrigation recycled water spray fields, and primary bioretention area for both Design Options A and B. Soil visibility in this area was poor due to vegetation and ground cover, ranging from 10 to 15 percent across the area. Observed soils were largely consistent with those previously observed within the residential development area.

On July 27, 2023, Dr. DePietro returned to the project site a third time, to survey the site for the proposed water storage and booster pump facility, which lies to the north of Cope Lake and east of Lake I of the Zone 7 Chain of Lakes. Visibility in this third area was better, ranging from 40 to 50 percent, however, much of the area has been highly disturbed by the demolition of a concrete industrial building, and vegetation obscured the eastern half of this area. Soils were consistent overall with those observed elsewhere in the project, however, the presence of imported gravels, concrete, and asphalt intermixed with native soils attests to the level of disturbance resulting from the building demolition.

Soils in sections of poor visibility were intermittently inspected using a hand trowel. Survey conditions were documented using digital photographs and field notes. During the survey, Dr. DePietro examined all areas of the exposed ground surface for prehistoric artifacts (e.g., fire-affected rock, milling tools, flaked stone tools, toolmaking debris, ceramics), soil discoloration and depressions that might indicate the presence of a cultural midden, faunal and human osteological remains, and features indicative of the former presence of structures or buildings (e.g., postholes, standing exterior walls, foundations) or historic debris (e.g., glass, metal, ceramics). Particular attention was paid to soils in proximity to the bioretention area, as it appears natural washes and

drainages may have been present in this area prior to the construction of large retention ponds to the north and northeast.

All areas of the project site were closely inspected for culturally modified soils or other indicators of potential historic or prehistoric resources. No potential historic resources, archaeological resources, or raw materials commonly used in the manufacture of tools (e.g., obsidian, Franciscan chert) were observed.

Buried Site Potential

In addition to the pedestrian survey, the potential for yet identified cultural resources in the vicinity was reviewed against geologic and topographic geographic information system data for the general area and information from other nearby projects. The proposed project was evaluated against a set of criteria identified by a geoarchaeological overview of the Central Valley that was prepared for the California Department of Transportation (Caltrans) Districts 6 and 9. This study mapped the “archaeological sensitivity,” or potential to support the presence of buried prehistoric archaeological deposits, throughout the Central Valley based on geology and environmental parameters including distance to water and landform slope. The methodology used in the study is applicable to other parts of California and concluded that sites consisting of flat, Holocene-era deposits in close proximity to water resources had a moderate to high probability of containing subsurface archaeological deposits when compared to earlier Pleistocene deposits situated on slopes or further away from drainages, lakes, and rivers.

The project site is situated on vacant undeveloped land. According to the geological map of the Graymer et al., the project site is situated on artificial fill and undivided Holocene-Pleistocene deposits. A Preliminary Geotechnical Report prepared by ENGEO Incorporated for the proposed project indicates that the project site was divided into a larger north pit and a smaller south pit (Busch Pit). The historical review within the document states that the northern pit was quarried to at 100 feet below ground surface (BGS), and the Busch Pit to at least 50 to 70 feet BGS. Both pits were filled using a historical stockpile that was located in the northern half of the project site. As part of the 2022 study, cone penetration tests were conducted to an approximate depth of 162.5 feet BGS, subsurface conditions consisted of existing fill across the project site and up to 162.5 feet BGS in the northern pit and up to 70 feet BGS in the Busch Pit. The existing fill is characterized as floodplain deposits. Applying the criteria set forth in Meyer et al., all Holocene-era deposits have the potential to contain archaeological deposits, which increases with the ease of the slope and proximity to water resources.

Additionally, the Geotechnical Feasibility Report for the Off-Site Infrastructure Area prepared by ENGEO Incorporated on February 12, 2024, divided the off-site improvement areas east of the project site into three different areas: the West Area, which includes land west of El Charro Road, the East Area, which includes lands east of El Charro Road and south of Cope Lake, and the Northeast Area, which includes lands east of El Charro Road and north of Cope Lake. Explorations within the West Area generally encountered existing fill consisting of medium stiff to stiff sandy clay with varying amounts of gravel up to approximately 100 feet BGS in the northern portion and up to approximately 92 feet BGS in the southern portion. Explorations within the East Area generally

encountered existing fill, consisting of very soft to stiff silty and sandy clay and very loose to loose silty and clayey sand up to approximately 119.5 feet BGS. Finally, explorations in the Northeast Area generally encountered fill, consisting of medium dense clayey gravel and stiff sandy clay, up to approximately 22 feet BGS.

The project site (west of El Charro Road) is situated on artificial fill and may have the potential to contain Holocene-Pleistocene deposits. It is also near a man-made water source, which is north and east of the project boundaries, which indicates a low buried site potential. However, the limit of disturbance areas (east of El Charro Road) has a moderate potential for unanticipated buried cultural resources to be impacted by project construction.

Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the NRHP, which contains an inventory of the nation's significant prehistoric and historic properties. Under Title 36 Code of Federal Regulations Part 60, a property is recommended for possible inclusion on the NRHP if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) amended the Antiquities Act of 1906 (16 United States Code [USC] 431–433) and set a broad policy that archaeological resources are important to the nation and should be protected and required special permits before the excavation or removal of archaeological resources from public or Indian lands. The purpose of ARPA was to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites that are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data that were obtained before October 31, 1979.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act (AIRFA) established federal policy to protect and preserve the inherent rights of freedom for Native groups to believe, express, and exercise their traditional religions. These rights include but are not limited to access to sites, use and possession of sacred objects, and freedom to worship through ceremonies and traditional rites.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State

CEQA Guidelines Section 15064.5(a)—CEQA Definition of Historical Resources

CEQA Guidelines Section 15064.5(a), in Title 14 of the California Code of Regulations, defines a “historical resource” as:

- (1) A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.
- (2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall 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.
- (3) 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 a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources.
- (4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

Therefore, under CEQA, even if a resource is not included on any local, State, or federal register or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource for the purposes of CEQA if there is substantial evidence supporting such a determination. A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR.

Archaeological and historical sites are protected pursuant to a wide variety of State policies, laws and regulations, as enumerated in the Public Resources Code Section 5024.1. Cultural resources are recognized as nonrenewable resources and receive additional protection under the Public Resources Code and CEQA.

Public Resources Code Section 5024.1 and CEQA Guidelines Section 15064.5(a)—Definition of a Historic Resource

Public Resources Code Section 5024.1 and CEQA Guidelines Section 15064.5(a), in Title 14 of the California Code of Regulations, define a “historical resource” as a resource that:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) 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.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

CEQA Guidelines Section 15064.5(a)(3)—California Register of Historical Resources Criteria

As defined by CEQA Guidelines, Section 15064.5(a)(3) (A-D), a resource shall be considered historically significant if the resource meets the criteria for listing on the CRHR. The CRHR and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model (see criteria described above under the description of the NHPA), since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that meets NRHP criteria is clearly significant. In addition, a resource that does not meet NRHP standards may still be considered historically significant at a local or State level.

CEQA Guidelines 15064.5(c)—Effects on Archaeological Resources

CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. CEQA Guidelines direct lead agencies to evaluate archaeological sites to determine whether they meet the criteria for listing in the CRHR. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the CRHR, potential adverse impacts to it must be considered. If an archaeological site is considered not to be a historical resource but meets the definition of a “unique archaeological resource” as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

CEQA Guidelines Section 15064.5(d)—Effects on Human Remains

- Native American human remains and associated burial items may be significant to descendant communities and/or may be scientifically important for their informational value. They may be significant to descendant communities for patrimonial, cultural, lineage, and religious reasons. Human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendant groups in ancestral burials is a matter of law for some groups, such as Native Americans (CEQA Guidelines § 15064.5(d); PRC § 5097.98). CEQA and other State laws and regulations regarding Native American human remains provide the following procedural requirements to assist in avoiding potential adverse effects on human remains within the contexts of their value to both descendant communities and the scientific community. When an initial study identifies the existence or probable likelihood that a project would affect Native American human remains, the lead agency is to contact and work with the appropriate Native American representatives identified through the NAHC to develop an agreement for the treatment and disposal of the human remains and any associated burial items (CEQA Guidelines § 15064.5(d); PRC § 5097.98).
- If human remains are accidentally discovered, the County Coroner must be contacted. If the County Coroner determines that the human remains are Native American, the Coroner must contact the NAHC within 24 hours. The NAHC must identify the Most Likely Descendant (MLD) to provide for the opportunity to make recommendations for the treatment and disposal of the human remains and associated burial items (CEQA Guidelines § 15064.5(e)).
- If the NAHC is unable to identify an MLD, the MLD fails to make recommendations within 24 hours of notification, or the project applicant rejects the recommendations of the MLD, the Native American human remains and associated burial items must be reburied in a location not subject to future disturbance on the property (CEQA Guidelines § 15064.5(e)).
- If potentially affected human remains or a burial site may have scientific significance, whether or not it has significance to Native Americans or other descendant communities, then under CEQA, the appropriate mitigation of effect may require the recovery of the scientific information of the remains/burial through identification, evaluation, data recovery, analysis, and interpretation (CEQA Guidelines § 15064.5(c)).

Health and Safety Code Section 7050.5

Section 7050.5 of the Health and Safety Code sets forth provisions related to the treatment of human remains. As the code states, “every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor” except under circumstances as provided in Section 5097.99 of the Public Resource Code. The regulations also provide guidelines for the treatment of human remains found in locations other than a dedicated cemetery including responsibilities of the Coroner.

Public Resources Code Section 5097.98

Section 5097.98 provides protocol for the discovery of human remains. It states that “whenever the commission receives notification of a discovery of Native American human remains from a County Coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify persons believed to be most likely descended from the deceased Native American.” It also sets forth provisions for descendants’ preferences for treatment of the human remains and what should be done if the commission is unable to identify a descendant.

California Public Resources Code Section 5097.91—Native American Heritage Commission

Section 5097.91 of the Public Resources Code established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.91 of the Public Resources Code, a State policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites or sacred shrines located on public property. Section 5097.98 of the Public Resources Code specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a County Coroner. Section 5097.5 defines the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands as a misdemeanor.

California Senate Bill 18—Protection of Tribal Cultural Places

SB 18 (California Government Code § 65352.3) incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American Tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB 18 requires public notice to be sent to tribes listed on the NAHC SB 18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that may be affected by the proposed adoption or amendment to a general or specific plan.

California Assembly Bill 52—Effects on Tribal Cultural Resources

California AB 52 was signed into law on September 25, 2014, and provides that any public or private “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.” TCRs include “[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the CRHR or included in a local register of historical resources.” Under prior law, TCRs were typically addressed under the umbrella of “cultural resources,” as discussed above. AB 52 formally added the category of “tribal cultural resources” to CEQA and extends the consultation and confidentiality requirements to all projects as provided for under CEQA, rather than just projects subject to SB 18 as previously discussed.

The parties must consult in good faith, and consultation is deemed concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect on a TCR (if such a significant effect exists); or (2) when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed upon during consultation must be recommended for inclusion in the environmental document. AB 52 also identifies mitigation measures that may be considered to avoid significant impacts if there is no agreement on appropriate mitigation. Recommended measures include:

- Preservation in place.
- Protecting the cultural character and integrity of the resource.
- Protecting the traditional use of the resource.
- Protecting the confidentiality of the resource.
- Permanent conservation easements with culturally appropriate management criteria.

California Public Resources Code Section 21074—Effects on Tribal Cultural Resources

AB 52 amended the CEQA statute to identify an additional category of resource to be considered under CEQA called “tribal cultural resources.” It added Public Resources Code Section 21074, which defines “tribal cultural resources” as follows:

- (a) “Tribal cultural resources” are either of the following:
 - (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the CRHR.
 - B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of 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.
- (b) 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.
- (c) 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).

Local

Alameda County

Chapter 17.62 Historic Preservation Ordinance

17.62.020 Purpose. The purpose of this chapter shall be to:

- A. Identify, protect, and encourage the preservation of significant architectural, historic, prehistoric and cultural structures, sites, resources and properties in the county;
- B. Ensure the preservation, protection, enhancement and perpetuation of historic structures, sites and other resources to the fullest extent feasible;
- C. Encourage, through public or private action, the maintenance or rehabilitation of historic structures, sites and other resources;
- D. Safeguard the county's historic resources, both public and private projects;
- E. Encourage development that sensitively incorporates the retention, preservation and reuse of historic structures, sites and other resources;
- F. Foster civic pride in the character and quality of the county's historic resources and in the accomplishments of its people through history;
- G. Provide a mechanism, through surveys, nominations and other available means, to compile, update and maintain a register of historic resources within the county;
- H. Protect and enhance the county's attraction to tourists and visitors;
- I. Provide for consistency with State and federal preservation standards, criteria and practices;
- J. Encourage new development that will be aesthetically compatible with historic resources;
- K. Make available incentive opportunities to preserve Alameda County's historic resources.

17.62.040 Cultural resource surveys

- A. The county will maintain a list of all surveys and will use the survey information to identify and protect potentially historic resources as outlined in this Ordinance. All surveys shall be prepared by or under supervision of an architectural historian satisfying the professional qualification standards for architectural historians specified in the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.
- B. Three Cultural Resource Surveys of portions of Alameda County were conducted prior to creation of this Ordinance:
 - 1. Preliminary Cultural Resources Survey, Ashland and Cherryland Districts, San Lorenzo, Alameda County (April 1998);
 - 2. Unincorporated San Lorenzo Historic Building Survey, Alameda County (November 2000); and
 - 3. Historical and Cultural Resource Survey, East Alameda County (June 2005).
- C. All properties evaluated in the above surveys, regardless of the conclusions as to their historic significance, will go into an Inventory of Potential Historic Resources. This Inventory shall also include the results of any future historic resource surveys, including historic resource evaluations done in conjunction with the completion of any Environmental Impact Reports (EIRs) or Negative Declarations prepared pursuant to CEQA in the county. The Planning Department

shall take appropriate steps to ensure that the Inventory is properly maintained and regularly updated. The Planning Department shall also take appropriate steps to maintain and regularly update a list or compilation of resources within the county that are on the California Register of Historical Resources or the National Register of Historic Places, and to make the list or compilation available for public review and use.

17.62.060 Criteria and requirements for placement on, and deletion from, the Alameda County Register

The criteria and requirements for placement on, or deletion from, the Alameda County Register as landmarks, historic preservation districts, contributing resources or structures of merit are as follows:

- A. A nominated resource shall be added to the Alameda County Register as a landmark if the Board of Supervisors finds, after holding the hearings required by this chapter, that all of the requirements set forth below are satisfied:
 1. The nominated resource meets one or more of the following criteria:
 - a. It is associated with events that have made a significant contribution to the broad patterns of the history of the county, the region, the State or the nation;
 - b. It is associated with the lives of persons significant in the county's past;
 - c. It embodies the distinctive characteristics of a type, period or method of construction;
 - d. It represents the work of an important creative individual or master;
 - e. It possesses high artistic values; or
 - f. It has yielded, or may be likely to yield, information important in the prehistory or history of the county, the region, the State or the nation.
 2. The nominated resource has integrity of location, design, setting, materials, workmanship, feeling and association. Integrity shall be judged with reference to the particular criterion or criteria specified in subparagraph (A)(1).
 3. The nominated resource has significance historically or architecturally, and its designation as a landmark is reasonable, appropriate and necessary to promote, protect and further the goals and purposes of this chapter.
 4. The nominated resource has been evaluated by a qualified historical resources consultant who meets one or more of the Secretary of the Interior's professional qualifications standards or who are certified by the Register of Professional Archaeologists, and the evaluator has submitted documents that provide evidence of the resources historical or architectural significance.
- B. A geographic area nominated as a historic preservation district shall be added to the Alameda County Register as a historic preservation district if the Board of Supervisors finds, after holding the hearings required by this chapter, that all of the requirements set forth below are satisfied:
 1. The area is a geographically definable area;

2. The area possesses either:
 - a. A significant concentration or continuity of buildings unified by a) past events; or b) aesthetically by plan or physical development; or
 - b. The area is associated with an event, person, or period significant or important to County history
 3. The designation of the geographic area as a historic preservation district is reasonable, appropriate and necessary to protect, promote and further the goals and purposes of this chapter and is not inconsistent with other goals and policies of the county.
 4. A historic preservation district shall have integrity of location, design, setting, materials, workmanship, feeling and association.
 5. The collective historic value of the buildings and structures in a historic preservation district taken together is greater than the historic value of each individual building or structure.
 6. The application is accompanied by a form bearing the signatures of at least fifty-one (51) percent of all property owners within the area of the proposed district.
 7. The board finds that the addition of the district to the register does not in any manner interfere, eliminate or otherwise obviate the identification, qualification, designation and preservation requirements of the creation of historic preservation districts pursuant to Chapter 17.20 of this title.
- C. A nominated resource shall be added to the Alameda County Register as a structure of merit if the Board of Supervisors finds, after holding the hearing(s) required by this chapter, that it satisfies one or more of the following criteria:
1. It represents in its location an established and familiar visual feature of the neighborhood, community or county; or
 2. It materially benefits the historic, architectural or aesthetic character of the neighborhood or area; or
 3. It is an example of a type of building that once was common but is now rare in its neighborhood, community or area; or
 4. It is connected with a business or use which was once common but is now rare; or
 5. It contributes to an understanding of the contextual significance of a neighborhood, community or area.
- D. A nominated resource shall be added to the Alameda County Register as a contributing resource if the Board of Supervisors finds, after holding the hearing(s) required by this chapter, that it satisfies one or more of the following criteria:
1. The nominated resource is within a historic district;
 2. The nominated resource either embodies the significant features and characteristics of the historic district or adds to the historical associations, historical architectural qualities or archaeological values identified for the historic district;

3. The nominated resource was present during the period of historical significance of the historic district and relates to the documented historical significance of the historic district;
4. The nominated resource either possesses historic integrity or is capable of yielding important information about the period of historical significance of the historic district; and
5. The nominated resource has important historic or architectural worth, and its designation as a contributing resource is reasonable, appropriate and necessary to protect, promote and further the goals and purposes of this chapter.

3.4.4 - Approach to Analysis

This evaluation focuses on whether implementation of the proposed project would have potentially significant impacts on historic resources, architectural resources, archaeological resources, human remains, or TCRs.

A project could have a significant impact on a historical resource if construction of the project would significantly impair a resource's eligibility for inclusion in the CRHR; thus, this information has been considered, as appropriate, as part of the methodology used in this evaluation. Analysis is based, in part, on information collected from record searches at the NWIC, additional archival research, pedestrian surveys, and information from the historic architectural assessment of existing properties more than 45 years in age (if any) located within the project site boundaries. If a project would leave an identified cultural resource no longer able to convey its significance, meaning that the resource would no longer be eligible for listing in the CRHR, then the proposed project's impact would be considered a significant adverse change. Pursuant to CEQA Guidelines Section 15126.4(b)(1), if a project adheres to the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, then the project's impact "shall generally be considered mitigated below a level of significance and thus is not significant."

A project may have an impact on an archaeological resource or human remains if construction of the project would physically damage or destroy archaeological data or human remains (including those interred outside of formal cemeteries). Analysis is based, in part, on information collected from record searches at the NWIC, the additional archival research, and pedestrian surveys.

Both direct and indirect effects of project implementation were considered for this analysis. Direct impacts are typically associated with construction and/or ground-disturbing activities, and have the potential to immediately alter, diminish, or destroy all or part of the character and quality of archaeological resources and/or historic architecture, human remains, or eligible TCRs. Indirect impacts are typically associated with post-project implementation conditions that have the potential to alter or diminish the historical setting of a cultural resource (generally historic architecture) by introducing visual intrusions on existing historical structures that are considered undesirable.

Thresholds of Significance

The lead agency utilizes the criteria in the CEQA Guidelines Appendix G Environmental Checklist to determine whether cultural resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5.
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- c) Disturb any human remains, including those interred outside of formal cemeteries.

Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Historic Resources

Impact CUL-1: **The proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.**

Impact Analysis

Historic resources in this context refer to the built environment, mainly buildings and structures more than 45 years in age that may be eligible for inclusion on the CRHR or NRHP. Records search results conducted at the NWIC identified three historic resources (P-01-000193, P-01-001783, and P-01-002190) located within the 0.5-mile records search radius. However, these resources are not located within the project site or the limit of disturbance areas, nor will they be adversely impacted by the proposed project. Additionally, no historic resources were encountered during the pedestrian field survey. The proposed project would not have an adverse impact on historic-era built environment resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Archaeological Resources

Impact CUL-2: **The proposed project could cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.**

Impact Analysis

Records search results from the NWIC did not identify any prehistoric archaeological resources located within the project site and limit of disturbance areas or within the 0.5-mile search radius.

Additionally, the Sacred Lands File search conducted by the NAHC were negative for TCRs within the project site. No archaeological resources were encountered during the pedestrian field survey; however, the project site and limit of disturbance areas are situated on undivided Holocene-Pleistocene deposits that have the potential to contain archaeological deposits and be encountered during project construction. Implementation of Mitigation Measure (MM) CUL-2a and MM CUL-2b would reduce potential impacts to archaeological resources that may be discovered during project construction.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

- MM CUL-2a** Prior to the initiation of construction activities, all construction personnel directly involved with project-related ground disturbance within the residential project site and off-site improvement areas, both west and east of El Charro Road, attend a “tailgate” Worker Environmental Awareness Program (WEAP) training for archaeological resources. The training should include visual aids, a discussion of applicable laws and statutes relating to archaeological resources, types of resources that may be found within the limit of disturbance areas, and procedures to be followed in the event such resources are encountered. The training should be conducted by an Archaeologist who meets the Secretary of the Interior’s Professional Qualification Standards for archaeology. FirstCarbon Solutions (FCS) recommends that a qualified Archaeologist who meets the Secretary of Interior’s Professional Qualification Standards for Archaeology be present to monitor during the clearing and grubbing phases of ground disturbance within the limit of disturbance areas east of El Charro Road to check for the inadvertent exposure of cultural materials. In the event exposed soils indicate cultural materials may be present, this may be followed by regular or periodic archaeological monitoring as determined by the Archaeologist, but full-time archaeological monitoring is not recommended at this time.
- MM CUL-2b** In the event that buried cultural resources are discovered during construction, operations shall stop within a 100-foot radius of the find and a qualified Archaeologist shall be consulted to determine whether the resource requires further study. The qualified Archaeologist shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines Section 15064.5. Potentially significant cultural resources consist of, but are not limited to, stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the Archaeological Monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency where they would be afforded long-term preservation to allow future scientific study.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Human Remains

Impact CUL-3: **The proposed project could disturb human remains, including those interred outside of formal cemeteries.**

Impact Analysis

While no formal cemeteries or areas containing human remains are known to be in the project vicinity, the possibility always exists that construction-related ground disturbance may uncover previously undiscovered human remains. In the unlikely event such a discovery is made, CEQA Guidelines Section 15064.5, Health and Safety Code Section 7050.5, and Public Resources Code Sections 5097.94 and Section 5097.98 must be followed. Implementation of MM CUL-3, which details inadvertent discovery procedures, would reduce potential impacts to previously undiscovered human remains to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-3 In the event of an accidental discovery or recognition of any human remains, Public Resource Code Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site where human remains are discovered and/or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine whether the remains are Native American and if an investigation of the cause of death is required. If the Coroner determines the remains to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC)

within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in Public Resources Code Section 5097.98, or

2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project area in a location not subject to further subsurface disturbance:
 - The NAHC is unable to identify a most likely descendant, or the most likely descendant failed to make a recommendation within 48 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Significance of Tribal Cultural Resource and Eligibility for California Register Listing

Impact CUL-4:	The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
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Impact Analysis

Records search results from the NWIC indicate that three historic resources are located within 0.5 mile of the project site and the limit of disturbance areas, and a review of the NAHC Sacred Lands File search was negative for recorded TCRs within the project site. A letter containing project information requesting any additional information regarding TCRs was sent to each tribal representative on February 27, 2023. No responses have been received to date. Should TCRs be discovered during ground disturbance activities, implementation of MM CUL-1, MM CUL-2, and MM CUL-3 would reduce potential impacts on TCRs to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM CUL-2a, MM CUL-2b, and MM CUL-3.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Significance of Tribal Cultural Resource and Eligibility as Determined by Lead Agency

Impact CUL-5: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Impact Analysis*Construction*

A letter was sent to the NAHC on February 7, 2023, in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project area. A response was received on February 20, 2023, indicating that the Sacred Lands File search produced a negative result for Native American cultural resources in the immediate project area. The NAHC included a list of 15 tribal representatives available to provide additional information pertaining to TCRs. FCS sent letters containing project information requesting any additional information regarding TCRs was sent to each tribal representative on February 27, 2023. No responses have been received to date. Tribal consultation pursuant to AB 52 has been initiated by the Lead Agency, who did not identify any tribes that had requested consultation.

While the Lead Agency has not identified any TCRs meeting the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, undiscovered TCRs may be encountered and adversely impacted during project construction. Implementation of MM CUL-2a, MM CUL-2b, and MM CUL-3 would reduce these potential impacts to a less than significant level.

Operation

Impacts related to a project's potential to cause a substantial adverse change in the significance of a State-listed or eligible TCR is limited to construction impacts. No respective operational impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM CUL-2a, MM CUL-2b, and MM CUL-3.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Cumulative Impacts

The cumulative analysis considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project. The geographic scope for the

cumulative analysis is described further below for each type of resource. This analysis evaluates whether the impacts of the proposed project, together with the impacts of other cumulative development, could result in a cumulatively significant impact related to historical, archaeological, and/or TCRs. This analysis then considers whether the incremental contribution of the impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for the proposed project's cumulative effects to rise to the level of significance.

Historic Resources

The relevant geographic scope for potential cumulative impacts on historic, built environment resources is the land within the City's municipal boundaries. This is because the City provides the smallest geographic boundary of potential significance when a historic property is evaluated at the local, State, or federal level. The cumulative setting includes existing agricultural and industrial uses. Three historic resources were identified in the records search, however these resources are not located within the project site or the limit of disturbance areas. The literature review and the pedestrian survey were also negative for historic resources. With respect to the cumulative projects, these cumulative projects have the potential to result in impacts to historic resources. However, potential cumulative impacts would be mitigated at an individual project level by adherence to applicable current State and federal laws and regulations, as well as other City and County laws, regulations, and mitigations, such as adherence to standard conditions of approval that require monitoring of construction sites in proximity to known resources (similar to MM CUL-2a). The combination of these efforts would reduce potential cumulative impacts related to historical resources to a less than significant level. Moreover, the proposed project would not have a considerably cumulative contribution to this already less than significant impact because there are no known historic resources that would be adversely impacted by the proposed project.

Based on the foregoing, the proposed project would not have a significant cumulative impact on any historic resources.

Archaeological Resources

The geographic scope of the cumulative archaeological resources analysis is the project vicinity. This is because archaeological resource impacts tend to be localized because the integrity of any given resource depends on what occurs in the immediate vicinity around that resource, such as disruption of soils, and the immediate vicinity provides the smallest geographic unit within which significant cumulative impacts spanning multiple projects may occur. Therefore, in addition to the project site itself, the area near the project site would be the area most affected by project activities (generally within a 0.5-mile radius). For the purposes of this analysis, the geographic scope is defined as the 0.5-mile NWIC records search radius. As noted above, there are 14 area-specific survey reports are on file with the NWIC for the project site and its 0.50-mile search radius; two reports (S-017781 and S-030892) are immediately adjacent to the western project boundary and partially address the project site. One report (S-24986) intersects the limit of disturbance area along El Charro Road (Table 2 in the Phase I CRA [Appendix D]). However, the entire project site has not previously been surveyed for cultural resources. There are no known unique archaeological resources within this geographic scope; however, there is always the possibility of previously unknown archaeological resources that could be damaged or destroyed during subsurface construction activities associated

with cumulative projects. Nevertheless, any such potential cumulative impacts would be mitigated at an individual project level by adherence to applicable local, State and federal laws and regulations, as well as City and County laws, regulations, and mitigations as discussed in Section 3.4.4, such as adherence to standard conditions of approval that require monitoring of construction sites in proximity to known resources. Accordingly, cumulative impacts would be less than significant.

For the reasons noted above, the proposed project would not have a direct impact on any known archaeological resources, and potentially significant impacts to any previously unknown resources that could be damaged or destroyed during project construction would be mitigated to less than significant by adherence to applicable laws and regulations and compliance with the identified mitigation measures (MM CUL-2a through MM CUL-3), which require WEAP training for construction staff, inadvertent discovery procedures, and monitoring during the clearing and grubbing phases of ground disturbance in the limit of disturbance areas east of El Charro Road. Therefore, the proposed project would not have a cumulatively considerable contribution on this already less than significant cumulative archaeological resources impact.

Based on the foregoing, the proposed project would not have a significant cumulative impact on any archaeological resources.

Tribal Cultural Resources

Significant impacts to TCRs may range from impacts to a resource meeting the CEQA definition of a significant historic resource to impacts to resources identified through consultation between a lead agency and Native American tribe. As such, the scope and range of potential cumulative impacts to TCRs are highly contingent on the nature of the resource and status of consultation. In the absence of any known TCRs that would be significantly impacted by the proposed project, the appropriate geographic scope for assessing potential cumulative impacts to TCRs is the project vicinity. This is because any undiscovered TCRs would likely be archaeological in nature, and the immediate project vicinity provides the smallest geographic unit within which significant cumulative impacts spanning multiple projects may occur. Thus, for the purposes of this analysis, the immediate vicinity is defined as the 0.5-mile NWIC records search radius.

As discussed above, the geographic scope includes existing agricultural and industrial uses. As noted above, there are 14 area-specific survey reports are on file with the NWIC for the project site and its 0.50-mile search radius; Two reports (S-017781 and S-030892) are immediately adjacent to the western project boundary and partially address the project site. One report (S-24986) intersects the limit of disturbance area along El Charro Road (Table 2 in the Phase I CRA [Appendix D]). There are no known TCRs or other archaeological resources within this geographic scope; however, there is always the possibility of previously unknown resources that could be damaged or destroyed during subsurface construction activities associated with cumulative projects. Nevertheless, any such potential cumulative impacts would be required to be mitigated at an individual project level through compliance with applicable federal, State, and local laws and regulations governing cultural resources, such as adherence to standard conditions of approval that require monitoring of construction sites in proximity to known resources. Therefore, cumulative impacts would be less than significant.

As explained above, there are no known TCRs that would be impacted by the proposed project. Although subsurface construction activities associated with the proposed project have the potential to encounter undiscovered TCRs and other archaeological resources, the proposed project would be required to mitigate for impacts through compliance with applicable federal, State, and local laws and regulations governing cultural resources. Additionally, the implementation of mitigation measures MM CUL-2a, MM CUL-2b, and MM CUL-3, which require WEAP training for construction staff, inadvertent discovery procedures, and monitoring during the clearing and grubbing phases of ground disturbance in the limit of disturbance areas east of El Charro Road, would ensure that any undiscovered TCRs are not substantially adversely affected by project-related construction activities. Therefore, the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impact.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM CUL-2a, MM CUL-2b, and MM CUL-3.

Level of Cumulative Significance After Mitigation

Less than significant impact with mitigation incorporated.

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3.5 - Energy

3.5.1 - Introduction

This section describes the existing energy setting in the project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to energy that could result from the implementation of the proposed project. Information in this section is based on project-specific energy calculation outputs included in Appendix B. The following comments were received during the Environmental Impact Report (EIR) scoping period related to energy.

- The Draft EIR should consider how the project will contribute to or impact California’s transit to a circular economy, minimizing waste generation and promoting resource efficiency.
- The Draft EIR should consider how the project aligns with California’s long-term sustainability goals and commitments, such as reducing transitioning to renewable energy.

3.5.2 - Existing Setting

Energy Basics

Energy is generally transmitted either in the form of electricity, measured in kilowatts (kW)¹ or megawatts (MW)² or natural gas measured in British thermal units (BTU) or cubic feet.³ Fuel, such as gasoline or diesel, is measured in gallons or liters.

Electricity

Electricity is used primarily for lighting, appliances, and other uses.

Natural Gas

Natural gas is used primarily for heating, water heating, and cooking purposes and is typically associated with commercial and residential uses.

Fuel

Fuel is used primarily for powering off-road equipment, trucks, and passenger vehicles. The typical fuel types used are diesel and gasoline.

Electricity Generation, Distribution, and Use

State of California

According to the California Energy Commission (CEC), in 2022, the State of California generated approximately 203,257 gigawatt-hours (GWh) of electricity.⁴ Approximately 47.46 percent of this

¹ 1 kW = 1,000 watts; A watt is a derived unit of power that measure rate of energy conversion. 1 watt is equivalent to work being done at a rate of 1 joule of energy per second. In electrical terms, 1 watt is the power dissipated by a current of 1 ampere flowing across a resistance of 1 volt.

² 1 MW = 1 million watts

³ A unit for quantity of heat that equals 100,000 British thermal units. A British thermal unit is the quantity of heat required to raise the temperature of 1 pound of liquid water 1 degree Fahrenheit at a constant pressure of 1 atmosphere.

⁴ California Energy Commission (CEC). 2022 Total System Electric Generation. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2022-total-system-electric-generation>. Accessed December 18, 2023.

energy generation was sourced from natural gas, 32.25 percent from renewable sources (i.e., solar, wind, and geothermal), and 7.19 percent from large hydroelectric sources, and the remaining 13.1 percent was sourced from coal, nuclear, oil, and other nonrenewable sources. Additionally, California imported 83,962 GWh of electricity from other states in 2020.

According to the United States Energy Information Administration (EIA),⁵ in 2021, California ranked fourth in electricity production, fourth in the nation in conventional hydroelectric generation, and first as a producer of electricity from solar, geothermal, and biomass resources. California leads the nation in solar thermal electricity capacity and generation.

Electricity and natural gas are distributed through the various electric load-serving entities (LSEs) in California. These entities include investor-owned utilities (IOUs), publicly owned LSEs, rural electric cooperatives, community choice aggregators, and electric service providers.⁶

Alameda County

Pacific Gas and Electric Company (PG&E) provides electricity to Alameda County. In 2022, approximately 3,195 GWh of electricity was consumed by residential users while approximately 7,200 GWh of consumption was from all other nonresidential users in Alameda County.⁷

Project Site

The project site is currently vacant with no existing structures on-site. Therefore, there is no existing electricity consumption from the project site.

Natural Gas Generation, Distribution, and Use

State of California

Natural gas as an energy resource has several applications but is most commonly associated with cooking appliance use, electricity generation, and space and water heating. According to the CEC, in 2012 total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (BCF/year), up from 2,196 BCF/year in 2010.⁸ Demand in all sectors except electric power generation remained relatively flat for the last decade, due in large part to energy efficiency measures, but demand for power generation rose about 30 percent between 2011 and 2012. In 2021, it was estimated that California consumed 2,172.8 trillion BTU of natural gas.⁹

⁵ United States Energy Information Administration (EIA). 2022. California State Profile and Energy Estimates. Website: <https://www.eia.gov/state/?sid=CA>. Accessed December 18, 2023.

⁶ California Energy Commission (CEC). 2022. Electric Load-Serving Entities (LSEs) in California. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-load-serving-entities-lses>. Accessed December 18, 2023.

⁷ California Energy Commission (CEC). 2021. Electricity Consumption by County. Website: <http://www.ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed December 18, 2023 and February 21, 2024.

⁸ California Energy Commission (CEC). 2021. Supply and Demand of Natural Gas in California. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california>. Accessed December 18, 2023.

⁹ United States Energy Information Administration (EIA). 2023. California Energy Consumption Estimates. Website: <https://www.eia.gov/state/print.php?sid=CA>. Accessed December 18, 2023.

Natural gas-fired generation has become the dominant source of electricity in California, as it currently accounts for approximately 45 percent of electricity consumption.¹⁰ Because natural gas is a dispatchable resource that provides load when the availability of hydroelectric power generation and/or other sources decrease, use varies greatly from year to year. The availability of hydroelectric resources, the emergence of renewable resources for electricity generation, and overall consumer demand are the variables that shape natural gas use in electric generation.

Alameda County

Alameda County (County) consumes fossil fuels, natural gas, and gasoline for construction, lighting, heating, and cooling of residences and transportation of people within, to, and from the County.

Project Site

As stated previously, the project site is currently vacant with no existing structures on-site. There is currently no electricity use associated with the project site.

Fuel Use

State of California

California is one of the top producers of petroleum in the nation, with drilling operations occurring throughout the State. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay Area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay Area. Crude oil production in California and Alaska is in decline. According to the EIA, California's field production of crude oil has steadily declined since the mid-1980s, totaling approximately 4,103 million barrels in 2022.¹¹ At the same time, California refineries have become increasingly dependent on foreign imports.¹² Foreign suppliers provide approximately half of the crude oil refined in California.¹³

According to the EIA, transportation accounted for nearly 41 percent of California's total energy demand, amounting to approximately 2,355.5 trillion BTU in 2020 and 2,784 trillion BTU in 2021.¹⁴ California's transportation sector, including rail and aviation, consumed roughly 524 million barrels of petroleum fuels in 2020 and 2,731 million barrels in 2021.¹⁵ The CEC produces the California Annual Retail Fuel Outlet Report, which is a compilation of gasoline and diesel fuel sales data from across the State available at the county level. According to the CEC, California's 2022 fuel sales totaled

¹⁰ California Energy Commission (CEC). 2021. Supply and Demand of Natural Gas in California. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california>. Accessed December 18, 2023.

¹¹ California Energy Commission (CEC). California Field Production of Crude Oil. Website: <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPCA2&f=M>. Accessed December 18, 2023.

¹² California Energy Commission (CEC). 2023. Oil Supply Sources to California Refineries. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/oil-supply-sources-california-refineries>. Accessed December 18, 2023.

¹³ California Energy Commission (CEC). 2023. Foreign Sources of Crude Oil Imports to California 2021. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/foreign-sources-crude-oil-imports>. Accessed December 18, 2023.

¹⁴ United States Energy Information Administration (EIA). 2021. Profile Overview. Website: <https://www.eia.gov/state/?sid=CA#tabs-2>. Accessed December 18, 2023.

¹⁵ United States Energy Information Administration (EIA). 2021. Total Petroleum Consumption Estimates, 2022. Website: https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_use_pa.pdf. Accessed December 18, 2023.

13,640 million gallons of gasoline and 1,883 million gallons of diesel. Alameda County's 2022 fuel sales totaled 473 million gallons of gasoline and 57 million gallons of diesel.¹⁶

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. The use of these fuels is encouraged through various Statewide regulations and plans, such as the Low Carbon Fuel Standard (LCFS) and Senate Bill (SB) 32. Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle, with transportation fuels including hydrogen, biodiesel, and electricity. Currently, 57 public hydrogen refueling stations exist in California; five of which are in the county,¹⁷ and 36 public biodiesel refueling stations are in California, two of which are in the County.¹⁸

Electric Vehicles

Electricity can be used to power electric and plug-in hybrid electric vehicles (EVs) directly from the power grid. Electricity used to power vehicles is generally provided by the electricity grid and stored in the vehicle's batteries. Fuel cells are being explored to use electricity generated onboard the vehicle to power electric motors. Currently, California has 13,836 EV charging stations, including all charger types, and 35,662 EV supply equipment (EVSE) ports.¹⁹ Currently, 115 EV charging stations are located within the boundaries of the County, with 15 stations located within a mile of the project site.

3.5.3 - Regulatory Framework

Federal

Energy Independence and Security Act

The Energy Policy Act of 2005 created the Renewable Fuel Standard Program. The Energy Independence and Security Act of 2007 expanded this program by:

- Expanding the Renewable Fuel Standard Program to include diesel in addition to gasoline.
- Increasing the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- Establishing new categories of renewable fuel and setting separate volume requirements for each one.
- Requiring the Environmental Protection Agency (EPA) to apply lifecycle greenhouse gas (GHG) performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

¹⁶ California Energy Commission (CEC). 2023. California Retail Fuel Outlet Annual Report. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>. Accessed December 18, 2023.

¹⁷ United States Department of Energy. 2023. Alternative Fuels Data Center. Website: <https://afdc.energy.gov/stations/#/analyze?country=US®ion=US-CA&fuel=BD>. Accessed December 18, 2023.

¹⁸ Ibid.

¹⁹ Ibid.

This expanded Renewable Fuel Standard Program lays the foundation for achieving substantial reductions of GHG emissions from the use of renewable fuels, reducing the use of imported petroleum, and encouraging the development and expansion of the nation’s renewable fuels sector.

Signed on December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) aims to:

- Move the United States toward greater energy independence and security.
- Increase the production of clean renewable fuels.
- Protect consumers.
- Increase the efficiency of products, buildings, and vehicles.
- Promote research on and deploy GHG capture and storage options.
- Improve the energy performance of the federal government.
- Increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy.

EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423 and introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard Program, and the appliance/lighting efficiency standards.

The EPA is committed to developing, implementing, and revising both regulations and voluntary programs under the following subtitles in EISA, among others:

- Increased Corporate Average Fuel Economy Standards
- Federal Vehicle Fleets
- Renewable Fuel Standard
- Biofuels Infrastructure
- Carbon Capture and Sequestration²⁰

EPA and National Highway Traffic Safety Administration Light-duty Vehicle GHG Emission Standards and Corporate Average Fuel Economy Standards Final Rule

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, President Barack Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide

²⁰ United States Environment Protection Agency (EPA). Summary of the Energy Independence and Security Act. Website: <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>. Accessed March 7, 2024.

(CO₂) per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO₂ level solely through fuel economy improvements. Together, these standards would cut CO₂ emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016).

The EPA and the NHTSA issued final rules on a second phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012.²¹ The standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles. The final standards are projected to result in an average industry fleet-wide level of 163 grams/mile of CO₂ in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and NHTSA issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20 percent reduction in CO₂ emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles, and a 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO₂ emissions from the 2014 to 2018 model years.

The State of California has received a waiver from the EPA to have separate, stricter Corporate Average Fuel Economy Standards. Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the incidental reduction of GHG emissions. In order to manage the State's energy needs and promote energy efficiency, Assembly Bill (AB) 1575 created the CEC in 1975.

Executive Order N-79-20: Transition to 100 Percent ZEV

Executive Order N-79-20, issued by Governor Newsom in 2020, calls for elimination of new internal combustion passenger vehicles by 2035. It also directs the California Air Resources Board (ARB) to pursue a goal of 100 percent medium- and heavy-duty vehicles in the State to be zero-emissions by 2045. This establishes a target for the transportation sector that helps put the State on a path to carbon neutrality by 2045.

California Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation

²¹ United States Environmental Protection Agency (EPA). 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks.

waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.²² The standards applied to 2009 through 2016 model year vehicles. After adopting these initial GHG standards for passenger vehicles, ARB adopted continuing standards for future model years.

The second phase of the implementation for the Pavley Bill was incorporated into amendments to the Low Emission Vehicle (LEV) Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation aims to reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules reduce pollutants from gasoline and diesel-powered cars and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid EVs, and hydrogen fuel cell cars. The regulations also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.²³

California Code of Regulations Title 13: Motor Vehicles

California Code of Regulations, Title 13: Division 3, Chapter 10, Article 1, Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling seeks to reduce public exposure to diesel particulate matter and other air contaminants by establishing idling restrictions, emission standards, and other requirements for heavy-duty diesel engines and alternative idle reduction technologies to limit the idling of diesel-fueled commercial motor vehicles. Any person that owns, operates, or causes to operate any diesel-fueled commercial motor vehicle must not allow a vehicle to idle for more than 5 consecutive minutes at any location or operate a diesel-fueled auxiliary power system for greater than 5 minutes at any location when within 100 feet of a restricted area.

California Code of Regulations, Title 13: Division 3, Chapter 9, Article 4.8, Section 2449: General Requirements for In-use Off-road Diesel-fueled Fleets

This measure regulates oxides of nitrogen (NO_x), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. This measure also requires each fleet to meet fleet average requirements or demonstrate that it has met “best available control technology” requirements. Additionally, this measure requires medium and large fleets to have a written idling policy that is made available to operators of the vehicles informing them that idling is limited to 5 consecutive minutes or less.

California Senate Bill 1078: Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed Senate Bill (SB) 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor

²² California Air Resources Board (ARB). 2013. Clean Car Standards—Pavley, Assembly Bill 1493. Website: <https://ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley>. Accessed December 18, 2023.

²³ California Air Resources Board (ARB). 2011. Status of Scoping Plan Recommended Measures.

Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's LSEs to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010, by Resolution 10-23.

California SB 350: Clean Energy and Pollution Reduction Act

In 2015, the State legislature approved and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the Renewables Portfolio Standard (RPS), higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024 and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.²⁴

California Code of Regulations Title 24

Part 6 (Energy Efficiency Standards for Residential and Nonresidential Buildings)

California Code of Regulations Title 24 Part 6 (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020. The 2022 Building Energy Efficiency Standards became effective on January 1, 2023.²⁵

Part 11 (California Green Building Standards Code)

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2022 California Green Building Code Standards that became effective January 1, 2023.²⁶ Local jurisdictions are permitted to adopt more stringent requirements as State law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition

²⁴ California Legislative Information (California Leginfo). 2015. Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015. Website: https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed December 18, 2023.

²⁵ California Energy Commission (CEC). 2023. Building Energy Efficiency Standards. Website: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed December 18, 2023.

²⁶ Ibid.

ordinances and defers to them as the ruling guidance provided they include a minimum 50 percent diversion requirement. The Code also provides exemptions for areas not served by construction and demolition recycling infrastructure. California Building Standards Code (CBC) provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

California Public Utilities Code

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

Local

Alameda County

The Alameda County Community Climate Action Plan (CAP),²⁷ adopted in 2014, has identified specific goals, objectives, and policies intended to improve community-wide energy efficiency and renewable energy use. The County's CAP also identifies the objectives related to GHG emissions and overall energy consumption. Goals and objectives identified in the County's CAP are separated into climate action areas related to Greenhouse Gas Reduction Potential, Part 2 Infrastructure, Transportation, Land Use Building Energy, Water Use, Waste and Green Infrastructure. The CAP includes the following measures applicable to the project:

- Measure E-8** Provide incentives for buildings that exceed the California Title-24 standards for energy efficiency by 30 percent (Tier 2).
- Measure E-10** Require new construction to use building materials containing recycled content.
- Measure E-12** Require all new multi-unit buildings and major renovations to existing multi-unit buildings to be "submetered" in order to enable each individual unit to monitor energy and water consumption.
- Measure WT-1** Encourage residents and businesses to conserve water in existing buildings and landscapes.
- Measure WT-3** Adopt an ordinance that allows the installation and use of greywater (recycled) systems for subsurface irrigation.
- Measure WT-4** Work with EBMUD and Zone 7 to redesign water bill format to encourage water conservation in residential and commercial users.
- Measure G-1** Expand the urban forest (e.g., street trees and trees on private lots) in order to sequester carbon and reduce building energy consumption.

²⁷ Alameda County. 2014. Alameda County Community Climate Action Plan. February. Website: https://www.acgov.org/cda/planning/generalplans/documents/110603_Alameda_CCAP_Final.pdf. Accessed December 19, 2023.

It should be noted that the County's CAP includes several other energy conservation measures beyond those listed above; however, the additional measures are intended to be implemented by the County rather than by an individual development project.

Alameda County General Plan

The General Plan's goals, objectives, and policies guide development decisions that are essential for responsive government.²⁸ The following policies are relevant to the proposed project and are aimed to reduce energy impacts.

CC-14 Energy Efficiency and Conservation

Promote efficient use of energy and conservation of available resources in the design, construction, maintenance, and operation of public and private facilities, infrastructure, and equipment.

Actions

- a) **Weatherization and Energy Efficient Building Renovations.** Promote investments in building energy efficiency through programs and the streamlining of permitting requirements for energy efficient building renovations such as weatherization while retaining requirements for new windows to visually match the original windows.
- b) **Public Facilities.** Incorporate renewable energy, electrification, and energy efficiency into public facility capital improvements.
- c) **Low Carbon Materials.** Require or promote the use of low carbon building materials where available.
- d) **Energy Audits.** Consider requirements for energy audits or energy upgrades at major renovations or time of sale.
- e) **Incentives.** Incent the use of the Living Community Challenge, LEED® for Neighborhood Development, or similar third-party certification system to certify climate friendly construction.
- f) **Financing.** Identify and implement inclusive financing mechanisms that encourage the use of clean electricity for appliances, HVAC, and water heating, in single-family, multi-family, and commercial buildings.
- g) **Solar Panels.** Encourage installation of solar panels and energy storage equipment in existing and new development and on public property such as the former Doolittle Landfill.
- h) **Low Carbon Materials.** Seek low carbon alternatives to conventional construction materials.
- i) **Landscapes.** Continually update landscape ordinances and guidelines to reduce energy use and GHG emissions from landscape installation, renovation, and maintenance.

LU-16 Climate-Friendly, Transit-Oriented Mixed-Use Development

Permit higher-density, multi-family, and mixed-use development on sites within walking distance of commercial and transit-rich areas to reduce automobile dependence, automobile congestion,

²⁸ Alameda County. 2023. Alameda General Plan 2040, Amended June 7, 2022. Website: https://irp.cdn-website.com/f1731050/files/uploaded/AGP_Book_June2022_Amend-1.pdf. Accessed: December 18, 2023.

greenhouse gas emissions, and energy use; provide for affordable housing; make efficient use of land; and support climate friendly modes of transportation, such as walking, bicycling, and transit use.

Actions

- a) **Transit-oriented Zoning.** To support additional ferry service, bus service, and future heavy rail service in Alameda, amend the zoning code to allow for higher-density, mixed-use, multi-family housing in transit-rich locations.
- b) **Mixed-use Shopping Centers.** Amend the zoning code to facilitate the redevelopment and reinvestment in Alameda’s single-use retail shopping centers and large open parking lots with higher-density mixed-use development with ground floor commercial, service, and office uses, and upper floor multi-family housing.
- c) **Incentives.** Utilize strategic infrastructure investments, public lands, and public/private partnerships to incentivize and support mixed-use, transit-oriented development in transit-rich locations.
- d) **Transportation Demand Management Programs.** Require new developments to include transportation services and facilities, such as bicycle parking facilities, to support the City’s mode shift and climate goals.
- e) **Parking Requirements.** Amend the Municipal Code to replace minimum car parking requirements with maximum parking requirements to disincentivize automobile ownership and reduce construction and land costs to help make housing more affordable. Require a significant proportion of dedicated spaces and infrastructure to support “Clean Air Vehicles” like EVs, carpooling vehicles, and hybrids.

Housing Element (2015-2023)

Like other counties in the Bay Area, Alameda County is required by State law to update its General Plan Housing Element to plan for the construction of new homes at all income levels to be built in Alameda County between 2015 and 2023. The Alameda County Housing Element 2015–2023 serves as a policy guide to meet housing needs of the unincorporated areas of Alameda County.^{29,30}

Chapter 5 of this document addresses energy conservation opportunities for new housing developments including:

- Improvements to bicycle and pedestrian ways, as well as requirements for the installation of bicycle racks, special parking restrictions, and encouraging the use of public transit.
- Increased use of alternative energy, including requiring solar photovoltaic cells as conditions of approval for certain private projects. Weatherproofing and identifying ways to make residential units more energy efficient and encouraging new private development projects to incorporate alternative energy.

²⁹ Alameda County. 2015. Housing Element. Alameda County 2015-2023. Website: <https://www.acgov.org/cda/planning/generalplans/documents/CompleteHousingElementBOSAdopted050515.pdf>. Accessed December 19, 2023.

³⁰ The 2023–2031 Housing Element was being drafted at the time of this document preparation.

- Implementation of water conservation programs, such as the Water Efficient Landscape Ordinance (WELO) and the minimization of turf except for sports fields and other uses that require turf.
- Implementation of measures related to the reduction of waste and enhanced recycling.
- Implementation of Title 24 Energy Efficiency Standards.
- Home Investment Partnerships Program (HOME) and Community Development Block Grant (CDBG) funded residential rehabilitation and development programs that encourage the use of energy conservation features through the funding of weatherization improvements and installation of energy efficient systems.
- Implementation of Green Building Ordinances.

3.5.4 - Methodology

For the purposes of this Draft EIR, the approach to analysis for energy use is based on the 2019 California Environmental Quality Act (CEQA) Guidelines Appendix F (Energy Conservation). CEQA Guidelines Appendix F is focused on energy conservation through the efficient use of energy resources. Estimates of energy consumption associated with the proposed project are based, in part, on information provided by the California Emissions Estimator Model (CalEEMod) output included in this Draft Program EIR as Appendix B. CalEEMod contains energy intensity rates for the various land uses selected (see Section 3.7, Greenhouse Gas Emissions, for detailed information on how energy estimates are determined).

Furthermore, the proposed project is assessed for whether the project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency. To achieve this, the proposed project is assessed for its consistency with State goals and plans related to energy efficiency and renewable energy.

3.5.5 - Thresholds of Significance

The lead agency utilizes the criteria in the CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts related to energy are significant environmental effects. Would the project:

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

3.5.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Energy Use

Impact ENER-1: **The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

Impact Analysis

Construction Impacts

The anticipated construction schedule is assumed to begin in March 2025 and conclude in August 2027. If the construction schedule moves to later years, total energy consumption resulting from project construction would likely decrease as a result of improvements in technology and more stringent regulatory requirements as older, less efficient equipment is replaced by newer and cleaner equipment. Construction of the proposed project would require site preparation, grading, building construction, architectural coating, and paving activities. Project construction would require energy for the manufacture and transportation of building materials, preparation of the site (e.g., site clearing and grading), and the actual construction of the proposed residences and structures. Petroleum-based fuels, such as diesel fuels and gasoline, would be the primary sources of energy for these tasks. As shown in Section 2, Project Description, the proposed project includes two design options, Design Option A and Design Option B, which share the same improvements (e.g., water storage tank, water treatment plant, bioretention areas); however, they are placed at different locations throughout the east area of the Main Site. These design options are shown on Exhibit 2-6a and Exhibit 2-6b, respectively. Construction activities would be similar under both design options; therefore, the analysis presented below would remain accurate under either scenario.

The types of on-site equipment used during the construction of the proposed project could include gasoline- and diesel-powered construction and transportation equipment, including trucks, bulldozers, graders, front-end loaders, forklifts, and cranes. Construction equipment is estimated to consume a total of 208,890 gallons of diesel fuel over the entire construction duration (Appendix B) for main site construction.

Fuel use associated with construction vehicle trips generated by the proposed project was also estimated including construction worker trips, haul truck trips for material transport, vendor trips for construction material deliveries, and on-site truck trips. Fuel use from these vehicles traveling to the project site was based on (1) the projected number of trips the proposed project would generate during construction, (2) average trip distances by trip type, and (3) fuel efficiencies estimated in the ARB Emissions Factors model (EMFAC) mobile source emission model. Appendix B provides the specific parameters used to estimate fuel usage. In total, the proposed project is estimated to generate 2,403,059 Vehicle Miles Traveled (VMT) and a combined 153,833 gallons of gasoline and diesel for vehicle travel during construction.

Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained, which are required as a standard condition, would result in fuel savings. California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB.

Other equipment could include construction lighting, field services (office trailers), and electrically driven equipment such as pumps and other tools. As described in Section 3.12, Noise, Section 6.60.070 of the Alameda Municipal Code limits construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure outside of the County’s standard permissible hours for construction (7:00 a.m. to 7:00 p.m. on any day except Saturday or Sunday and 8:00 a.m. to 5:00 p.m. on Saturday or Sunday). As on-site construction activities would be restricted to these hours, it is anticipated that the use of construction lighting would not be wasteful. Single-wide mobile office trailers, commonly used in construction staging areas, generally range in size from 160 square feet to 720 square feet. A typical 720-square-foot office trailer would consume approximately 44,300 kilowatt-hours (kWh) during the approximate 2.5-year construction period (Appendix B).

The overall construction schedule and process are already designed to be efficient to avoid excess monetary costs. This is because equipment and fuel are not typically used wastefully due to the added expense associated with renting, maintaining, and fueling equipment. Therefore, the opportunities for future efficiency gains during construction are limited. For the reasons discussed above, it is anticipated that the construction activities associated with the proposed project would not result in wasteful, inefficient, and unnecessary consumption of energy. Construction-related energy impacts would be less than significant.

Operational Impacts

Electricity and Natural Gas

The operational phase of the project would consume energy as part of building operations and transportation activities. Building operations for the project would involve energy consumption for multiple purposes, including, but not limited to, building heating and cooling, refrigeration, lighting, and electronics. Based on CalEEMod energy use estimations, operations would consume approximately 1,729,121 kWh of electricity on an annual basis (Appendix B).

Additionally, the proposed project would consume energy for transportation activities. Table 3.5-1 summarizes the proposed project’s operational energy consumption.

Table 3.5-1: Operational Energy Consumption

Energy Consumption Activity	Estimated Annual Energy Consumption
Electricity Consumption	1,729,121 kWh
Natural Gas Consumption	8,967,053 kBTU
Vehicle Fuel Consumption	226,453 gallons (gasoline, diesel)
Vehicle Electricity Consumption	166,448 kWh
Notes: kWh = kilowatt-hours kBTU = thousand British thermal units Source: Appendix B.	

As illustrated in Table 3.5-1, the proposed project's operation would consume an estimated 1,729,121 kWh of electricity and an estimated 8,967,053 kBtu of natural gas on an annual basis under the unmitigated scenario. For comparison, the County's total electricity consumption in 2022 was 10,395,384,395 kWh.³¹ Therefore, the proposed project's electrical consumption represents approximately 0.017 percent of the County's total 2022 electric consumption. The County's total natural gas consumption in 2022 was 37,730,978,800 kBtu.³² Therefore, the proposed project's natural gas consumption represents approximately 0.023 percent of the County's total 2022 natural gas consumption. Thus, the proposed project would represent a nominal percentage of the County's total electrical and natural gas consumption during operation.

The proposed project would be required to include solar in compliance with Alameda County Municipal Code Title 15, Buildings and Construction; Alameda County Municipal Code Chapter 15.08.010 indicates the County adopted California Code of Regulations Title 24, Part 6 (Energy Code) standards for residential buildings. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards, widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation. Furthermore, as further described in Impact GHG-2, the project would comply with several applicable Statewide and local measures that promote efficient energy consumption. Compliance with these policies would ensure that building energy consumption would not result in the use of energy in a wasteful, inefficient, or unnecessary manner.

Fuel

Operational energy would also be consumed during vehicle trips associated with the proposed project. Fuel consumption would be primarily related to vehicle use by residents, visitors, and employees associated with the proposed project. Based on energy use estimations contained within the CalEEMod output files used to estimate the project's generation of GHG emissions, project-related vehicle trips would result in approximately 6 million VMT and consume an estimated 226,453 gallons of gasoline and diesel combined, annually. (CalEEMod output files and energy-specific calculations are included in Appendix B.) However, with the issuance of Executive Order N-79-20, which calls for the elimination of new in-State sales of fossil-fueled passenger vehicles by 2035, the proportion of the passenger vehicle fleet that is electric and alternatively fueled is anticipated to increase with each passing year. Therefore, the annual consumption of gasoline and diesel fuels is anticipated to gradually decrease with each year of operation.

The proposed project is located in a developed portion of Alameda County. Regional and local access to the project site is provided via Busch Road, which is adjacent to the south of the project site. The County of Alameda has implemented policies and programs to reduce the use of personal vehicles as identified by Goal T-8 and T-13 within the CAP. Furthermore, Livermore-Amador Transit Authority

³¹ California Energy Commission. 2024. Electric Consumption by County Report, County of Alameda, Sector Total, Year 2022. Website: <https://ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed May 7, 2024.

³² California Energy Commission. 2024. Natural Gas Consumption by County Report, County of Alameda, Sector Total, Year 2022. Website: <https://ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed May 7, 2024.

(LAVTA) provides bus transit services through the Wheels bus service. Wheels operates routes 10R, 605, and 608 within 0.5 mile of the project site.³³ The closest bus stops to the project site are Martin Avenue and Mohr Avenue, and Stanley Boulevard and Valley Avenue, approximately 0.3 mile northwest and 0.45 mile southwest of the project site, respectively. The Altamont Corridor Express (ACE) Rail is a regional rail transit service that runs approximately 0.33 miles south of the project site and provides connections throughout the County from San Jose to Stockton.³⁴ The Pleasanton ACE Rail station is located approximately 2.10 miles southwest of the site at 4950 Pleasanton Avenue. Finally, Bay Area Rapid Transit (BART) is a regional rail transit service that operates within the County and provides connections to Contra Costa, San Francisco, and San Mateo counties. The Dublin/Pleasanton BART Station is approximately 2.60 miles northwest of the project site. These alternative transit options would encourage the reduction of personal vehicle fuel consumption. Thus, transportation fuel consumption would not be wasteful, inefficient, or unnecessary. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Energy Efficiency and Renewable Energy Standards Consistency

Impact ENER-2: The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Impact Analysis

The proposed project includes two design options, Design Option A and Design Option B, in which the off-site improvements are at different locations throughout Assessor's Parcel Numbers (APNs) 946-4634-2 and 946-1350-3-10. Construction activities would be similar under both design options. Furthermore, operations would remain the same under both scenarios. Therefore, the analysis presented below would remain accurate under either scenario.

The proposed project would be required to comply with the applicable Title 24 Energy Efficiency Standards and CALGreen requirements—for example, EV charging infrastructure and solar requirements—as adopted under Alameda County Municipal Code Title 15, Buildings and Construction; Alameda County Municipal Code Chapter 15.08.010.

The proposed project would receive electricity and natural gas service from PG&E. In 2021, PG&E obtained 48 percent of its electricity from renewable energy sources while the remaining electricity was sourced from nuclear (39 percent), large hydroelectric (4 percent), and natural gas (9 percent).³⁵ PG&E also offers a Solar Choice 50 percent option that sources 71 percent of its power mix from

³³ Livermore-Amador Valley Transit Authority (LAVTA). 2018. Wheels System Map. Website: http://www.wheelsbus.com/wp-content/uploads/2015/07/UPDATED-16-LAVTA-0002_LAVTA-System-Map-Brochure_5-Fold_3-4x8-5-1.pdf. Accessed December 19, 2023.

³⁴ ACE Rail. 2023. Route Map and Connections. Website: <https://acerail.com/>. Accessed December 19, 2023.

³⁵ California Energy Commission (CEC). 2022. Power Content Label. Website: <https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure/power-content-label/annual-power-content-2>. Accessed February 26, 2024.

eligible renewable energy sources, and a Solar Choice 100 percent option that sources 94 percent of its power mix from eligible renewable energy sources.

Therefore, the proposed project's electricity provider meets the State's current objective of 33 percent required by the RPS provisioned in SB 350 as discussed in the Regulatory Framework. The proposed project's electricity provider would also be required to meet the State's future objective of 60 percent of in-State electricity sales being generated from renewable energy sources by 2030.

As such, the proposed project would not conflict with or obstruct the applicable plan for renewable energy or energy efficiency. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.5.7 - Cumulative Impacts

The cumulative analysis considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project. The geographic scope of the cumulative energy analysis is the PG&E service area. PG&E serves 5.3 million electrical customers in 47 counties of California and 4.4 million natural gas customers in 39 counties of California. All cumulative projects would be required to comply with County and/or City ordinances and policies that address energy conservation and energy efficiency, such as complying with the latest California Energy Code and Title 24 standards. Accordingly, potential cumulative impacts would be less than significant. Moreover, the proposed project would not have a significant incremental contribution to cumulative impacts.

The proposed project would require an estimated 1,729,121 kWh of electricity and 8.97 million kBtu of natural gas on an annual basis. Development associated with the proposed project, as well as development associated with the cumulative projects, would be designed in accordance with Title 24, California's Energy Efficiency Standards for Residential Buildings. These standards include minimum energy efficiency requirements related to the building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC] and water heating systems), indoor and outdoor lighting, and illuminated signs. The incorporation of the Title 24 standards into the proposed project and cumulative projects would ensure that implementation of these projects would not result in the inefficient, unnecessary, or wasteful consumption of energy. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to energy consumption.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

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3.6 - Geology and Soils

3.6.1 - Introduction

This section describes existing conditions related to geology and soils in the region and project area and the relevant regulatory framework. This section also evaluates the possible impacts related to geology and soils that could result from the proposed project's implementation. Information included in this section is based, in part, on the Preliminary Geotechnical Report prepared for the residential project site, dated May 18, 2023, and the Geotechnical Feasibility Report prepared for the off-site improvement areas, dated February 12, 2024, by ENGEO Incorporated (ENGEO), which are included in Appendix E. The following resources were also consulted as part of this analysis:

- California Geological Survey (CGS)
- United States Geological Survey (USGS)
- University of California Museum of Paleontology (UCMP)

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to geology and soils. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should evaluate soil disturbance impacts of construction on adjacent properties.
- The Draft EIR should evaluate soil to a depth of 6 feet on the project site.
- The Draft EIR should complete a current seismic and geotechnical analysis of the project site.
- The Draft EIR should address whether the site could be returned to the original site elevation (4 feet lower), especially adjacent to the Village at Ironwood neighborhood.
- The Draft EIR should test and analyze potentially contaminated soil and land fill from the Sobrante Sunnyvale Source Area.
- The Draft EIR should provide studies of any filed documents or reports of contaminants.
- The Draft EIR should discuss the potential square footage of land and soil that could be contaminated.
- The Draft EIR should provide a preliminary grading plan.
- The Draft EIR should comply with Alameda County's Soil Import Ordinance.
- The Draft EIR should discuss the soil importation to the project site performed in 2018 and 2019.
- The Draft EIR should discuss soil reclamation for the project site.
- The Draft EIR should discuss natural disasters.

Section 3.8, Hazards and Hazardous Materials, and Section 3.11, Mineral Resources, of this Draft EIR discuss issues related to the former mining activities that occurred at the project site and the open Cleanup Program Site associated with soil contamination at the site. The discussion includes

summaries of the Phase I Environmental Site Assessments (Phase I ESAs) performed for the project site and the records made available by the California State Water Resources Control Board (State Water Board) GeoTracker and California Department of Toxic Substances Control (DTSC) EnviroStor databases.

3.6.2 - Environmental Setting

Geologic Setting

East Alameda County

The project site is within the California Coast Ranges geomorphic province, which is dominated by a series of northwest-trending mountain ranges that have been folded and faulted in a tectonic regime that involves both translational and compressional deformations.¹ The bedrock consists of igneous, metamorphic, and sedimentary rocks.

Additionally, the site is within the tri-valley basin, near the intersection of Livermore Valley, Amador Valley, and San Ramon Valley.² The tri-valley basin is generally regarded as a trough of sediments within the Diablo Range. The basin is filled with Quaternary-age sediments derived from erosion of the surrounding highlands, consisting mostly of Holocene and Pleistocene-age alluvial deposits and the late-Pliocene to early-Pleistocene-age Livermore Gravels.

Project Site

The project-specific geotechnical reports indicate that the project site and the associated off-site improvement areas were historically part of a mining quarry from 1979 to 1982.^{3,4}

Residential Project Site

The residential project site was divided into a larger pit to the north and a smaller pit at the southwest portion of the project site (known as the Busch Pit).⁵ The northern pit was quarried to approximately 100 feet below ground surface (bgs), and the Busch Pit was excavated to approximately 50 to 70 feet bgs.

Geologic mapping by Dibblee and Minch indicates that the project site is underlain by surficial sediments composed of Holocene-age alluvial deposits (Qa) composed of alluvial gravel, sand, and clay.⁶ Mapping also indicates additional Holocene and Pleistocene-age deposits (Qa and Qoa) in the vicinity, composed of alluvial gravel, sand, and clay from the valley areas. Finally, the late-Pliocene to early-Pleistocene-age Livermore Gravels (QTlg) make up the general bedrock in the adjacent hills to the north and south.

¹ ENGEO Incorporated (ENGEO). 2023. Preliminary Geotechnical Report: Arroyo Lago, Pleasanton, California. May 18.

² Ibid.

³ Ibid.

⁴ ENGEO Incorporated (ENGEO). 2024. Geotechnical Feasibility Report: Arroyo Lago – Off-Site Infrastructure Area, Pleasanton, California. February 12.

⁵ ENGEO Incorporated (ENGEO). 2023. Preliminary Geotechnical Report: Arroyo Lago, Pleasanton, California. May 18.

⁶ Dibblee, T.W., and Minch, J.A. 2006. Geologic Map of the Livermore Quadrangle, Contra Costa and Alameda Counties, California. Dibblee Geological Foundation. Dibblee Foundation Map DF-196. Map. Scale 1:24,000.

Off-site Improvement Areas

The Geotechnical Feasibility Report refers to the three non-contiguous areas east of the residential project site, where the off-site improvement areas would occur as the West Area, the East Area, and the Northeast Area. For more information, refer to Exhibit 3.6-1.

West Area

The Geotechnical Feasibility Report indicates that the west area of the off-site improvement areas (west of El Charro Road) was historically used as agricultural land with a residential property located in the northern portion of the area.⁷ The residential property was demolished by 1982, and the area was then excavated for quarry use. Backfill operations for the area were completed between 1993 and 2002, and between 2007 and 2013, a stockpile approximately 5 to 15 feet in height was located in the northern portion of the west area.

East Area

The east area of the off-site improvement sites (east of El Charro) was excavated for quarry use between 1960 and 1966, and fill placement began in the southeastern portion of the area between 1987 and 1993, which continued until 2010.⁸

Northeast Area

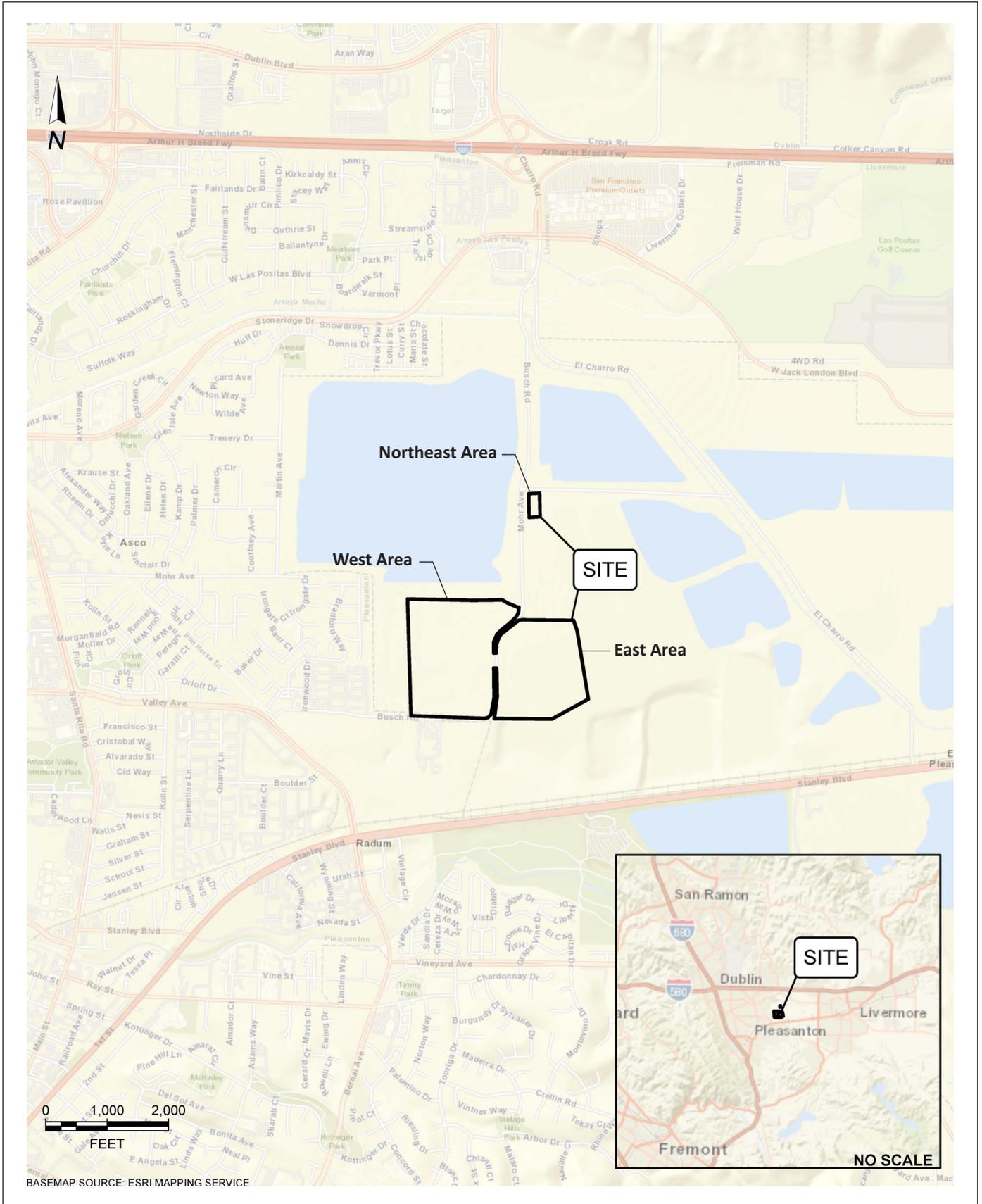
The northeast area of the off-site improvement sites (water storage and booster pump facility and associated bioretention area site) historically supported agricultural uses and was used for excavation activities for the quarry by 1974.⁹ Fill was placed within the area in 1987 to construct an access road north of Cope Lake. Additionally, grading began in 2005 for the present-day Zone 7 Water Agency (Zone 7) water facility, which was completed by 2009.

⁷ ENGEO Incorporated (ENGEO). 2024. Geotechnical Feasibility Report: Arroyo Lago – Off-site Infrastructure Area, Pleasanton, California. February 12.

⁸ Ibid.

⁹ Ibid.

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Source: ENGeo, 2024.

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Project Site

Residential Project Site

Existing fill was encountered between 130 and 162.5 feet bgs in the northern pit.¹⁰ In general, the fill is characterized by medium stiff to very stiff sandy and silty clay with varying amounts of gravel. The clayey fill generally has low to medium plasticity within the upper 10 feet. Existing fill in the Busch Pit was encountered up to 70 feet bgs. Fill was placed and compacted up to approximately 64 feet deep. The fill generally consists of brown sandy lean clay from the site and import sources, compacted to at least 90 percent relative compaction. Floodplain deposits directly underlie the fill in the site and generally consist of dense to very dense clayey sand and gravel and stiff to very stiff lean clay. According to the Preliminary Geotechnical Report and the Geotechnical Feasibility Report, the existing clayey fill has moderate to high expansion potential.

Off-Site Improvement Areas

West Area

Existing fill was encountered up to 100 feet bgs in the northern portion and up to 92 feet bgs in the southern portion. Additionally, existing fill was encountered up to approximately 60 feet bgs near El Charro Road. The fill generally consists of medium stiff to stiff sandy clay with varying amounts of gravel, and the native material consists of dense clayey gravel.

East Area

Existing fill was encountered up to 119.5 feet bgs, and it generally consists of very soft to stiff silty and sandy clay, as well as very loose to loose silty and clayey sand.

Northeast Area

Existing fill was encountered up to approximately 22 feet bgs, and the fill generally consisted of medium dense clayey gravel and stiff sandy clay. The native material generally consisted of very dense clayey sand and clayey gravel.

Seismicity

The term seismicity describes the effects of seismic waves radiated from an earthquake fault in motion. Seismicity can result in seismic-related hazards (i.e., fault rupture, ground shaking, and liquefaction). Faults form in rocks when stresses overcome the internal strength of the rock, and surface fault rupture occurs when movement on a fault breaks through to the surface and can result in damage to infrastructure and persons. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. Strong ground shaking from an earthquake can result in damage, with buildings shifted off their foundations and underground pipes broken.

There are several Holocene-active faults in the San Francisco Bay region, including the San Andreas Fault Zone, the Greenville Fault Zone, the Calaveras Fault Zone, and the Hayward Fault Zone. The California Earthquake Hazards Zone Application (EQ Zapp) is an interactive map available on the CGS website. The EQ Zapp allows users to view the current established Earthquake Fault Zones (EFZs), as

¹⁰ ENGEO Incorporated (ENGEO). 2023. Preliminary Geotechnical Report: Arroyo Lago, Pleasanton, California. May 18.

required by the Alquist-Priolo Earthquake Fault Zoning Act (discussed in Section 3.6.3, *Regulatory Framework*). The State Geologist delineates EFZs around the surface traces of Holocene-active faults, which are faults that show evidence of surface displacement within the Holocene Epoch (i.e., the last 11,700 years).¹¹ The EQ Zapp also allows the user to view current liquefaction and earthquake-induced landslide hazard zones.

Liquefaction occurs when an earthquake causes ground shaking that results in saturated soil losing shear strength, deforming, and acting like a liquid. When liquefaction occurs, it can result in ground failure that can result in damage to roads, pipelines, and buildings.

East Alameda County

The East County is within the seismically active San Francisco Bay Area; therefore, seismic risk is assumed by every occupant and developer in the County. The Greenville and Calaveras Faults are the two largest faults that run through the East County. The Greenville Fault crosses the central portion of the East County, and the Calaveras Fault crosses the western portion. The Hayward and San Andreas fault zones are not within the East County planning area but could seismically affect the East County. Other Holocene-active faults in the area include the Pleasanton, Las Positas, and Verona fault zones.

Project Site

The nearest Holocene-active fault to the project site is the Pleasanton Fault Zone (approximately 2.6 miles northwest) and the Verona Fault Zone (approximately 2.8 miles southwest). Other fault zones located in the project's vicinity include the Northern Calaveras section of the Calaveras Fault Zone (approximately 3.5 miles west), the Las Positas Fault Zone (approximately 6.8 miles southeast), and the Marsh Creek-Greenville section of the Greenville Fault Zone (approximately 8.3 miles northeast). The Preliminary Geotechnical Report also lists the Mount Diablo Thrust as a potential source of ground shaking at the project site.¹²

Liquefaction

Liquefaction refers to the sudden, temporary loss of soil shear strength during strong ground shaking. Liquefaction-related phenomena include liquefaction-induced settlement, flow failure, and lateral spreading. These phenomena can occur where there are saturated, loose, and/or granular deposits.

The Preliminary Geotechnical Report evaluated the potential for liquefaction at the site and determined that it is negligible based on the soil type and consistency of the soil materials.¹³ Additionally, the depth to hydrostatic groundwater is at least 45 feet bgs. The Geotechnical Feasibility Report for the off-site improvement areas determined that the potential for liquefaction

¹¹ Parish, J.G. 2018. Special Publication 42: Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California. California Geological Survey. Revised 2018.

¹² ENGEO Incorporated (ENGEO). 2023. Preliminary Geotechnical Report: Arroyo Lago, Pleasanton, California. May 18.

¹³ Ibid.

would be low due to soil type, consistency of soil materials encountered, and the depth of hydrostatic groundwater.¹⁴

According to the EQ Zapp, the project site and associated off-site improvement areas are not within an established liquefaction zone.¹⁵ However, the mapping prepared by the Association of Bay Area Governments (ABAG) identifies the site as moderately susceptible to liquefaction.¹⁶

Slope Disturbance

Slope disturbance from long-term geologic cycle of uplift, mass wasting, intense precipitation or wind, and gravity can result in slope failure in the form of mudslides and rock fall. The project area is seismically active with known faults; however, the project area does not contain active faults which would cause geologic uplifting. Mass wasting refers to a variety of erosional processes from gradual downhill soil creep to mudslides, debris flows, landslides, and rock fall—processes that are commonly triggered by intense precipitation or wind, which varies according to climactic shifts. Often, various forms of mass wasting are grouped together as landslides, which are generally used to describe the downhill movement of rock and soil. Soil creep is a long-term, gradual downhill migration of soil under the influence of gravity and is generally on the order of a fraction of an inch per year. These soils can creep away downslope sides of foundations and reduce lateral support.

Project Site

The project site gently slopes inward toward the central-eastern portion of the property, with the high point in the northwest at an elevation of approximately 362 feet and the low point in the central-eastern portion of the site at approximately 357 feet. According to the EQ Zapp, the project site is not within an established landslide zone.¹⁷ Additionally, geologic mapping does not indicate the presence of current or historic landslides in proximity to the project site.¹⁸

Paleontological Resources

Paleontological resources, or fossils, are the fossilized remains or traces of plants, animals, or microbes that are preserved in the earth's crust. Body fossils include bones, teeth, shells, leaves, and wood, while trace fossils include trails, trackways, footprints, burrows, coprolites, and eggshells.

According to the Society of Vertebrate Paleontology (SVP) Guidelines, significant paleontological resources are fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic paleoecologic, stratigraphic, and/or biochronologic

¹⁴ ENGEO Incorporated (ENGEO). 2024. Geotechnical Feasibility Report: Arroyo Lago – Off-site Infrastructure Area, Pleasanton, California. February 12.

¹⁵ California Geological Survey (CGS). 2023. California Earthquake Hazards Zone Application (EQ Zapp). Website: www.conservation.ca.gov/cgs/geohazards/eq-zapp. Accessed on February 26, 2024.

¹⁶ ENGEO. 2023. Preliminary Geotechnical Report, Arroyo Lago, Pleasanton, California. May 18.

¹⁷ California Geological Survey (CGS). 2023. California Earthquake Hazards Zone Application (EQ Zapp). Website: www.conservation.ca.gov/cgs/geohazards/eq-zapp. Accessed on February 26, 2024.

¹⁸ Dibblee, T.W., and Minch, J.A. 2006. Geologic Map of the Livermore Quadrangle, Contra Costa and Alameda Counties, California. Dibblee Geological Foundation. Dibblee Foundation Map DF-196. Map. Scale 1:24,000.

information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).¹⁹

The Paleontological Records Search for the proposed project (Appendix E) concluded that the project site is located on artificial fill and undivided Holocene- to Pleistocene-age deposits. The UCMP records revealed 1,237 Pleistocene-age vertebrate specimens from 64 localities within Alameda County. The records indicate that there are five Pleistocene-age vertebrate localities within 3 miles of the project site.

In general, Holocene-age deposits are considered to have a low potential to contain significant paleontological resources at the surface. However, the potential increases with increased depth into the subsurface; these deeper layers are older and, therefore, have a higher potential to contain significant fossil remains. In general, Pleistocene-age alluvial deposits are considered to have a high potential to contain significant paleontological resources.

3.6.3 - Regulatory Framework

Federal

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program (NEHRP) was established by the United States Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95–124. In establishing the NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic goals remain unchanged:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary NEHRP agencies:

- National Institute of Standards and Technology of the Department of Commerce
- National Science Foundation
- USGS of the Department of the Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

¹⁹ Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Website: https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf. Accessed February 26, 2024.

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program, authorized by Section 402(p) of the federal Clean Water Act, controls water pollution by regulating point sources, such as construction sites and industrial operations that discharge pollutants into waters of the United States. A Storm Water Pollution Prevention Plan (SWPPP) is required to control discharges from a project site, including soil erosion, to protect waterways. A SWPPP describes the measures or practices to control discharges during both the construction and operational phases of the project. A SWPPP identifies project design features and structural and nonstructural Best Management Practices (BMPs) that will be used to control, prevent, remove, or reduce stormwater pollution from the site, including sediment from erosion.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code [PRC] Sections 2621 to 2630) was passed in 1972 to provide a statewide mechanism for reducing the hazard of surface fault rupture to structures used for human occupancy. The main purpose of the Act is to prevent the siting of buildings used for human occupancy across the traces of active faults. It should be noted that the Act addresses the potential hazard of surface fault rupture and is not directed toward other earthquake hazards, such as seismically-induced ground shaking or landslides.

The law requires the State Geologist to identify regulatory zones (known as EFZs or Alquist-Priolo Zones) around the surface traces of active faults and to depict these zones on topographic base maps, typically at a scale of one inch to 2,000 feet. EFZs vary in width, although they are often 0.75-mile wide. Once published, the maps are distributed to the affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. With the exception of single-family wood frame and steel-frame dwellings that are not part of a larger development (i.e., four units or more), local agencies are required to regulate development within the mapped zones. In general, construction within 50 feet of an active fault zone is prohibited.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (PRC §§ 2690–2699.6), which was passed in 1990, addresses earthquake hazards other than surface fault rupture. These hazards include strong ground shaking, earthquake-induced landslides, liquefaction, or other ground failures. Much like the Alquist-Priolo Earthquake Fault Zoning Act discussed above, these seismic hazard zones are mapped by the State Geologist to assist local government in the land use planning process. The Act states, “it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.” The Act also states, “cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

California Building Standards Code

The California Building Standards Code (CBC), codified in the California Code of Regulations Title 24, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards for structural strength, means of egress to facilities (entering and exiting), 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.

California Code of Regulations Title 24 is administered by the California Building Standards Commission (CBSC), which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24, or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure, or any appurtenance connected or attached to buildings or structures throughout California.

The 2022 edition of the CBC is based on the 2021 International Building Code (IBC), which replaced the Uniform Building Code in 2000, and is published by the International Code Council (ICC). The code is updated triennially; the 2022 edition on the CBC was published by the CBSC on July 1, 2022, and took effect starting January 1, 2023. The 2022 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-22, Minimum Design Loads and Associated Criteria for Buildings and Other Structures. The CBC provides requirements for general structural design and includes means for determining earthquake loads and other loads (such as wind loads) for inclusion in building codes.

The State earthquake protection law (California Health and Safety Code § 19100 *et seq.*) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. CBC Chapter 16, Structural Design, establishes minimum seismic safety and structural design requirements for the structural components of buildings. CBC Chapter 18, Soils and Foundations, covers the requirements of geotechnical investigations (Section 1803); excavations, grading, and fill (Section 1804); load-bearing values of soils (1806); foundations (1808); shallow foundations (1809); and deep foundations (1810). Requirements for geotechnical investigations are included in CBC Appendix J, Section J104, *Permit Application and Submittals*. Appendix J also provides standards for grading activities, including drainage and erosion control.

Local Regulations

County of Alameda

East County Area Plan

The East county Area Plan (ECAP) is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to geology and soils:

Environmental Health and Safety

Goal To minimize the risks to lives and property due to seismic and geologic hazards.

- 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 311** 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 315** The County shall require that buildings be designed and constructed to withstand ground shaking forces of a minor earthquake without damage, of a moderate earthquake without structural damage, and of a major earthquake 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.

City of Pleasanton

General Plan

The City of Pleasanton General Plan sets forth the following goals, objectives, and actions that are relevant to geology and soils.

Public Safety Element

- Goal 1** Minimize the risks to lives and property and minimize the potential liability to the City due to seismic activity within the Planning Area.
- Policy 1** Restrict development in areas prone to seismic safety hazards.
- Program 1.2** Prohibit construction of habitable structures within at least 50 feet of an identified active fault trace where the fault has been specifically located in site-specific geologic studies.
- Program 1.3** Prohibit construction of a habitable structure within at least 100 feet of the most likely line of the fault trace, if the active fault trace is approximately located, concealed or inferred. The applicant's geologist (with concurrence from the City's peer review geologist) shall identify the most likely line of the fault trace. This program applies only to new development approved after date of adoption and does not make non-conforming those structures approved under policies and regulations allowing structures at least 50 feet from a fault trace.

- Program 1.4** Prohibit construction of facilities and systems vital to the public health and safety (e.g., water facilities, fire stations, hospitals, communication facilities, etc.) within the Alquist-Priolo Earthquake Fault Zones.
- Policy 2** Investigate the potential for seismic hazards during the development review process, and implement soils engineering and construction standards which minimize potential danger from earthquakes.
- Program 2.1** Require site-specific soils, geologic, and/or geotechnical engineering studies prior to development approval of structures for human occupancy for any project proposed within areas shown on current Alquist-Priolo Earthquake Fault Zones Maps. For development within areas identified as severe through violent seismic shaking amplification (Figure 5-3: Relative Intensity of Ground Shaking) outside of the Alquist-Priolo Earthquake Fault Zone, the site-specific soils and/or geotechnical report shall address the impacts of seismic ground shaking on proposed structures, infrastructure, and ground stability.
- Program 2.2** Design and construct all structures to address potential seismic and geologic hazard conditions according to the California Building Standards Code (CBC) standards or more stringent standards. All structures and facilities not addressed by the CBC shall be designed and constructed to mitigate potential seismic and geologic hazards as recommended by site-specific soils, geologic, and/or geotechnical engineering studies.
- Program 2.5** Require technical review and analysis of soils, geologic, and geotechnical studies by a qualified consulting engineering geologist reporting to the City of Pleasanton. Incorporate the recommendations of the City’s consulting engineer into the project design.
- Program 2.6** Require professional inspection of foundations, piers, excavation, earthwork, and other aspects of site development during construction. Ensure that all mitigations recommended by the City’s consulting engineer are incorporated into the project construction.
- Goal 2** Minimize the risks to lives and property, and minimize potential liability to the City, due to geologic hazards within the Planning Area.
- Policy 5** Investigate the potential for geologic hazards as part of the development review process and maintain this information for the public record.
- Program 5.1** Require site-specific soils studies for all new development prior to the issuance of building permits and prior to the approval of final improvement plans. Where there is risk of geologic hazards, the soil study should address seismic shaking, lateral spreading, differential settlement, lurch cracking, liquefaction, erosion, and expansive soils.

- Program 5.2** Require site-specific geologic and/or geotechnical engineering studies prior to development approval where there is risk of the following geologic hazards: surface fault rupture, bank failures, rock falls, landslides, and for areas with slopes equal to or greater than 20 percent.
- Program 5.3** Require measures to mitigate potential geologic safety hazards during adverse conditions such as saturated soils and ground shaking, and during grading of the site for roads, installation of infrastructure, and creation of building pads. Mitigation measures identified by the site engineering studies shall be incorporated into the project design.
- Program 5.4** Require technical review and analysis of geotechnical studies by a qualified consulting Geotechnical Engineer reporting to the City. Incorporate the recommendations of the City’s consulting engineer into the project design.
- Program 5.5** Discourage development in areas with a high risk of geologic hazards as identified by a California-licensed engineering geologist representing the City. Allow development only when geologic and soils investigations demonstrate that hazards can be mitigated by accepted engineering and construction techniques. Mitigation measures identified by the investigations shall be incorporated into the project design and subject to approval by the City’s reviewing geologist/engineer.
- Policy 6** Restrict new development of sites with structures intended for human occupancy in any landslide-prone or unstable area.
- Program 6.1** Prohibit new development of sites with structures intended for human occupancy in any landslide-prone areas unless the landslide risk can be eliminated. Permit development in landslide-prone areas only when sites can be shown to be stable during adverse conditions such as saturated soils, ground shaking, and during grading of the site for roads, installation of infrastructure, and creation of building pads. Engineering studies shall demonstrate that structures in landslide-prone areas would sustain no more damage due to slope instabilities than damage sustained by a similar building in the Pleasanton Planning Area constructed to current CBC standards and located on soils with a low susceptibility to failure when exposed to moderate ground shaking.
- Program 6.2** Require developers to include drainage, erosion, and landslide mitigation measures to reduce landslide potential.
- Program 6.3** Design irrigation systems to minimize the potential for soil saturation, excessive runoff, and other factors deemed to contribute to slope instability.
- Program 6.4** Design grading plans to minimize earthmoving activity and site grading in areas of potential land instability and in areas identified as having “Mostly landslides,” as shown on Figure 5-1.

Program 6.5 Establish Geologic Hazard Abatement Districts (GHADs) in areas of new development where landslide risks or other geologic hazards are known to exist, to assure that ongoing monitoring and maintenance of slopes and drainage facilities occurs. GHADs should be considered for hillside development such as west of Foothill Road and other areas prone to seismic, landslides, and other geologic hazards.

3.6.4 - Methodology

Impacts related to geology and soils were determined by reviewing information contained in the Preliminary Geotechnical Report prepared for the residential project site and the Geotechnical Feasibility Report prepared for the off-site improvement areas, which are provided in Appendix E.

3.6.5 - Thresholds of Significance

The lead agency derives its significance criteria based on the questions in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist. Accordingly, impacts to geology and soils would be considered significant environmental effects if the proposed project would:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
 - ii. Strong seismic ground shaking.
 - iii. Seismic-related ground failure, including liquefaction.
 - iv. Landslides.
- b) Result in substantial soil erosion or the loss of topsoil.
- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.6.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Earthquakes

- Impact GEO-1:** **The proposed project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:**
- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**
 - ii) Strong seismic ground shaking.**
 - iii) Seismic-related ground failure, including liquefaction.**
 - iv) Landslides.**
-

Impact Analysis

Overall, the project-specific geotechnical reports concluded that the project site and associated off-site improvement areas are suitable for the proposed development from a geotechnical standpoint, provided that various measures and recommendations would be implemented. No severe geologic or soil-related concerns were identified that would preclude development of the project site for the proposed project. The primary geotechnical issues to be considered during project design on the residential project site include the presence of undocumented fill, settlement of moderately compressible layers due to proposed fill and building loads, and strong ground motions. The primary geotechnical issues to be considered during the project design of the off-site improvements include potentially expansive soil, static consolidation settlement from compressible fill, long-term compression from existing fill, potential for slope instability along El Charro Road, and potentially corrosive soil.

The design and construction of the improvements at the project site would be subject to the mandatory requirements and standards of the CBC, which identify site preparation and construction techniques to attenuate the effects of strong ground shaking and seismic-related ground failure. The CBC identifies seismic factors that must be considered in structural design.

i) Surface Fault Rupture

Under the Alquist-Priolo Earthquake Fault Zoning Act, CGS produced maps showing all known active faults and defining zones within which special fault studies are required. Based on currently available published geologic information, the project site is not located within an EFZ. The Calaveras fault is the nearest known active fault, located approximately 4.4 miles to the southwest. According to the project-specific geotechnical reports, no evidence indicative of active or historic faulting was observed during project site reconnaissance, either within or proximal to the project site or associated off-site improvement areas. Therefore, the potential for fault surface rupture at the project site is considered low, and impacts would be less than significant.

ii) Strong Seismic Ground Shaking

As previously discussed, the San Francisco Bay Area is a seismically active region that has been subject to major earthquakes in the past. Thus, the project site would likely experience seismic

ground shaking from future earthquakes in the San Francisco Bay Area. Earthquakes along any of several active faults in the region could cause moderate to strong ground shaking at the project site. The potential for strong seismic shaking at the project site is high. Because of its proximity, the Calaveras fault presents the highest potential for strong ground shaking. The most significant adverse impact associated with strong seismic shaking is potential damage to structures and improvements. Therefore, the proposed project has the potential to expose people or structures to adverse effects associated with seismic events. However, the Preliminary Geotechnical Report and the Geotechnical Feasibility Report determined that with proper planning and design, these potential impacts could be limited. Implementation of Mitigation Measure (MM) GEO-1, which requires adherence to the implementation of site-specific engineering measures recommended by a Design-Level Geotechnical Report, would reduce potential impacts to less than significant. As previously discussed, the proposed project would also be required to comply with the most recent version of the CBC (2022). Also, the proposed project would be overseen by the County of Alameda, which provides engineering, environmental, and construction inspection services that would confirm compliance with applicable regulations that reduce ground shaking impacts. With adherence to State building requirements and MM GEO-1, impacts would be less than significant with mitigation.

iii) Seismic-related Ground Failure, Including Liquefaction

According to the project-specific geotechnical reports in Appendix E, the project site's susceptibility to liquefaction is negligible based on the soil type and consistency of the soil materials and the depth to groundwater. Therefore, liquefaction and related phenomena are not anticipated to constitute a significant hazard at the project site or associated off-site improvement areas. Additionally, as discussed above, implementation of MM GEO-1 would require an updated design-level geotechnical assessment of geologic and geotechnical hazards. If liquefaction hazards are identified at the project site recommendations for addressing such hazards would be provided in a Design-Level Geotechnical Report. Adherence to the design recommendations provided in a Design-Level Geotechnical Report would ensure that the proposed project would not result in impacts associated with liquefaction. The impact would be less than significant.

iv) Landslides

The Preliminary Geotechnical Report does not identify any landslide-related hazards at the project site. According to the EQ Zapp, the project site is not within a landslide zone, except for the areas adjacent to the Zone 7 Chain of Lakes and surrounding the Busch Pit area. Additionally, geologic mapping does not indicate the presence of current or historic landslides in proximity to the project site. Given the relatively flat topography at the project site and the available data, the proposed project would not result in landslides. Additionally, as discussed above, implementation of MM GEO-1 would require an updated design-level geotechnical assessment of geologic and geotechnical hazards. If landslide hazards are identified at the project site recommendations for addressing such hazards would be provided in a Design-Level Geotechnical Report. Adherence to the design recommendations provided in a Design-Level Geotechnical Report would ensure that the proposed project would not result in impacts associated with landslides. The impact would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-1 Design-Level Geotechnical Study

Prior to issuance of building and grading permits, an updated design-level geotechnical exploration and assessment shall be performed by a qualified Geotechnical Engineer. The design-level exploration and reporting shall include (but would not be limited to) the following items:

- Hollow-stem auger borings, including matched-pair borings.
- Soil sample collection at depths relevant to building-specific foundation design.
- Laboratory testing, including (but not limited to) moisture content, unit weight, gradation, Atterberg Limits, strength, consolidation, and corrosivity testing.
- Design-level assessment of geologic and geotechnical hazards, including (but not limited to) the following:
 - Characterization of subsurface conditions.
 - Consolidation of compressible soil based on in situ structural loading.
- Design recommendations for foundation system design.
- Design-level subexcavation, ground improvement, and/or surcharging recommendations.
- Foundation constructability recommendations.
- Design-level earthwork and improvement design and construction recommendations.
- Design-level features required for landslides.

The recommendations included in the Design-Level Geotechnical Report shall be implemented during construction activities, including grading and excavation.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Soil Erosion or Topsoil Loss

Impact GEO-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.

Impact Analysis

The proposed grading activities associated with the proposed project would temporarily expose underlying soils to water and air, which would increase erosion susceptibility while the soils are exposed. Accordingly exposed soils would be subject to erosion during rainfall events or high winds due to the temporary exposure of these erodible materials to wind and water. Erosion by water would be greatest during the first rainy season after grading and before the proposed project's structure foundations are established and paving and landscaping occur. Erosion by wind would be

highest during periods of high wind speeds when soil is exposed. Construction activities would involve ground-disturbing earthwork, including earthmoving, excavation, and grading. These activities could increase the susceptibility of soils on the project site to erosion by wind or water and subsequently result in the loss of topsoil. If not controlled and managed, the impact of soil erosion would be significant.

As the proposed project would disturb more than one acre, a SWPPP would be developed and implemented as part of the proposed project, in compliance with the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance activities (General Permit) (Order WQ 2022-0057-DWQ). The SWPPP would include BMPs designed to control and reduce soil erosion. The BMPs may include stormwater runoff quality control measures, watering for dust control, and the construction of silt fences, as needed. Additionally, the proposed project would comply with Chapter 15.36 of the Alameda County General Ordinance, which includes grading, erosion, and sediment control measures. Implementation of these soil and erosion control measures would ensure that impacts associated with soil disturbance and loss would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Unstable Geologic Location

Impact GEO-3: **The proposed project could 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.**

Impact Analysis

As described in Impact GEO-1, the project-specific geotechnical reports determined that liquefaction and landslide hazards are considered low at the project site and associated off-site improvement areas. Additionally, it was determined that the risk of regional subsidence at the project site is low to negligible. Preliminary analyses suggest that the potentially compressible layers underlying the project site could experience settlement due to building loads and fill placement.

As discussed in Impact GEO-1, implementation of MM GEO-1 would require an updated design-level geotechnical assessment of geologic and geotechnical hazards. If hazards related to unstable soils are identified at the project site recommendations for addressing such hazards would be provided in a Design-Level Geotechnical Report. Adherence to the design recommendations provided in a Design-Level Geotechnical Report would ensure that the proposed project would not result in impacts associated with unstable soils. The impact would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM GEO-1.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Expansive Soil

Impact GEO-4: **The proposed project could be located on expansive soil, creating substantial direct or indirect risks to life or property.**

Impact Analysis

The Preliminary Geotechnical Report determined that the existing fill on the project site is composed of lean clays with a moderate to high expansive potential. On this basis, the risk of expansive soil affecting the proposed improvements creates a potentially significant impact.

Preliminary recommendations include using a rigid mat foundation designed to resist the settlement and heave of expansive soil, deepening the foundations to below the zone of moisture fluctuation, and/or using footings at normal shallow depths with a layer of select fill having a low expansion potential. Additionally, implementation of MM GEO-1, Design-Level Geotechnical Report, would require an updated, design-level geotechnical report to be prepared prior to the issuance of any building or grading permits. The updated geotechnical report would incorporate the 2022 CBC standards and include an updated analysis of all potential geotechnical hazards that could impact the project site, including expansive soil. Implementation of the MM GEO-1 would also ensure that development associated proposed project would be designed in compliance with the recommendations provided in a Design-Level Geotechnical Report, to withstand any impacts related to expansive soil; therefore, the proposed project would have a less than significant impact with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM GEO-1.

Level of Significance After Mitigation

Less than significant with mitigation incorporated.

Wastewater Disposal Systems

Impact GEO-5: **The proposed project would not 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.**

Impact Analysis

As discussed in Chapter 2, Project Description, the proposed project would include the development of a sewer treatment plant, on approximately one acre, adjacent to El Charro Road, as shown in Exhibits 2-6a and 2-6b. Under Design Option A (Exhibit 2-6a), the sewer treatment plant would be located west of El Charro Road in the northern portion of Assessor's Parcel Number (APN) 946-4634-2, west of the primary bioretention area described below. Under Design Option B (Exhibit 2-6b), the sewer treatment plant would be located farther east, closer to El Charro Road. The proposed sewer treatment plant would be a package membrane bioreactor sewage treatment plant that would treat approximately 50,000 gpd of wastewater. The sewer treatment plant would include an influent pump station, a headworks facility, odor control, a membrane bioreactor facility, ultraviolet disinfection, an effluent and recycled water pump station and pipelines, solids handling, a chemical facility, administration, laboratory, operations, and maintenance. The proposed sewer treatment plant would not rely on subsurface disposal.

The proposed wastewater treatment facility would produce disinfected tertiary recycled water as defined in California Code of Regulation, Title 22, Section 60301.230. Disinfected tertiary recycled water produced by the wastewater treatment facility would be stored in lined storage ponds and would be disposed of through irrigation of agricultural spray fields.³² The proposed wastewater treatment facility would also be required to meet the applicable requirements of the Water Reclamation Requirements for Recycled Water Use (Order WQ 2016-0068-DDW). Thus, all recycled water discharged from the wastewater treatment facility would be treated per State guidelines, including Title 22. Further, the treatment plant would have further oversight through permitting with the State Water Board and San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB).

Additionally, the project applicant would file a Notice of Intent (NOI) under the Statewide General Recycled Water Order with the San Francisco Bay RWQCB for waste discharge requirements (WDRs) related to its treatment and agricultural spray field in compliance with Title 22. Compliance with these requirements would ensure that the proposed sewer treatment plant would be designed properly, and its impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Destruction of Paleontological Resource or Unique Geologic Feature

Impact GEO-6: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact Analysis

Project-related excavations are expected to reach at least 15 feet bgs and could impact previously undisturbed Pleistocene deposits underlying the project site, which have a high paleontological

sensitivity. While some Pleistocene-age deposits can have a low potential to contain significant paleontological resources, the presence of vertebrate localities within 3 miles of the project site indicates that disturbance or discovery of unknown paleontological resources is possible. This would be a potentially significant impact. To ensure that earth-disturbing construction-related activities do not impact significant paleontological resources, the implementation of MM GEO-6 would require paleontological monitoring of excavations in previously undisturbed surface deposits. The impact on paleontological resources would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-6 Prior to the start of any ground-disturbing activity, a qualified Paleontologist meeting Society of Vertebrate Paleontology (SVP) standards and best practices shall be retained to prepare and conduct a project-wide Worker Environmental Awareness Program (WEAP) training. The WEAP shall contain unanticipated discovery measures to be followed in the event that paleontological resources are encountered while the qualified Paleontologist or qualified Paleontological Monitor is not present (i.e., during excavations within the first 6 feet below the existing grade). The WEAP shall be conducted by a qualified environmental trainer, under the supervision of a qualified Paleontologist. In the event construction crews are phased in, additional training shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the proposed project site and the procedures to be followed if they are found.

Paleontological monitoring shall be conducted by a qualified Paleontological Monitor meeting SVP standards and best practices, under the supervision of the qualified Paleontologist. Monitoring would be required for excavations at the project site that exceed 6 feet below the existing grade, in previously undisturbed deposits east of El Charro Road. Full-time monitoring shall be required for all excavation into previously undisturbed Pleistocene-age deposits. If earth-disturbing construction-related activities uncover any paleontological resources (i.e., bones or teeth), those activities shall be diverted at least 15 feet away from the discovery until a qualified Paleontologist is brought on-site to assess the find for possible salvage, consistent with the standards and best practices set by the SVP. Construction workers shall not attempt to remove such finds. Depending on the conditions encountered, full-time monitoring can be reduced to part-time inspections or ceased entirely if determined adequate by the qualified Paleontologist.

In the event that paleontological resources are encountered while monitoring is not occurring (i.e., during excavations within the first 6 feet below the existing grade), excavations within 50 feet of the find shall be temporarily halted or diverted until the qualified Paleontologist can assess the find and determine its significance.

Depending on the conditions encountered, monitoring activities may be increased at the discretion of the qualified Paleontologist if he or she deems it appropriate. The qualified Paleontologist may spot check the excavation on an intermittent basis and recommend whether the depth of required monitoring should be revised based on his/her observations.

The qualified Paleontologist shall document the discovery as needed and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. Salvaged fossils should be deposited in an appropriate repository (i.e., University of California Museum of Paleontology [UCMP]), where they will be properly curated and made available for future research. The qualified Paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the discovery. If the applicant determines that avoidance is not feasible, the qualified Paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery.

The plan shall be submitted to the appropriate repository and to the County for review and approval prior to implementation. The applicant shall adhere to the recommendations in the approved plan.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

3.6.7 - Cumulative Impacts

The geological, paleontological, and soil impacts of the proposed project would occur in concurrence with adjacent development listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, of this document. Generally, impacts to the geology, soil, and paleontology of a project are site-specific and localized. Accordingly, the geographic scope of the cumulative geology, paleontological, and soils analysis is the project vicinity. Adverse effects associated with geologic, paleontological, soil, and seismic hazards tend to be site-specific, because each project site has its own geologic and soils conditions, and each project has its own design characteristics, localized within the area near the project site most affected by project activities (generally within a 0.5-mile radius). Cumulative projects may require varying levels of excavation or cut-and-fill activity, which would affect local geologic conditions and could affect paleontological resources. Cumulative projects would also be subject to building department requirements regarding geotechnical review and the State and local building codes.

In addition, MM GEO-1 and MM GEO-6, which require site-specific geotechnical review and monitoring for paleontological resources, would reduce the proposed project's impacts associated with geology, seismic safety, and paleontological resources. Furthermore, site-specific mitigation would be developed, when necessary, based on site conditions. The cumulative projects listed in Table 3-1, Cumulative Projects, would also be subject to the same compliance with the Building Code, mandatory seismic safety standards, mitigation measures, and design review procedures as

the proposed project. General compliance from all projects to these standards and procedures would ensure that the cumulative effects from nearby cumulative projects would be less than significant. Therefore, the proposed project in conjunction with other cumulative development would not adversely impact paleontological resources, or expose people or structures to substantial adverse effects, including the risk of loss, injury, or death in the event of a major earthquake; fault rupture; ground shaking; seismic-related ground failure; landslide; or liquefaction.

Implementation of MM GEO-1 and MM GEO-6 would ensure that the proposed project impacts would not be cumulatively significant. Therefore, cumulative impacts on the geology, soils, and paleontological resources area would be less than significant with mitigation.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM GEO-1 and MM GEO-6.

Level of Cumulative Significance After Mitigation

Less than significant impact with mitigation incorporated.

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3.7 - Greenhouse Gas Emissions

3.7.1 - Introduction

This section describes the existing greenhouse gas (GHG) emissions setting and potential effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on project-specific information and modeling results utilizing California Emissions Estimator Model (CalEEMod) Version 2022.1. The Greenhouse Gas Analysis is included in this Draft Environmental Impact Report (Draft EIR) as Appendix B.

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) scoping period related to GHG emissions. The following list provides a summary of relevant comments, which are thoroughly addressed in this section:

- The Draft EIR should analyze GHG emissions impacts.
- The Draft EIR should evaluate whether construction of the proposed project would contribute to climate change.
- The Draft EIR should evaluate operational GHG emissions from proposed homes and associated vehicle travel; and
- The Draft EIR should analyze project consistency with State climate goals.

One comment asked how carbon compounds would deplete the ozone layer. Man-made chemicals containing halogens were determined to be the main cause of ozone loss.¹ These chemicals are collectively known as ozone-depleting substances. The most common type is chlorofluorocarbons (CFCs), which have been completely phased out in the United States, except for limited exemptions.² Hydrochlorofluorocarbons (HCFCs) were transitional substitutes and are being completely phased out by 2030.³

3.7.2 - Environmental Setting

Greenhouse Gases and Global Emission Sources

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. Prominent GHGs that naturally occur in the Earth's atmosphere are water vapor, carbon dioxide (CO₂), methane (CH₄), oxides of nitrogen (NO_x), and ozone. Anthropogenic (human-caused) GHG emissions include releases of these GHGs plus release of human-made gases with high global warming potential (GWP) (ozone-depleting substances such as chlorofluorocarbons [CFCs]⁴ and aerosols, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere. The GWP of a gas

¹ United Nations Environment Programme. Ozone and You. Website: <https://ozone.unep.org/ozone-and-you#:~:text=Manmade%20chemicals%20containing%20halogens%20were,daily%20lives%20around%20the%20world>. Accessed December 13, 2023.

² United States Environmental Protection Agency (EPA). What Is the Phaseout of Ozone-Depleting Substances? Website: <https://www.epa.gov/ods-phaseout/what-phaseout-ozone-depleting-substances>. Accessed December 13, 2023.

³ Ibid.

⁴ CFCs destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited CFCs production in 1987.

is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, carbon dioxide (CO₂).

Individual GHG compounds have varying potential for contributing to global warming. For example, methane is 25 times as potent as CO₂, while sulfur hexafluoride is 22,200 times more potent than CO₂ on a molecule-per-molecule basis. To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method for comparing GHG emissions is the GWP methodology defined in the Intergovernmental Panel on Climate Change (IPCC) reference documents.⁵ The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalents (CO₂e), which compares the gas in question to that of the same mass of CO₂ (by definition, CO₂ has a GWP of 1). The GWP of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. Thus, to describe how much global warming a given type and amount of GHG may cause, the CO₂e is used. A CO₂e is the mass emissions of an individual GHG multiplied by its GWP. As such, a high GWP represents high absorption of infrared radiation and a long atmospheric lifetime compared to CO₂. One must also select a time horizon to convert GHG emissions to equivalent CO₂ emissions to account for chemical reactivity and lifetime differences among various GHG species. The standard time horizon for climate change analysis is 100 years. Generally, GHG emissions are quantified in terms of metric tons (MT) of CO₂e (MT CO₂e) emitted per year.

Units commonly used to describe the concentration of GHGs in the atmosphere are parts per million (ppm), parts per billion (ppb), and parts per trillion (ppt), referring to the number of molecules of the GHG in a sampling of 1 million, 1 billion, or 1 trillion molecules of air. Collectively, HFCs, PFCs, and sulfur hexafluoride are referred to as high GWP gases. CO₂ is by far the largest component of worldwide CO₂e emissions, followed by methane, nitrous oxide, and high GWP gases, in order of decreasing contribution to CO₂e.

The primary human processes that release GHGs include the burning of fossil fuels for transportation, heating, and electricity generation; agricultural practices that release methane, such as livestock grazing and crop residue decomposition; and industrial processes that release smaller amounts of high GWP gases. Deforestation and land cover conversion have also been identified as contributing to global warming by reducing the Earth's capacity to remove CO₂ from the air and altering the Earth's albedo or surface reflectance, thus allowing more solar radiation to be absorbed. Specifically, CO₂ emissions associated with fossil fuel combustion are the primary contributors to human-induced climate change. CO₂, methane, and nitrous oxide emissions associated with human activities are the next largest contributors to climate change.

Global Climate Change Issue

Climate change is a global problem because GHGs are global pollutants, unlike criteria air pollutants and hazardous air pollutants (also called toxic air contaminants), which are pollutants of regional and local concern. Pollutants with localized air quality effects have relatively short atmospheric lifetimes, approximately 1 day; by contrast, GHGs have long atmospheric lifetimes, several years to several

⁵ United Nations Intergovernmental Panel on Climate Change, United Nations. 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Geneva, Switzerland.

thousand years. GHGs persist in the atmosphere for a long enough time to be dispersed around the globe.

Although the exact lifetime of any particular GHG molecule depends on multiple variables and cannot be pinpointed, more CO₂ is currently emitted into the atmosphere than is sequestered. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through photosynthesis and dissolution, respectively. These are two of the most common processes of CO₂ sequestration. Of the total annual human-caused CO₂ emissions, approximately 54 percent is sequestered through ocean uptake, Northern Hemisphere forest regrowth, and other terrestrial sinks within a year, whereas the remaining 46 percent of human-caused CO₂ emissions is stored in the atmosphere.⁶

Similarly, effects of GHGs are borne globally, as opposed to the localized air quality effects of criteria air pollutants and hazardous air pollutants. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known and cannot be quantified, and no single project would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global or local climates or microclimate.

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. A cumulative discussion and analysis of project impacts on global climate change is presented in this Draft EIR because, although it is unlikely that a single project will contribute significantly to climate change, cumulative emissions from many projects affect global GHG concentrations and the climate system.

Although the international, national, State, and regional communities are beginning to address GHGs and the potential effects of climate change, worldwide GHG emissions will likely continue to rise over the next decades.

Climate and Topography

Climate is the accumulation of daily and seasonal weather events over a long period of time, whereas weather is defined as the condition of the atmosphere at any particular time and place. For a detailed discussion of existing regional and project site climate and topography, see Section 3.2, Air Quality.

Existing GHG Emissions

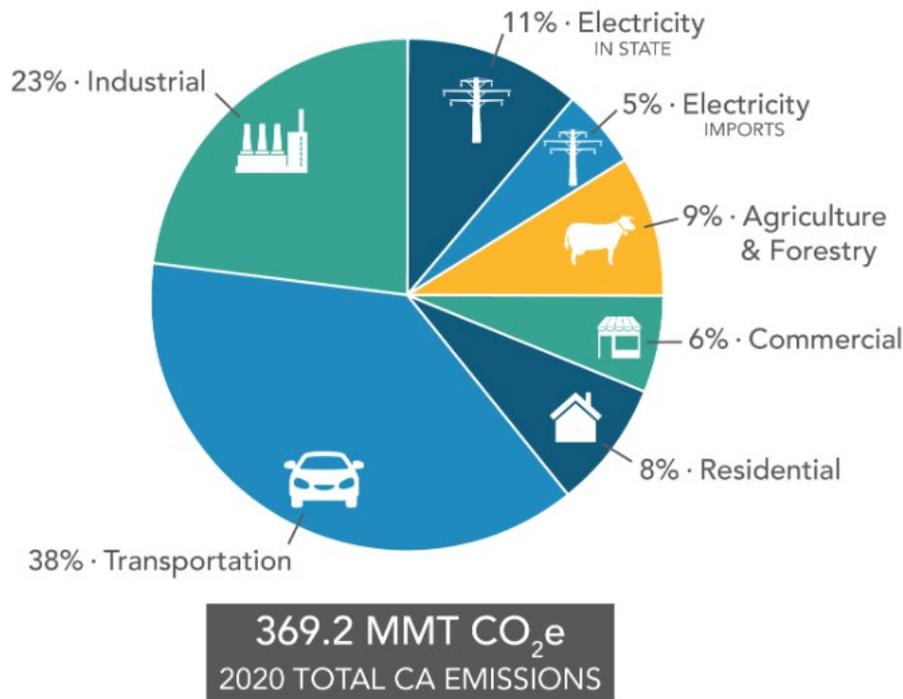
California GHG Inventory

As the second largest emitter of GHG emissions in the U.S. and the twelfth to sixteenth largest GHG emissions emitter in the world, California contributes a large quantity (369.3 MMT CO₂e in 2020) of GHG emissions to the atmosphere.⁷ Emissions of CO₂ are byproducts of fossil fuel combustion and are attributable in large part to human activities associated with transportation, industry/manufacturing, electricity and natural gas consumption, and agriculture. In California, the

⁶ Seinfeld, J. H. and S.N. Pandis. 1998. Atmospheric Chemistry and Physics from Air Pollution to Climate Change. John Wiley & Sons.

⁷ California Air Resources Board (ARB). 2022. California Greenhouse Gas Emission Inventory – 2020 Edition. Website: <https://ww2.arb.ca.gov/ghg-inventory-data>. Accessed November 24, 2023.

transportation sector is the largest emitter at 38 percent of GHG emissions, followed by industry/manufacturing at 23 percent of GHG emissions (Figure 3.7-1).⁸



Source: California Air Resources Board (ARB). 2022. California Greenhouse Gas Emission Inventory—2020 Edition. Website: <https://ww2.arb.ca.gov/ghg-inventory-data>. Accessed November 24, 2023.

Figure 3.7-1: 2020 California Greenhouse Gas Emissions by Sector

Alameda County

Based on the draft Alameda County Community Action Plan update,⁹ the County's 2019 baseline inventory emissions were approximately 950,235 MT CO₂e.¹⁰ On-road transportation, which includes emissions from all vehicle miles traveled associated with vehicles registered in the unincorporated County, was the major source accounting for 73 percent of the total. The second source is residential building energy (13 percent). The remainder sources of emissions include nonresidential building energy (6 percent), agricultural (3 percent), off-road vehicles and equipment (3 percent), solid waste (second percent), wastewater treatment (less than 1 percent), and water supply (less than 1 percent).

⁸ California Air Resources Board (ARB). 2022. California Greenhouse Gas Emission Inventory – 2020 Edition. Website: <https://ww2.arb.ca.gov/ghg-inventory-data>. Accessed November 24, 2023.

⁹ Not yet adopted at the time of this writing.

¹⁰ Alameda County. 2023. Draft Community Climate Action Plan. October. Website: <https://www.acgov.org/cda/planning/documents/Draft-Community-Climate-Action-Plan.pdf>. Accessed December 13, 2023.

Climate Change Trends and Effects

CO₂ accounts for more than 75 percent of all anthropogenic GHG emissions, the atmospheric residence time of CO₂ is decades to centuries, and global atmospheric concentrations of CO₂ continue to increase at a faster rate than ever previously recorded. Thus, the warming impacts of CO₂ will persist for hundreds of years after mitigation is implemented to reduce GHG concentrations.

Substantially higher temperatures, more extreme wildfires, and rising sea levels are just some of the direct effects experienced in California.^{11,12} As reported by the California Natural Resources Agency in 2009, despite annual variations in weather patterns, California has seen a trend of increased average temperatures, more extreme hot days, fewer cold nights, longer growing seasons, less winter snow, and earlier snowmelt and rainwater runoff. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and a larger proportion of total precipitation is falling as rain instead of snow.¹³ Sea level rose by as much as 7 inches along the California coast over the last century, leading to increased erosion and adding pressure to the State's infrastructure, water supplies, and natural resources.

These observed trends in California's climate are projected to continue in the future. Research indicates that California will experience overall hotter and drier conditions with a continued reduction in winter snow (with concurrent increases in winter rains), as well as increased average temperatures and accelerating sea level rise. The frequency, intensity, and duration of extreme weather events such as heat waves, wildfires, droughts, and floods will also change.¹⁴ In addition, increased air pollution and spread of insects potentially carrying infectious diseases will also occur as the climate-associated temperature and associated species clines shift in latitude.

The following is a summary of climate change factors and predicted trends specific to California.

In California, climate change may result in consequences such as the following.^{15,16}

- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much

¹¹ California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008. Website:

http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf. Accessed November 22, 2023.

¹² California Energy Commission (CEC). 2012. Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California. Website: <http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>. Accessed November 22, 2023.

¹³ California Energy Commission (CEC). 2006. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004. Draft Final Report. CEC-600-2006-013-D. Website: <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-D.PDF>. Accessed November 22, 2023.

¹⁴ California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008. Website: http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf. Accessed November 22, 2023.

¹⁵ California Climate Change Center. (CCCC). 2006. Our Changing Climate, Assessing the Risks to California: A Summary Report from the California Climate Change Center. July 2006. CEC-500-2006-077. Website: <https://www.engr.scu.edu/~emaurer/papers/CEC-500-2006-077.pdf>. Accessed March 7, 2024.

¹⁶ Moser et al. 2009. Moser, Susie, Guido Franco, Sarah Pittiglio, Wendy Chou, Dan Cayan. 2009. The Future Is Now: An Update on Climate Change Science Impacts and Response Options for California. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2008-071. Website: www.energy.ca.gov/2008publications/CEC-500-2008-071/CEC-500-2008-071.PDF.

as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.

- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of Southern California are estimated to increase by approximately 30 percent toward the end of the 21st Century because more winter rain will stimulate the growth of more plant “fuel” available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more Northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today’s conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California’s coast have risen about 7 inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California’s forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

3.7.3 - Regulatory Framework

Regulations relevant to the analysis are discussed below.

Federal

Safer Affordable Fuel-Efficient Vehicles Rule

On September 27, 2019, the United States Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. The SAFE Rule Part One revokes California’s authority to set its own GHG emissions standards and to adopt its own Zero-Emission Vehicle (ZEV) mandates. On April 30, 2020, the EPA and the NHTSA published Part Two of the SAFE Vehicles Rule, which revised corporate average fuel economy and CO₂ emissions standards for passenger cars and trucks of model years 2021-2026, such that the standards increase by approximately 1.5 percent each year

through model year 2026, as compared to the approximately 5 percent annual increase required under the 2012 standards.¹⁷

State

Assembly Bill 1493 Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required the California Air Resources Board (ARB) to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the United States District Court for the District of Columbia in 2011.¹⁸ The standards were to be phased in during the 2009 through 2016 model years.¹⁹

The second phase of the implementation for the Pavley Bill was incorporated into Amendments to the Low Emission Vehicle (LEV) Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car Program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation is anticipated to reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery-electric cars, newly emerging plug-in hybrid EVs and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.²⁰

Advanced Clean Cars II was adopted in November 2022. The Advanced Clean Cars II regulations will rapidly scale down light-duty passenger car, pickup truck and SUV emissions starting with the 2026 model year through 2035. The regulations are two-pronged. First, they amend the ZEV Regulation to require an increasing number of ZEVs, and rely on currently available advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric and plug-in hybrid electric-vehicles, to meet air quality and climate change emissions standards. These amendments support Governor Newsom's 2020 Executive Order N-79-20 that requires all new passenger vehicles sold in California to be zero emissions by 2035. Second, the Low-emission Vehicle Regulations were amended to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions.

¹⁷ National Highway Traffic Safety Administration. 2020. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. March. Website: [https://www.nhtsa.gov/corporate-average-fuel-economy/safe#:~:text=The%20Safer%20Affordable%20Fuel%2DEfficient%20\(SAFE\)%20Vehicles%20Rule%2C,model%20years%202021%20through%202026](https://www.nhtsa.gov/corporate-average-fuel-economy/safe#:~:text=The%20Safer%20Affordable%20Fuel%2DEfficient%20(SAFE)%20Vehicles%20Rule%2C,model%20years%202021%20through%202026). Accessed November 28, 2023.

¹⁸ California Air Resources Board (ARB). 2013. California's Greenhouse Gas Vehicle Emission Standards Under Assembly Bill 1493 of 2002 (Pavley). Website: <http://www.arb.ca.gov/cc/ccms/ccms.htm>. Accessed February 26, 2024.

¹⁹ California Air Resources Board (ARB). Advanced Clean Cars Summary. Website: https://ww2.arb.ca.gov/sites/default/files/2019-12/acc%20summary-final_ac.pdf. Accessed February 26, 2024.

²⁰ California Air Resources Board (ARB). 2011. Status of Scoping Plan Recommended Measures. Website: https://calcarbondash.org/cc/scopingplan/sp_measures_implementation_timeline.pdf. Accessed February 26, 2024.

In October 2023, staff launched a new effort to consider potential amendments to the Advanced Clean Cars II regulations, including updates to the tailpipe greenhouse gas emission standard and limited revisions to the Low-emission Vehicle and ZEV regulations.

These regulations rapidly scale down emissions of light-duty passenger cars, pickup trucks and SUVs and require an increased number of ZEVs to meet air quality and climate change emissions goals.

Assembly Bill 32

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020.

“Greenhouse gases” as defined under AB 32 include CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs.

The ARB is the State agency charged with monitoring and regulating sources of GHGs. The ARB approved the 1990 GHG emissions level of 427 MMT CO₂e on December 6, 2007.²¹ Therefore, to meet the State’s target, emissions generated in California in 2020 are required to be equal to or less than 427 MMT CO₂e. Emissions in 2020 in a Business as Usual (BAU) scenario were estimated to be 596 MMT CO₂e, which do not account for reductions from AB 32 regulations.²² At that rate, a 28 percent reduction was required to achieve the 427 MMT CO₂e 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. Under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.²³ On July 11, 2018, the ARB announced that the State met its target of reducing GHG emissions to 1990 levels.²⁴

California Air Resources Board Scoping Plan

The ARB Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State’s emissions to 1990 levels by the year 2020 to comply with AB 32.²⁵ The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target included energy efficiency programs, renewable energy expansion, Cap-and-Trade, establishing targets for transportation-related GHGs, and the high GWP fee program.

²¹ California Air Resources Board (ARB). 2007. Staff Report. California 1990 Greenhouse Gas Level and 2020 Emissions Limit. November 16, 2007. Website: www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf. Accessed February 26, 2024.

²² California Air Resources Board (ARB). 2008. (includes edits made in 2009) Climate Change Scoping Plan, a framework for change. Website: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed February 26, 2024.

²³ California Air Resources Board (ARB). GHG 2020 Business-as-Usual Emissions Projection. 2014 Edition BAU Emissions Projection. Website: <https://ww2.arb.ca.gov/ghg-bau>. Accessed February 26, 2024.

²⁴ California Air Resources Board. 2018. Climate Pollutants Fall Below 1990 Levels for First Time. Website: <https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time#:~:text=SACRAMENTO%20%E2%80%93%20The%20California%20Air%20Resources,gallons%20of%20gasoline%20a%20year.time>. Accessed February 26, 2024.

²⁵ California Air Resources Board (ARB). 2008. (includes edits made in 2009) Climate Change Scoping Plan, a framework for change. Website: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed February 26, 2024.

The ARB approved the First Update to the Scoping Plan on May 22, 2014. The First Update built upon the Initial Scoping Plan with new strategies and recommendations.

Senate Bill 375—the Sustainable Communities and Climate Protection Act of 2008

Senate Bill (SB) 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, “Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32.” SB 375 does the following: (1) requires Metropolitan Planning Organizations (MPOs) to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Senate Bill 32 and the 2017 Climate Change Scoping Plan Update

The Governor signed SB 32 in September 2016, giving the ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the 2017 Scoping Plan Update. SB 32 states that “In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the State [air resources] board shall ensure that Statewide greenhouse gas emissions are reduced to at least 40 percent below the Statewide greenhouse gas emissions limit no later than December 31, 2030.” The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017.

2022 ARB Scoping Plan

The 2022 Scoping Plan²⁶ establishes a scenario by which the State may achieve carbon neutrality by 2045 or earlier, and it outlines a technologically feasible, cost-effective, and equity-focused path for achieving this climate target. The 2022 Scoping Plan addresses the latest climate-related legislation and direction from current Governor Gavin Newsom, who, by his signing of AB 1279, required the State to reduce Statewide anthropogenic GHG emissions to at least 85 percent below 1990 levels by 2045 and to maintain net negative GHG emissions thereafter. The 2022 Scoping Plan relies on the aggressive reduction of fossil fuels in all Statewide sectors and accelerating existing carbon reduction programs. Aspects of the 2022 Scoping Plan’s scenario include:

- Rapidly moving to zero-emission transportation by electrifying cars, buses, trains, and trucks.
- Phasing out the use of fossil gas used for heating homes and buildings.
- Clamping down on chemicals, refrigerants, and other high GWP gases.
- Providing communities with sustainable options for walking, biking, and public transit to reduce reliance on cars.
- Continuing to develop solar arrays, wind turbine capacity, and other resources that provide clean, renewable energy.

²⁶ California Air Resources Board. 2022 Scoping Plan. Website: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>. Accessed November 26, 2023.

- Scale up options such as renewable hydrogen and biomethane for end uses that are hard to electrify.

ARB estimates that successfully achieving the outcomes called for by the 2022 Scoping Plan will reduce demand for liquid petroleum by 94 percent and total fossil fuel by 86 percent in 2045, relative to 2022. The 2022 Scoping Plan also emphasizes the role of natural and working lands and carbon capturing technologies to address residual emissions and achieve net negative emissions.

Senate Bill 350: Clean Energy and Pollution Reduction Act

As enacted in 2015, this law establishes clean energy, clean air, and GHG emissions reduction goals, as well as increasing California’s renewable electricity procurement goals from 33 percent to 50 percent by 2030. The bill further requires the State to double the energy efficiency in existing buildings by 2030.²⁷

Senate Bill 100: Renewable Portfolio Standard Program

On September 10, 2018, former Governor Newsom signed SB 100, requiring California electricity utility providers to supply all in-state end users with electricity sourced from renewable or carbon-free sources by 2045. Specifically, SB 100 accelerates previously established renewable goals and requires that the program achieve 100 percent of electricity sourced from carbon-free sources by the end of 2045, with interim milestones of 50 percent by the end of 2026 and 60 percent by 2030.

Executive Orders Related to GHG Emissions

California’s Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the State and guide the actions of State agencies.

Executive Order S-3-05

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S3-05, the following reduction targets for GHG emissions:

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

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an Executive Order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07—Low Carbon Fuel Standard

The Governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a Statewide goal shall be established to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020. In particular, the Executive Order established a low carbon fuel standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of

²⁷ California Legislative Information (California Leginfo). 2015. Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015. Website: https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed August 9, 2023.

the California Energy Commission (CEC), ARB, University of California, and other agencies to develop and propose protocols for measuring the “lifecycle carbon intensity” of transportation fuels. The ARB adopted the LCFS on April 23, 2009.

The LCFS was subject to legal challenge in 2011. Ultimately, on August 8, 2013, the Fifth District Court of Appeal (California) ruled that the ARB failed to comply with California Environmental Quality Act (CEQA) and the Administrative Procedure Act when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal directed that Resolution 09-31 and two Executive Orders of the ARB approving LCFS regulations promulgated to reduce GHG emissions be set aside. However, the Court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, the ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The Final Rulemaking Package adopting the regulation was filed with the Office of Administrative Law (OAL) on October 2, 2015. The OAL approved the regulation on November 16, 2015. In 2018, the Board 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 ZEV adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.²⁸

Executive Order B-30-15

On April 29, 2015, former Governor Edmund G. Brown Jr. issued an Executive Order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor’s Executive Order aligns California’s GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Executive Order sets a new interim Statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MT CO₂e. The Executive Order also requires the State’s climate adaptation plan to be updated every 3 years and for the State to continue its climate change research program, among other provisions.

Executive Order N-79-20

Executive Order N-79-20 directs the State to require that, by 2035, all new cars and passenger trucks sold in California be ZEVs.²⁹

²⁸ California Air Resource Board (ARB). 2023. LCFS Regulation. Website: <https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/lcfs-regulation>. Accessed February 26, 2024.

²⁹ Executive Department State Of California. 2020. Executive Order N-79-20.

ARB Advanced Clean Truck and Advanced Clean Fleet Regulations

The Advanced Clean Truck Regulation and recently approved Advanced Clean Fleets (ACF) regulation are part of a holistic approach to accelerate a large-scale transition of zero-emission medium and heavy-duty vehicles. Together, these regulations will transition California’s truck fleet to ZEV by 2045. The regulation has a manufacturer sales requirement; by 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. The rule also has a company and fleet requirement that gathers information about shipments and shuttle services. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

ARB Advanced Clean Cars II Rule

Adopted by the ARB in August 2022, the Advanced Clean Cars II regulation supports the implementation of Executive Order N-79-20 and requires that by 2035, all new passenger cars, trucks, and SUVs sold in California will be zero emissions.³⁰

Small Off-Road Engine Regulations

Small Off-Road Engine (SORE) Regulations will require that most newly manufactured SORE, such as those found in leaf blowers, lawn mowers, and other equipment, be zero-emission starting in 2024. Despite their small size, these engines are highly polluting. The volume of smog-forming emissions from this type of equipment has surpassed emissions from light-duty passenger cars and is projected to be nearly twice those of passenger cars by 2031. Portable generators, including those in recreational vehicles, would be required to meet more stringent standards in 2024 and meet zero-emission standards starting in 2028.³¹ Engines that use diesel fuel and engines that are used in stationary equipment, including standby generators, are not subject to the SORE regulations.

Large Spark Ignition Regulation

The Large Spark Ignition Fleet Rule and Amendments, commonly referred to as the “Forklift Rule” applies to forklifts, sweeper/scrubbers, industrial tow tractors, and airport ground support equipment. It applies to fleets (four or more vehicles) and includes off-road gasoline, propane, liquefied petroleum gas (LPG), compressed natural gas, and electric forklifts ≥ 25 hp.³² The regulation sets fleet average emission level requirements that decrease each year to encourage the use of electric vehicle (EV) and low-emissions engines.

The ARB is currently working on drafting a zero-emission forklift measure to drive greater deployment of zero-emission forklifts within fleets throughout the State. The intent of this proposed rule is to phase out any propane forklifts 13 years or older beginning in 2026 for use in California. The new change would also mean facilities would not be able to purchase new propane forklifts

³⁰ California Air Resource Board (ARB). Proposed Advanced Clean Cars II Regulations. Website: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii>. Accessed November 30, 2023.

³¹ California Air Resources Board (ARB). 2021. CARB Approves Updated Regulations Requiring Most New Small Off-Road Engines be Zero-Emission by 2024. Website: <https://ww2.arb.ca.gov/news/carb-approves-updated-regulations-requiring-most-new-small-road-engines-be-zero-emission-2024>. Accessed February 26, 2024.

³² California Air Resources Board (ARB). 2023. Large Spark-Ignition Fleet Regulation Overview. Website: <https://ww2.arb.ca.gov/sites/default/files/offroadzone/landing/lsi.html>. Accessed November 21, 2023.

beginning 2026. The measure is currently in rulemaking and scheduled for Board consideration in Summer 2024.³³

California Regulations and Building Standards Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California’s energy consumption relatively flat even with rapid population growth.

California Code of Regulations Title 13: Motor Vehicles

California Code of Regulations, Title 13: Division 3, Chapter 10, Article 1, Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.³⁴ This measure seeks to reduce public exposure to diesel particulate matter (DPM) and other air contaminants by establishing idling restrictions, emission standards, and other requirements for heavy-duty diesel engines and alternative idle-reduction technologies to limit the idling of diesel-fueled commercial motor vehicles. Any person that owns, operates, or causes to operate any diesel-fueled commercial motor vehicle must not allow a vehicle to idle for more than 5 consecutive minutes at any location or operate a diesel-fueled auxiliary power system for greater than 5 minutes at any location when within 100 feet of a restricted area.

California Code of Regulations, Title 13: Division 3, Chapter 9, Article 4.8, Section 2449: General Requirements for In-Use Off-Road Diesel-Fueled Fleets. This measure regulates NO_x, DPM, and other criteria pollutant emissions from in-use, off-road diesel-fueled vehicles. This measure also requires each fleet to meet fleet average requirements or demonstrate that it has met “Best Available Control Technology” requirements. Additionally, this measure requires medium and large fleets to have a written idling policy that is made available to operators of the vehicles informing them that idling is limited to 5 consecutive minutes or less.

Title 20 Appliance Efficiency Regulations

California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

Title 24 Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and

³³ California Air Resources Board (ARB). 2023. Website: <https://ww2.arb.ca.gov/our-work/programs/zero-emission-forklifts>. Accessed November 21, 2023.

³⁴ California Air Resource Board (ARB). Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. Website: <https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling>. Accessed February 26, 2024.

possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. CEC approved the latest 2022 Energy Code, which became effective on January 1, 2023.³⁵ All newly constructed buildings shall have solar photovoltaics (PV) system installed, including high-rise multifamily housing, offices, retail, warehouse, and hotel uses.

Title 24 California Green Building Standards Code

California Code of Regulations Title 24 Part 11 code is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings. The code is updated on a regular basis, with the current version consisting of the 2022 California Green Building Code Standards Code (CALGreen) that became effective January 1, 2023.³⁶ Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. California Building Standards Code (CBC) provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

CALGreen standards distinguish between residential and nonresidential occupancy. Recent additions to the code are requirements related to EV charging infrastructure, water conservation and recycling, and changes made to avoid conflicts with California energy efficiency standards under Title 24, Part 6. Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. The CBC provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

The latest update, 2022 California Green Building Standards Code went into effect on January 1, 2023. The revised code significantly increases the Mandatory Measures for EV charging requirements for both new residential and commercial buildings. The 2022 standards would require mixed-fuel, single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.³⁷

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The bill required local agencies to adopt a local Landscape Ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected under the Ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (Executive Order B-29-15) directed the California Department of Water Resources to update the Ordinance through expedited regulation. The California

³⁵ California Energy Commission (CEC). 2022 Building Energy Efficiency Standards. Website: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed November 30, 2023.

³⁶ California Energy Commission (CEC). 2021. CEC Approves 2022 CALGreen Building Standards Code. Website: <http://calenergycommission.blogspot.com/2021/10/cec-approves-2022-calgreen-building.html>. Accessed November 30, 2023.

³⁷ California Energy Commission. 2021, May 19. Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

Water Commission approved the revised Ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems.
- Incentives for graywater usage.
- Improvements in on-site stormwater capture.
- Limits on the portion of landscapes that can be planted with high water use plants.
- Reporting requirements for local agencies.

Senate Bill 97 and the CEQA Guidelines Revisions

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. SB 97 states “(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a).”

The 2010 CEQA Amendments first guided public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The 2010 CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change. The 2010 CEQA Amendments also revised Appendix F of the CEQA Guidelines, which focuses on energy conservation, and the sample environmental checklist in Appendix G was amended to include GHG questions.

- The most recent 2018 CEQA Amendments expanded upon the previous guidance by specifying that:
 - The lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project’s emissions to the effects of climate change. A project’s incremental contribution may be cumulatively considerable even if it appears relatively small compared to Statewide, national, or global emissions. The agency’s analysis should consider a timeframe that is appropriate for the project. The agency’s analysis also must reasonably reflect evolving scientific knowledge and State regulatory schemes.
 - In determining the significance of impacts, the lead agency may consider a project’s consistency with the State’s long-term climate goals or strategies, provided that substantial evidence supports the agency’s analysis of how those goals or strategies address the project’s incremental contribution to climate change and its conclusion that the project’s incremental contribution is not cumulatively considerable.

A lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has the discretion to select the model or methodology it considers most appropriate to enable decision-makers to intelligently take into account the proposed project’s incremental contribution to climate change. The lead agency must support its selection of a model

or methodology with substantial evidence. The lead agency should explain the limitations of a particular model or methodology selected for use.

California Supreme Court GHG Ruling

In a November 30, 2015, ruling, the California Supreme Court in *Center for Biological Diversity v. California Department of Fish and Wildlife* on the Newhall Ranch project concluded that whether the project was consistent with meeting Statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25-27 of the ruling to address this issue summarized below:

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU.** A lead agency may use a BAU comparison based on the Scoping Plan’s methodology if it also substantiates the reduction a particular project must achieve to comply with Statewide goals (page 25).
- **Compliance with Regulatory Programs or Performance Based Standards.** A lead agency “might assess consistency with AB 32’s goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities” (page 26).
- **Compliance with GHG Reduction Plans or Climate Action Plans.** A lead agency may utilize “geographically specific GHG emission reduction plans” such as Climate Action Plans (CAPs) or GHG emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (page 26).
- **Compliance with Local Air District Thresholds.** A lead agency may rely on “existing numerical thresholds of significance for greenhouse gas emissions” adopted by, for example, local air districts (page 27).

Bay Area Air Quality Management District

Plan Bay Area 2050: Strategy for a Sustainable Region

On October 21, 2021, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) adopted Plan Bay Area 2050, an integrated transportation and land use strategy through 2050 that updates the nine-county region’s long-range plan to meet the requirements of SB 375. Working in collaboration with cities and counties, the Plan Bay Area 2050 advances initiatives to expand housing and transportation choices, create healthier communities, and build a stronger regional economy. Plan Bay Area 2050 remains on track to meet a 20 percent per capita reduction of GHG emissions by 2035 from 2005 conditions.³⁸

³⁸ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. Plan Bay Area 2050. October 21.

Bay Area Air Quality Management District 2050 Climate Resolution Goals

In 2013, the Bay Area Air Quality Management District (BAAQMD) Board of Directors approved a Resolution (No. 2013-11) adopting a GHG goal and a commitment to developing a regional climate protection strategy that commits to the following:

- Setting a goal for the Bay Area region to reduce GHG emissions to 80 percent below 1990 levels by 2050.
- Developing a Regional Climate Protection Strategy to make progress toward the 2050 goal and to complement existing climate action efforts at the State, regional, and local levels.
- Preparing a work program to guide the BAAQMD climate protection activities in the near term.

Bay Area Air Quality Management District 2017 Clean Air Plan

The BAAQMD adopted the 2017 Clean Air Plan on April 19, 2017, to comply with State air quality planning requirements set forth in the California Health and Safety Code. The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants (TACs), to reduce emissions of methane and other “super-greenhouse gases” that are potent climate pollutants in the near term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

The proposed control strategy for the 2017 Clean Air Plan consists of 85 specific control measures targeting a variety of local, regional, and global pollutants. The control measures have been developed for stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and Super GHG pollutants. Implementation of some of the control measures could involve retrofitting, replacing, or installing new air pollution control equipment, changes in product formulations, or construction of infrastructure that have the potential to create air quality impacts.

The BAAQMD CEQA Guidelines set forth criteria for determining consistency with the 2017 Clean Air Plan. In general, a project is considered consistent if the project (1) supports the primary goals of the 2017 Clean Air Plan, (2) includes control measures, and (3) does not interfere with implementation of the 2017 Clean Air Plan measures.

Bay Area Air Quality Management District CEQA Air Quality Guidelines

The purpose of the BAAQMD’s 2022 CEQA Air Quality Guidelines is to assist lead agencies in evaluating air quality and GHG impacts of projects and plans proposed in the Air Basin. The most recent version of the CEQA Air Quality Guidelines was revised April 2023 and includes revisions made to address the Supreme Court’s opinion (*California Building Industry Association v. Bay Area Air Quality Management District*, December 2015).³⁹ The BAAQMD’s 2022 CEQA Air Quality

³⁹ In March 2012, the Alameda County Superior Court ordered BAAQMD to set aside use of the significance thresholds within the BAAQMD 2010 CEQA Guidelines and cease dissemination until they complete an assessment of the environmental effects of the thresholds in accordance with CEQA. The Court found that the thresholds, themselves, constitute a “project” for which

Guidelines contain instructions on how to evaluate, measure, and mitigate air quality impacts generated from land development, construction, and operation activities. They focus on criteria air pollutant, GHG, TAC, and odor emissions generated from plans or projects and are intended to help lead agencies navigate through the CEQA process. The 2022 CEQA Air Quality Guidelines are presented as advisory recommendations based on substantial evidence to assist local agencies.

The BAAQMD’s 2022 CEQA Air Quality Guidelines provide recommended significance thresholds for GHGs for land use development projects and plans. The new thresholds state that if a project would contribute its “fair share” of what will be required to achieve California’s long-term climate goal of carbon neutrality by 2045, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change. The thresholds for new land use projects require projects to meet either of one of two enumerated Criteria “A” or “B” detailed in Table 3.7-1. If a land use development project cannot demonstrate consistency with Criterion A or Criterion B, then that project would result in a potentially significant impact related to the generation of direct and indirect GHG emissions.

Table 3.7-1: BAAQMD Thresholds of Significance for Greenhouse Gases

Thresholds for Land Use Projects (Must Include A or B)
A. Projects must include, at a minimum, the following project design elements:
<ol style="list-style-type: none"> 1. Buildings <ol style="list-style-type: none"> a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development). b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. 2. Transportation <ol style="list-style-type: none"> a. Achieve a reduction in project-generated Vehicle Miles Traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research’s Technical Advisory on Evaluating Transportation Impacts in CEQA: <ol style="list-style-type: none"> i. Residential projects: 15 percent below the existing VMT per capita ii. Office projects: 15 percent below the existing VMT per employee iii. Retail projects: no net increase in existing VMT b. Achieve compliance with off-street electric vehicle (EV) requirements in the most recently adopted version of CALGreen Tier 2.
B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).
Source: Bay Area Air Quality Management District (BAAQMD). 2022. CEQA Guidelines. April 20. Revised November 2023.

environmental review is required. In August 2013, the First District Court of Appeal reversed the Alameda County Superior Court’s decision. The Court held that adoption of the thresholds was not a “project” subject to CEQA because environmental changes that might result from their adoption were too speculative to be considered “reasonably foreseeable” under CEQA. In December 2015, the California Supreme Court reversed the Court of Appeal’s decision and remanded the matter back to the appellate court to reconsider the case in light of the Supreme Court’s opinion.

Project consistency with Criteria A is based on incorporating project design criteria based on key attributes consistent with the 2022 Scoping Plan and states long-term carbon neutrality goals. Projects incorporating these elements would be contributing their “fair share” of what will be required to achieve California’s long-term climate goal of carbon neutrality by 2045. These include criteria for building energy design (elimination of natural gas) as well as criteria related to reduction in transportation emissions via VMT reductions and installation of EV charging infrastructure.

Project consistency with Criterion B involves demonstrating compliance with a local “qualified” GHG plan. CEQA Guidelines Section 15183.5(b) allows projects and plans to be analyzed through a streamlined or tiered approach utilizing an adopted Greenhouse Gas Reduction Plan. A “qualified” reduction strategy capable of being utilized for a streamlined or tiered analysis under CEQA must meet the following requirements:

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan’s progress toward achieving the level and to require amendments if the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

Local Regulations

Alameda County (Unincorporated Areas) Community Climate Action Plan

The Community Climate Action Plan was approved and adopted as an Element of the Alameda County General Plan by the Alameda County Board of Supervisors in 2014.⁴⁰ The CAP outlines a course of action to reduce community-wide GHG emissions generated within the unincorporated areas of Alameda County to 15 percent below 2005 levels by 2020 and to set the County on a path toward reducing emissions to 80 percent below 1990 levels by 2050. The strategies outlined in the CAP provide clear guidance to County staff regarding when and how to implement key provisions of the plan. The strategies and measures established by the CAP aim to reduce GHG emissions in six areas: transportation, land use, building energy, water, waste, and green infrastructure. The measures applicable to the proposed project are as follows:

⁴⁰ Alameda County. 2014. Community Climate Action Plan. February. Website: https://www.acgov.org/cda/planning/generalplans/documents/110603_Alameda_CCAP_Final.pdf. Accessed December 13, 2023.

Building Energy

E-9 Provide incentives for buildings that exceed the California Title 24 standards for energy efficiency by 30 percent (Tier 2).

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

Water

WT-2 Require new landscape projects to reduce outdoor potable water use by 40 percent.

WT-3 Adopt an ordinance that allows the installation and use of greywater (recycled) systems for subsurface irrigation.

Waste

WS-1 Increase solid waste reduction and diversion to 90 percent by 2030.

WS-3 Develop a food waste collection program and an ordinance that requires all household and commercial food wastes and food soiled paper to be placed in organics carts.

East County Area Plan

The East County Area Plan’s (ECAP) goals, objectives, and policies guide development decisions in the east area of the County.⁴¹ The following policies are relevant to the proposed project and are aimed to reduce GHG emission and climate change impacts:

Policy 184 The County shall seek to minimize the total number of Average Daily Traffic (ADT) trips throughout East County.

Policy 190 The County shall require new nonresidential developments in unincorporated areas to incorporate Transportation Demand Management (TDM) measures and shall require new residential developments to include site plan features that reduce traffic trips such as mixed use development and transit-oriented development projects.

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 nonresidential projects, these measures could include Transportation Demand Management programs such as ride sharing and transit promotion; for residential projects, these

⁴¹ Alameda 2040. 2023. Alameda General Plan 2040 Amended June 7, 2022. Website: https://irp.cdn-website.com/f1731050/files/uploaded/AGP_Book_June2022_Amend-1.pdf. Accessed: December 15, 2023.

measures could include site plan features to reduce traffic trip generation such as mixed use development and transit-oriented development.

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

Policy 303 The County shall incorporate the provisions of the Association of Bay Area Governments (ABAG) Bay Area Air Quality Plan and the Bay Area Air Quality Management District (BAAQMD) Air Quality and Urban Development Guidelines into project review procedures.

Policy 305 The County shall cooperate with the BAAQMD and California Air Resources Board in their enforcement of the provisions of the Clean Air Act, State and regional policies, and established standards for air quality.

3.7.4 - Thresholds of Significance

The lead agency utilizes the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether greenhouse emissions impacts are significant environmental effects. Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

3.7.5 - Approach to Analysis

In developing its 2022 GHG significance thresholds, BAAQMD analyzed what new land use development projects will require to achieve California's long-term climate goal of carbon neutrality by 2045, thereby better representing what design elements new land use development projects need to incorporate to sufficiently contribute to achieving the State's goal. As GHG emissions from the land use sector come primarily from building energy use and from transportation, these are the areas that need to be evaluated to determine whether the project can or will be carbon neutral. Because BAAQMD's 2022 GHG significance thresholds are developed to be consistent with State climate goals, if a project incorporates all required design elements and therefore results in a less than significant impact under BAAQMD's GHG thresholds, it follows that the project would also be consistent with State and local policies for GHG emission reduction. Conversely, a project that does not include all design elements required under the BAAQMD GHG significance threshold would not be consistent with the State's climate goals, thereby resulting in a significant GHG impact. Accordingly, the analysis below addresses both Impact GHG-1 and Impact GHG-2.

3.7.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

Greenhouse Gas Emissions and Conflict with Plan, Policy, or Regulation that Reduces Emissions

Impact GHG-1: The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

and

Impact GHG-2: The proposed project would conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Impact Analysis

Both construction and operational activities have the potential to generate GHG emissions. The proposed project would generate GHG emissions during temporary (short-term) construction activities such as site grading, operation of construction equipment, operation of on-site heavy-duty construction vehicles, hauling of materials to and from the project site, asphalt paving, and construction worker vehicle trips. Construction activities would vary over the duration of project construction.

Long-term, operational GHG emissions would result from project-generated vehicular traffic, operation of any landscaping equipment, natural gas combustion for space and water heating, and off-site generation of electrical power over the life of the proposed project, the energy required to convey water to and wastewater from the project site, the emissions associated with the hauling and disposal of solid waste from the project site, and any fugitive refrigerants from air conditioning or refrigerators.

Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough GHG emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact. Therefore, this section measures the proposed project's incremental contribution to the cumulative environmental impact. The following is a discussion of the proposed project's contribution to GHG emissions during both the construction and operation phases. The proposed project's GHG emissions are quantified for informational purposes only.

Construction

At the time of this analysis, the construction of the proposed project was anticipated to begin in March 2025 and end in August 2027. The proposed project includes two design options, Design Option A and Design Option B, in which the off-site improvements are at different locations throughout APN 946-4634-2 and 946-1350-3-10. The GHG construction emission estimates would remain the same under both design options. The proposed project's construction emissions are presented in Table 3.7-2. As vehicle and equipment fuel efficiencies and emission control standards continue to incrementally improve with each year, project construction emissions are likely to decrease nominally from what is shown in Table 3.7-2, should the construction schedule move to later years. Therefore, the construction GHG emissions contained in Table 3.7-2 represent a

conservative assessment of project construction emissions. CalEEMod outputs which detail the GHG emissions during each construction phase are provided in Appendix B.

Table 3.7-2: Proposed Project Construction GHG Emissions

Construction Year	Total MT CO ₂ e per year (approx.)
2025	1,168
2026	1,087
2027	490
2025 and 2026 Off-site improvements	483
Entire Construction Duration (2025-2027)	
Total	3,228
Amortized over 30 years	108
Notes: Because of rounding, total MT CO ₂ e may be marginally different from CalEEMod output. MT CO ₂ e = metric tons of carbon dioxide equivalents Source: Appendix B	

As shown above, the proposed project would generate approximately 3,228 MT CO₂e during construction.

Operation

Operational or long-term emissions occur over the life of the project. Project operations were modeled for the 2027 operational year, immediately following the completion of construction. Sources for operational emissions are summarized below and are described in more detail in Section 3.2, *Air Quality Modeling Parameters and Assumptions*. Sources for operational GHG emissions include:

- **Motor Vehicles:** These emissions refer to GHG emissions contained in the exhaust from the cars and trucks that would travel to and from the project site.
- **Area Sources:** These emissions refer to those produced during activities such as landscape maintenance.
- **Energy-Electricity:** These emissions refer to those generated by off-site power plants to supply electricity required for the project.
- **Energy-Natural Gas:** These emissions refer to the GHG emissions that occur when natural gas is burned on the project site. Natural gas uses could include heating water, space heating, dryers, stoves, or other uses.
- **Water Transport:** These emissions refer to those generated by the electricity required to transport and treat the water to be used on the project site.

- **Waste:** These emissions refer to the GHG emissions produced by decomposing waste generated by the project.

Table 3.7-3 presents the estimated annual GHG emissions from the proposed project’s operational activities. As shown in Table 3.7-3, the proposed project would generate approximately 2,872 MT CO₂e per year after the inclusion of 108 MT CO₂e per year from project construction. CalEEMod outputs which detail the GHG emissions during operation are provided in Appendix B.

Table 3.7-3: Operational Greenhouse Gas Emissions

GHG Emissions Source	GHG Emissions (MT CO ₂ e per year)
Mobile	2,053
Area	6
Energy–Electricity	162
Energy–Natural Gas	478
Water	14
Waste	51
Amortized Construction Emissions	108
Total Annual Project Emissions	2,872
Notes: MT CO ₂ e = metric tons carbon dioxide equivalent Totals were summed using unrounded numbers and may not appear to sum exactly due to rounding. Source: Appendix B.	

Project Impact

Construction

As shown in Section 2, Project Description, the proposed project includes two design options, Design Option A and Design Option B, which share the same improvements (e.g., water storage tank, water treatment plant, bioretention areas), however, they are placed at different locations throughout the east area of the project site. These design options are shown on Exhibit 2-6a and Exhibit 2-6b, respectively. The GHG construction emission estimates and construction-related GHG impacts would remain the same under both design options. BAAQMD does not have thresholds of significance for construction-related GHG emissions. GHG emissions from construction activities are one-time, short-term emissions and therefore would not significantly contribute to long-term cumulative GHG emissions impacts of the proposed project. Therefore, construction emissions would be less than significant.

Operation

As previously discussed, the BAAQMD’s proposed 2022 GHG significance thresholds represent a method for determining whether the proposed project would be cumulatively considerable or

whether the proposed project contributes to solving the cumulative problem of climate change, taking into consideration the State’s long-term climate goal of carbon neutrality by 2045.

Alameda County’s Climate Action Plan meets the BAAQMD requirements for a Qualified GHG Reduction Strategy and is designed to streamline environmental review of future development projects in the County consistent with State CEQA Guidelines Section 15183.5(b) and the BAAQMD CEQA Air Quality Guidelines. However, the County’s Climate Action Plan identifies emission reduction goals to reduce GHG emissions in Alameda County by 15 percent below the 2020 business-as-usual emissions level, consistent with AB 32. The proposed project would not be operational until post-2020; therefore, because the County’s Climate Action Plan was prepared based on the 2020 GHG targets, which are now superseded by the 2030 GHG targets established in SB 32, this analysis conservatively assumes that the County’s Climate Action Plan would not apply for streamlining. Therefore, the proposed project is evaluated against the design elements in Criterion A of BAAQMD’s 2022 GHG Significance thresholds:

All-electric design: The proposed project would include natural gas plumbing and is inconsistent with this design element that prohibits natural gas plumbing and appliances. However, in an effort to minimize future impacts related to emissions from the use of natural gas plumbing and appliances, the proposed project would implement Mitigation Measure (MM) GHG-1, which requires the proposed project to include pre-wiring that would allow for the proposed project to become all-electric and remove the usage of natural gas in the future. Additionally, the proposed project would also address emission impacts of natural gas usage by implementing MM GHG-2, which requires the proposed project to purchase carbon credits to offset the projected emissions from natural gas usage as determined in Table 3.7-3. However, even with the implementation of MM GHG-1 and MM GHG-2, the proposed project would still be inconsistent with this design element at the time of project construction.

Energy efficiency: As demonstrated in Section 3.5, Energy, the proposed project would not result in any wasteful, inefficient, or unnecessary energy usage, therefore the proposed project is consistent with this design element.

VMT: As detailed in Section 3.16, Transportation, the residents of the proposed project would be expected to generate 29.9 VMT per capita daily which is greater than the threshold of 25.9 VMT per capita, or 15 percent below the average VMT per capita for the Alameda County East Planning Area. Implementing a variety of countermeasures would be expected to result in a reduction of VMT between 4.2 to 5.7 percent only. As a result, the proposed project could not achieve the 15 percent VMT reduction as required by BAAQMD thresholds. The proposed project’s VMT impact is significant and unavoidable and is inconsistent with the third design element.

Tier 2 EV Charging Infrastructure: Alameda County currently does not have requirements for the inclusion of EV supply equipment for residential development. The last design element relates to implementation of CALGreen Tier 2 level of EV charging infrastructure, which is beyond the mandatory CALGreen requirement of EV charging spaces. The proposed project

would meet the CALGreen mandatory level of EV charging requirements only, but not CALGreen Tier 2 EV parking levels. Therefore, the proposed project is inconsistent with the fourth design element.

In summary, the proposed project would satisfy one of the four design elements as outlined in the BAAQMD GHG threshold Criterion A at the time of project construction. However, the proposed project would implement MM GHG-1 and MM GHG-2, which would require pre-wiring for an all-electric design in the future and purchase carbon credits that would help to offset project GHG emissions from the use of natural gas. Therefore, because the proposed project does not demonstrate a 15 percent reduction in resident VMT as required by BAAQMD thresholds and it is not consistent with other BAAQMD design elements, the proposed project's GHG emission impact would be considered potentially significant, even with implementation of MM GHG-1 and MM GHG-2.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GHG-1 Prior to issuance of building permits, the project applicant shall provide documentation (e.g., site plan) to the County to demonstrate that the proposed residential units would include pre-wiring so that each building is ready for a future retrofit to all-electric (e.g., such that electric space heating, water heating, drying, and cooking appliances could be installed).

MM GHG-2 Prior to issuance of building permits, the applicant shall provide documentation to the County to demonstrate purchase of carbon offsets that reduce the project's greenhouse gas (GHG) emissions due to natural gas use, which is estimated to be 478 metric tons carbon dioxide equivalent (MT CO₂e), if no other on-site measures are implemented to further reduce emissions. Based on estimated project life of 30 years, total credits needed to offset emissions below the applicable thresholds would be 14,341 MT CO₂e for the life of the proposed project (or a reduced amount estimated based on implementation of other measures or preparation of refined emission modeling).

The project developer or its designee may purchase and retire carbon offset credits that have been issued by an Offset Project Registry, as defined in 17 California Code of Regulations Section 95802(a), approved by the California Air Resources Board (ARB) in a quantity equal to the operational GHG emissions from natural gas use. Specifically, the carbon offset credits will be issued from Climate Action Reserve, American Carbon Registry, and/or Voluntary Carbon Standard (VERRA) organizations and relevant registries. Carbon offset credits that can be purchased from the aforementioned registries could fund projects, for example purposes only herein, such as hydro power projects and fuel switching projects (i.e., changing the fuels used for energy generation from high GHG-emitting fuels). For an offset to be considered viable, it must exhibit "permanence." To adequately reduce emissions of

GHGs, carbon offsets must be able to demonstrate the ability to counterbalance GHG emissions over the lifespan of a project or “in perpetuity.”

The purchase of GHG credits through voluntary participation in an approved registry must meet the following criteria:

- **Real**—represent reductions actually achieved (not based on maximum permit levels),
- **Additional/Surplus**—not already planned or required by regulation or policy (i.e., not double counted),
- **Quantifiable**—readily accounted for through process information and other reliable data,
- **Enforceable**—acquired through legally-binding commitments/agreements,
- **Validated**—verified through accurate means by a reliable third party, and
- **Permanent**—will remain as GHG reductions in perpetuity.

Additionally, it is important to note that MM TRANS-2a and MM TRANS-2b would be implemented to reduce project-related VMT, which is one of the criteria under BAAQMD’s 2022 GHG threshold (A).

MM TRANS-2a Prior to project operation, the proposed project would implement traffic calming elements on all of the street improvements included in the proposed project.

MM TRANS-2b Prior to project operation, the proposed project would construct approximately 1,000 feet of off-site sidewalk improvements and bicycle lane improvements along Busch Road, which would connect to existing facilities on Busch Road and Ironwood Drive.

Level of Significance After Mitigation

Significant and unavoidable impact.

3.7.7 - Cumulative Impacts

The geographic scope of the cumulative GHG emissions analysis is the San Francisco Bay Area Air Basin, which covers all or portions of the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Sonoma, and Solano. In a larger sense, however, the relevant geographic area is the entire Earth, as explained by the California Supreme Court. “[B]ecause of the global scale of climate change, any one project’s contribution is unlikely to be significant by itself.” (*Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 219.) “With respect to climate change, an individual project’s emissions would most likely not have any appreciable impact on the global problem by themselves, but they would contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. The question therefore becomes whether the proposed project’s incremental addition of greenhouse gases is “cumulatively considerable” in light of the global problem, and thus significant.” (*Id.*, quoting Crockett, Addressing the Significance of Greenhouse Gas Emissions Under CEQA:

California's Search for Regulatory Certainty in an Uncertain World (July 2011) Golden Gate U. Envtl. L.J. 203, 207–208.)

The proposed project would emit new GHG emissions, as would other past, present, and reasonably foreseeable projects within the Air Basin. The BAAQMD provides guidance for evaluating whether a project would contribute its “fair share” of what will be required to achieve California’s long-term climate goal of carbon neutrality by 2045, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change. The analysis showed that the proposed project would have a significant GHG impact and as such would be considered to have cumulatively significant impact as well. Feasible and enforceable mitigation with a nexus to the project’s impact have been identified under Impacts GHG-1 and GHG-2; however, even with implementation of all feasible mitigation, project impacts would be significant. Therefore, the proposed project, in conjunction with other past, present, and reasonably foreseeable future development in the Air Basin and around the world, would result in a significant cumulative GHG emissions impact. The proposed project’s contribution would be cumulatively considerable and thus significant in and of itself.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM GHG-1 and MM GHG-2.

Level of Cumulative Significance After Mitigation

Significant and unavoidable impact.

3.8 - Hazards and Hazardous Materials

3.8.1 - Introduction

This section describes the existing hazards and hazardous materials setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based, in part, on two Phase I Environmental Site Assessments (Phase I ESAs) prepared by Haley and Aldrich Inc. (Haley Aldrich), included in this Draft Environmental Impact Report (Draft EIR) as Appendix F. One Phase I ESA corresponds to the Assessor's Parcel Number (APN) associated with the residential site (APN 946-4634-1) and the other Phase I ESA corresponds to the APNs associated with the off-site improvements (i.e., water storage and booster pump facility, recycled water storage, sewer treatment plant, agricultural irrigation recycled water spray fields, and bioretention areas) (APNs 946-4634-2 and 946-1350-3-10). Both Phase I ESAs are listed below:

- ASTM Phase I Environmental Site Assessment, Arroyo Lago Residential Community, APN 946-4634-1, Pleasanton, California. File No. 0207936-001. July 12, 2023.
- ASTM Phase I Environmental Site Assessment, Arroyo Lago Residential Community, APN 946-4634-2, and 946-1350-3-10, Pleasanton, California. File No. 0207936-001. July 12, 2023.

To supplement the data provided in the Haley Aldrich Phase I ESA, this analysis includes data from the following resources:

- The California Department of Toxic Substances Control (DTSC)
- The California State Water Resources Control Board (State Water Board)
- Regional Water Quality Control Board (RWQCB)
- California Department of Forestry and Fire Protection (CAL FIRE)

The following public comments were received during the Draft EIR Notice of Preparation (NOP) scoping period related to hazards and hazardous materials. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should evaluate emergency access and response times for the project site and adjacent area, including Busch Road.
- The Draft EIR should ensure that open GeoTracker environmental case be closed prior to the approval of the proposed project.
- The Draft EIR should demonstrate compliance with Alameda County General Plan policies regarding natural hazards, man-made hazards, and emergency preparedness.
- The Draft EIR should evaluate Phase I and Phase II hazardous materials reports for the project site.
- The Draft EIR should analyze the Zone 7 Water Agency (Zone 7) easement road being used for emergencies by the Pleasanton-Livermore Fire Department, the Alameda County Sheriff Department, and the Pleasanton Police Department.

- The Draft EIR should test and analyze important land fill for contaminants prior to the proposed project's approval.
- The Draft EIR should evaluate potential air, water, and soil pollutants, such as polyfluoroalkyl substances (PFAS).
- The Draft EIR should reference the history of hazardous materials on the project site, including a hazardous chemical warning posted on El Charro Road.
- The Draft EIR should discuss a possible extension of El Charro Road to Busch Road, which could be necessary for emergency access.
- The Draft EIR should test and analyze the reclamation of Radum Quarry on the project site.
- The Draft EIR should evaluate hazard impacts from natural disasters.
- The Draft EIR should discuss hazardous waste prevention.
- The Draft EIR should provide studies of any filed documents or reports of contaminants.
- The Draft EIR should discuss whether a regulatory agency inspected and/or tested the site for current hazardous waste.

3.8.2 - Environmental Setting

Hazards

A hazard is a situation that poses a level of threat to life, health, property, or the environment. Hazards can be dormant or potential, with only a theoretical risk of harm. However, once a hazard becomes active, it can create an emergency. A hazardous situation that has already occurred is called an incident. Emergency response is action taken in response to an unexpected and dangerous occurrence in an attempt to mitigate its impact on people, structures, or the environment. Emergency situations can range from natural disasters to hazardous materials problems and transportation incidents.

Hazards Materials and Wastes

Hazardous materials include but are not limited to hazardous materials, hazardous substances, and hazardous wastes, as defined in Section 25501 and Section 25117, respectively, of the California Health and Safety Code (HSC). A hazardous material is any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released; and any material that a handler or an administering regulatory agency under Section 25501 has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment. Various properties may cause a substance to be considered hazardous, including:

- Toxicity—causes human health effects;
- Ignitability—has the ability to burn;
- Corrosivity—causes severe burns or damage to materials; and
- Reactivity—causes explosions or generates toxic gases.

Hazardous waste is any hazardous material that is to be discarded, abandoned, or recycled. The criteria that define a material as hazardous also define a waste as hazardous. Specifically, materials and waste may be considered hazardous if they are poisonous (toxic); can be ignited by open flame (ignitable); corrode other materials (corrosive); or react violently, explode, or generate vapors when mixed with water (reactive). Soil or groundwater contaminated with hazardous materials above specified regulatory State or federal thresholds is considered hazardous waste if it is removed from a site for disposal. If handled, disposed, or otherwise handled improperly, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous Building Materials

Many older buildings contain building materials that consist of hazardous materials. These materials include lead-based paint, asbestos-containing material, and polychlorinated biphenyls (PCBs).

Prior to the United States Environmental Protection Agency (EPA) ban in 1978, lead-based paint was commonly used on interior and exterior surfaces of buildings. Disturbances such as sanding and scraping activities, renovation work, gradual wear and tear, old peeling paint, and paint dust particulates have been found to contaminate surface soils or cause lead dust to migrate and affect indoor air quality. Exposure to residual lead can cause severe health effects, especially in children.

Asbestos is a naturally occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the EPA in the 1970s. In addition, many types of electrical equipment contained PCBs as an insulator, including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the EPA banned PCB use in new equipment and began a program to phase out certain existing PCB-containing equipment. For example, fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit.

Hazardous Substances

A hazardous substance can be any biological, natural, or chemical substance, whether solid, liquid, or gas, which may cause harm to human health. Hazardous substances are classified on the basis of their potential health effects, whether acute (immediate) or chronic (long-term). Dangerous goods are classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion, and poisoning. An accident involving dangerous goods could seriously harm human health or damage property or the environment. Harm to human health may happen suddenly (acute), such as dizziness, nausea, and itchy eyes or skin; or it may happen gradually over years (chronic), such as dermatitis or cancer. Some people can be more susceptible than others. Hazardous substances and dangerous goods can include antiseptic used for a cut, paint for walls, a cleaning product for the bathroom, chlorine in a pool, carbon monoxide from a motor vehicle, fumes from welding, vapors

from adhesives, or dust from cement, stone, or rubber operations. Such hazardous substances can make humans very sick if they are not used properly.

Per- and Polyfluoroalkyl Substances

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of chemicals used since the 1940s to make commercial products, including carpets, clothing, food packaging, and cookware because they are waterproof, stain-resistant, and non-stick; they also have been used in fire-retarding foam and various industrial processes.¹ They can be introduced into the body through ingestion of contaminated food or liquid and inhaling or touching products with packaging treated with the substance. They can contaminate drinking water supplies when products containing PFAS are used or spilled on the ground and they migrate into groundwater, and, once in groundwater, PFAS can travel large distances and contaminate drinking water wells. Major sources of PFAS contamination include fire training/fire response sites, military bases, industrial sites, and landfills.

In March 2019, the California State Water Resources Control Board (State Water Board) initiated a Statewide PFAS phased investigation for hundreds of drinking water sources, including Zone 7 and the Livermore District. The Livermore District has 12 groundwater wells within its service area.

In March 2023, EPA issued a proposed national primary drinking water regulation for certain PFAS. The proposed regulation calls for a maximum containment level for PFOS and PFOA of 4 parts per trillion (ppt) each. Four additional PFAS—PFNA, PFHxS, PFBS, and GenX—would have a combined hazard index limit of 1.0; the hazard index calculation would determine if the levels of these PFAS as a mixture pose a potential risk.²

According to the California Water Service (Cal Water) 2022 Water Quality Report for the Livermore District System, prior to issuance of this regulation, Cal Water had already proactively tested active sources in their systems for all six PFAS and took the affected sources out of service until treatment was installed. Thus, none of their active water sources have levels of the six PFAS compounds over current California response levels. The response level, which is the level at which a water system should make operational changes to reduce the concentration of a compound, is set with a margin of protection for all people (including sensitive populations) over a lifetime of exposure.³

On April 10, 2024, the EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS, including individual Maximum Contaminant Levels (MCLs) for PFOA and PFOS at 4 parts per trillion (ppt), individual MCLs for PFHxS, PFNA, and GenX Chemicals at 10 ppt, and an MCL for a mixture of 4 PFAS (PFHxS, PFNA, GenX Chemicals, and PFBS) at no greater than a Hazard Index of 1.0.⁴

¹ United States Environmental Protection Agency (EPA). 2023. Our Current Understanding of the Human Health and Environmental Risks of PFAS. Website: <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>. Accessed February 13, 2024.

² California Water Service (Cal Water). 2022. Water Quality Report for Livermore District, Livermore System. Website: <https://www.calwater.com/docs/ccr/2022/liv-liv-2022.pdf>. Accessed May 7, 2024.

³ California Water Service (Cal Water). 2022. Water Quality Report for Livermore District, Livermore System. Website: <https://www.calwater.com/docs/ccr/2022/liv-liv-2022.pdf>. Accessed May 7, 2024.

⁴ Zone 7 Water Agency. 2024. PFAS Information. Website:

The EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS. Public water systems must monitor for these PFAS and have 3 years to complete initial monitoring (by 2027), followed by ongoing compliance monitoring. Public water systems will have 5 years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs. Primary agencies, such as the State, will have up to 2 years to adopt standards that are no less stringent than the federal standards.⁵

Zone 7 has already begun implementing voluntary changes to meet the MCLGs, including the following actions:

- Reduced the production of our Mocho wellfield by nearly two-thirds,
- Increased our use of surface water,
- Started a conceptual design for a Mocho PFAS treatment facility with the goal of having the facility online in two to three years, which will be Zone 7's third PFAS treatment facility,
- Installed Ion Exchange PFAS Treatment at the Stoneridge Well facility, which is online now, and
- Begun installing Ion Exchange PFAS Treatment at the Chain of Lakes Facility which will be online by the end of 2024.⁶

Hazardous Materials Listing

The Cortese List is a list of known hazardous materials or hazardous waste facilities that meet one or more of the provisions of Government Code Section 65962.5, including:

- The list of hazardous waste and substances sites from the DTSC EnviroStor database.⁷
- The list of Leaking Underground Storage Tank (LUST) sites by county and fiscal year from the State Water Board GeoTracker database.⁸
- The list of solid waste disposal sites identified by the State Water Board with waste constituents exceeding hazardous waste levels outside the waste management unit.⁹

<https://www.zone7water.com/pfas#:~:text=On%20April%2010%2C%202024%2C%20the%20U.S.%20Environmental%20Protection,Zone%207%20has%20been%20doing%20voluntarily%20since%202019>. Accessed July 2, 2024.

⁵ Zone 7 Water Agency. 2024. PFAS Information. Website:

<https://www.zone7water.com/pfas#:~:text=On%20April%2010%2C%202024%2C%20the%20U.S.%20Environmental%20Protection,Zone%207%20has%20been%20doing%20voluntarily%20since%202019>. Accessed July 2, 2024.

⁶ Ibid.

⁷ California Department of Toxic Substances Control (DTSC). Hazardous Waste and Substances Site List (Cortese). Website:

https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITES,FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29. Accessed March 7, 2024.

⁸ California State Water Resources Control Board (State Water Board). List of Leaking Underground Storage Tank Sites from the State Water Board's GeoTracker Database. Website:

https://geotracker.waterboards.ca.gov/search?CMD=search&case_number=&business_name=&main_street_name=&city=&zip=&county=&SITE_TYPE=LUFT&oilfield=&STATUS=&BRANCH=&MASTER_BASE=&Search=Search. Accessed March 7, 2024.

⁹ California Environmental Protection Agency (Cal/EPA). "Cortese" list of solid waste disposal sites identified with waste constituents above hazardous waste levels outside the waste management unit. Website: <https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf>. Accessed March 7, 2024.

- The list of active cease-and-desist orders and cleanup and abatement orders from the State Water Board.¹⁰
- The list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, as identified by the DTSC.¹¹

According to the DTSC EnviroStor and State Water Board GeoTracker databases, the project site is located on the Cortese List. The project site is located on the Former Hanson Aggregates Radum Facility, where mining operations occurred between 1938 and 2001. The Phase I ESAs, prepared for the proposed project and the off-site improvement areas, provide a full history of contamination, as well as cleanup and remediation activities (Appendix F). A brief description of the site history is included below:

- **USL Pleasanton Lakes—Long-Term Monitoring (T1000009398).** *Cleanup Program Site, Open—Long Term Management as of July 18, 2017.* This site is at 3000 Busch Road and is the site of the former Hanson Radum Aggregates Facility. In 1938, Kaiser Sand and Gravel initiated mining operations at the site under Surface Mining Permit 31 (SMP 31); in 1991, Hanson Aggregates purchased the facility and continued mining operations until 2001. The site is currently owned by USL Pleasanton and is regulated by the Alameda County Department of Environmental Health (ACDEH).
- The project site is included in the GeoTracker database and listed under the following case:
- Voluntary Remedial Action Program (VRAP) Case No. RO0003228, USL Pleasanton Lakes—Long-Term Monitoring.

In 2017, ACDEH requested USL Pleasanton, the project site owner, to prepare a Closure Plan to obtain regulatory closure for Area of Concern (AOC) 6 and AOC 7. AOC 6 is within the southern portion of the project site, where the Busch Pit was formerly located. The Busch Pit was a stormwater retention pond that extended approximately 50 to 70 feet below ground surface (bgs). This pond reportedly received surface water runoff diverted from the former mining facility (as well as from two adjacent commercial operations). In 2013, the Busch Pit was backfilled with approximately 367,000 cubic yards of on-site soil; the backfilling activities were overseen by ACDEH, who approved the results. AOC 7 was established based on soil sampling at a boring location referred to as “SS-31,” and is approximately 0.25 mile east of the project site.

In 2017, a Closure Plan and Soil Management Plan were prepared and provided to ACDEH. The Closure Plan concluded that contamination in both AOC 6 and AOC 7 did not pose a risk to human health or the environment using the more conservative Tier 1 Environmental Screening Limit (ESL). On July 18, 2017, ACDEH provided conditional approval for subsequent entitlement, permitting, grading and development of a land use other than the Water Management, Agriculture or Open

¹⁰ California Environmental Protection Agency (Cal/EPA). “Cortese” list of State Water Board sites with active Cease and Desist Orders or Cleanup Abatement Orders. Website: <https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CDOCAOList.xlsx>. Accessed March 7, 2024.

¹¹ California Environmental Protection Agency (Cal/EPA). “Cortese” list of sites subject to Corrective Action pursuant to Health and Safety Code 25187.5. Website: <https://www.calepa.ca.gov/sitecleanup/cortese/section-65962-5a/>. Accessed March 7, 2024.

Space Use specified in the approved reclamation plan under the County Surface Mining Ordinance (SMO) and the California Surface Mining and Reclamation Act of 1975 (SMARA).

On March 2, 2020, the Alameda County Community Development Agency conducted independent research to ensure that land permitted under SMP-31 had been reclaimed ‘consistently and appropriately’ in accordance with SMARA and the County’s SMO. This investigation concluded that substantial evidence exists in the State Resources Control Board’s GeoTracker database and in the ACDEH approval documentation and administrative record to conclude that potential environmental impacts from former mining operations have been adequately investigated and delineated and found not to present an adverse risk to human health or the environment. Thus, ACDEH believes that no threat is imminent from contamination that occurs within AOC 6 or 7, and that no further cleanup was required.¹²

The County’s Community Development Agency Planning Department recorded a mining and aggregate production activities Notice of Completion (NOC) with the County’s Clerk-Recorder Office, which identifies completion of the associated reclamation plan, on June 24, 2022. This NOP establishes that mining operations have ceased, reclamation is certified complete, and no further action is required.

The ACDEH provided clearance of the proposed project contingent upon implementation of the following conditions of approval:

1. Submittal of a Final Soil Import Report to ACDEH for review and approval, documenting soils imported to the project site to restore the form quarry in accordance with the Reclamation Plan being implemented under the oversight of Alameda County Community Development Agency on the Former Aggregates Facility under Surface Mining Permit 31 to facilitate closure of the open environmental cleanup case.
2. Implementation of corrective actions and soil management protocols during site redevelopment.¹³
3. Submittal of project schedule to ACDEH prior to the start of site grading.
4. Submittal of soil import documents to ACDEH prior to import of soil to the site.
5. Submittal of a Stockpile Characterization Sampling, Evaluation, and Reuse plan to ACDEH prior to the reuse of excavated stockpile material on-site.
6. Submittal of a Soil Excavation Report to ACDEH prior to the beginning of construction.

A Final Soil Report (condition No. 1 above) was submitted to ACDEH on March 23, 2020 and determined that it met the condition on July 19, 2023 by ACDEH. The remaining conditions are included as HAZ COA-4a through HAZ COA-4e. Furthermore, the proposed project would require all

¹² Gilford, James. Director, Neighborhood Preservation and Sustainability Department. Deputy Director, Alameda County Community Development Agency. Personal communication: letter: Busch Pit Site—Closure Process for Potential Contamination Areas of Concern. March 2, 2020.

¹³ Gilford, James. Director, Neighborhood Preservation and Sustainability Department. Deputy Director, Alameda County Community Development Agency. Personal communication: letter: Busch Pit Site—Closure Process for Potential Contamination Areas of Concern. March 2, 2020.

necessary permits, including permitting from the State Water Board for the construction and operation of wastewater treatment facilities.

Phase I Environmental Site Assessments

The objective of a Phase 1 ESA is to assess whether known or suspect Recognized Environmental Condition (REC), Historical RECs (HREC), or Controlled RECs (CREC) are associated with the project site. The Phase I ESAs were conducted in conformance with the scope and limitations of the American Society of Testing and Materials (ASTM) E12527-21 Standard Practice for Environmental Site Assessments.

The ASTM E12527-21 Standard defines a REC as (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

The ASTM E12527-21 Standard defines a CREC as a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

Data provided in the Phase I ESAs was collected through site reconnaissance, interviews, a review of applicable environmental database files and information, and historical site use data. No data gaps were identified during the performance of the Phase I ESAs and sufficient information was obtained to identify subject property conditions indicative of releases or threatened releases of hazardous substances and petroleum hydrocarbons.

As stated in Section 3.8.1, *Introduction*, two Phase I ESA reports were prepared for the proposed project: one that corresponds to the APN associated with the project site (APN 946-4634-1) and one that corresponds to the APNs associated with the off-site improvements (i.e., the water storage and booster pump facility, recycled water storage facility, sewer treatment plant, agricultural irrigation fields, and two bioretention areas) (APNs 946-4634-2 and 946-1350-3-10). The Phase I ESAs are included in the Draft EIR as Appendix F.

APN 946-4634-1 (project site)

The Phase 1 ESA for the residential project site revealed no evidence of a REC; however, the Former Hanson Aggregate Radum Facility (discussed above) is considered an open CREC. Four nearby sites were identified as having the potential to have impacted the project site due to their location or status; however, after review of these sites, it was determined that none of them represents a potential concern to the project site. Vapor migration risk was also evaluated, and it was determined that it is unlikely vapor migration currently exists beneath the project site. As discussed above, AOC 6 is in the southern portion of the project site where the Busch Pit was formerly located.

Environmental inspections in 2006 and 2007 led to establishing the Busch Pit area as AOC 6;

however, subsequent soil and groundwater sampling indicates that the subsurface conditions within AOC 6 do not pose a potential risk to human health or the environment.

APNs 946-4634-2 and 946-1350-3-10 (off-site improvements)

The Phase 1 ESA for the off-site improvements revealed no evidence of a REC; however, the Former AOC 7 Hanson Aggregate Radum Facility (discussed above) is considered an open CREC. As discussed above, four nearby sites were identified as having the potential to have impacted the project site due to their location or status, but it was determined that none of them represents a potential concern to the project site. Vapor migration risk was also evaluated, and it was determined that it is unlikely vapor migration currently exists beneath the project site.

As discussed above, APN 946-4634-2 is associated with AOC 7. None of the off-site improvements associated with the proposed project would be built in AOC 7; however, this area has been identified as a potential soil harvest site. AOC 7 is not within the project site; it is approximately 0.25 mile east and is approximately 500 feet northwest of the proposed sewer treatment plant. AOC 7 was established based on soil sampling at a boring location referred to as “SS-31.” Subsequent sampling at boring SS-31 indicates that the AOC indicated by boring SS-31 (AOC 7) does not pose a potential risk to human health or the environment.

Existing Fire Related Conditions and Presence of Hazardous Materials

The CAL FIRE Fire and Resource Assessment Program (FRAP) publishes maps of Fire Hazard Severity Zones (FHSZs) in State Responsibility Areas (SRAs) based on fuel loading, slope, fire weather, and other relevant factors, including areas winds have been identified by CAL FIRE as a major cause of wildfire spread. The FHSZ classifies a wildland zone as Moderate, High, or Very High FHSZ based on the average hazard across the area included in the zone.¹⁴

According to the CAL FIRE FRAP map for Alameda County, the project site is not within a FHSZ in an SRA or a Very High FHSZ (VHFHSZ) in a Local Responsibility Area (LRA).¹⁵

Although the project site is not located within a FHSZ in an SRA or a VHFHSZ in an LRA, this section includes a general discussion of fire hazards and hazardous materials. Fire hazards and hazards from hazardous materials are typically site-specific, so existing conditions related to fire hazards and the transport, use, and disposal of hazardous materials are discussed below.

Fire hazards present a considerable problem to vegetation and wildlife habitats throughout the County. Grassland fires are easily ignited, particularly in dry seasons, but they are relatively easily controlled if they can be reached by fire equipment. Burned slopes, however, are highly subject to erosion and gullyng. While brushlands are naturally adapted to frequent light fires, fire protection in recent decades has resulted in heavy fuel accumulation on the ground. Wildfire is a serious hazard in undeveloped areas and on large lot home sites with extensive areas of unirrigated vegetation, particularly near areas of natural vegetation and steep slopes, since fires tend to burn more rapidly

¹⁴ California Department of Forestry and Fire Protection (CAL FIRE). 2023. State Responsibility Area, Fire Hazard Severity Zones in Alameda County. Fire and Resource Assessment Program (FRAP). June 15, 2023. Map. Scale 1:315,000.

¹⁵ Ibid.

on steeper terrain. Wildfire is also a serious hazard in areas of high wind, given that fires will travel faster and farther geographically when winds are higher.

3.8.3 - Regulatory Framework

Federal

Occupational Health and Safety Act

The Occupational Safety and Health Administration (OSHA) of the United States Department of Labor is responsible for implementing and enforcing federal laws and regulations that address worker health and safety. OSHA requires specific training for hazardous materials users and handlers, provision of information (procedures for personal safety, hazardous materials storage and handling, and emergency response) to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets from materials manufacturers. Material safety data sheets describe the risks, as well as proper handling and procedures, related to specific hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures. Construction workers and operational employees at the project site would be subject to these requirements.

Code of Federal Regulations, Titles 29 and 40

Regulations in Code of Federal Regulations Title 29 include requirements to manage and control exposure to lead-based paint and asbestos-containing materials. In California, these requirements are implemented by the California Occupational Safety and Health Administration (Cal/OSHA) under California Code of Regulations Title 8 (see further discussion of California Code of Regulations Title 8 below). The removal and handling of asbestos-containing materials is governed primarily by EPA regulations under Code of Federal Regulations Title 40. The regulations require that the appropriate State agency be notified before any demolition, or before any renovations, of buildings that could contain asbestos or asbestos-containing materials above a specified threshold.

Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act

The EPA is responsible for implementing and enforcing federal laws and regulations pertaining to hazardous materials. The primary legislation includes the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) and the Emergency Planning and Community Right-to-Know Act (known as SARA Title III). RCRA and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and nonhazardous wastes and mandate that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment, including detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities. As permitted by RCRA, in 1992, the EPA approved California's program called the Hazardous Waste Control Law (HWCL), administered by DTSC, to regulate hazardous wastes in California, as discussed further below. The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat, and the Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities. SARA relates primarily to emergency

management of accidental releases and requires annual reporting of continuous emissions and accidental releases of specified compounds that are compiled into a nationwide Toxics Release Inventory. Finally, SARA Title III requires formation of State and local emergency planning committees that are responsible for collecting material handling and transportation data for use as a basis for planning and provision of chemical inventory data to the community at large under the “right-to-know” provision of the law.

Hazardous Materials Transportation Act

Under the Hazardous Materials Transportation Act of 1975, the United States Department of Transportation (USDOT), Office of Hazardous Materials Safety regulates the transportation of hazardous materials on water, rail, highways, through air, or in pipelines, and enforces guidelines created to protect human health and the environment and reduce potential impacts by creating hazardous material packaging and transportation requirements. It also includes provisions for material classification, packaging, marking, labeling, placarding, and shipping documentation. The USDOT provides hazardous materials safety training programs and supervises activities involving hazardous materials. In addition, the USDOT develops and recommends regulations governing the multimodal transportation of hazardous materials.

Aboveground Petroleum Storage Act, and Spill Prevention, Control, and Countermeasure Rule

The Aboveground Petroleum Storage Act of 1990, and the Spill Prevention, Control, and Countermeasure (SPCC) Rule (amended 2010) of the Oil Pollution Prevention regulation (40 Code of Federal Regulations [CFR] 112) require the owner or operator of a tank facility with an aggregate storage capacity greater than 1,320 gallons to notify the local Certified Unified Program Agency (CUPA) and prepare an SPCC plan. The SPCC plan must identify appropriate spill containment measures and equipment for diverting spills from sensitive areas and must discuss facility-specific requirements for the storage system, inspections, recordkeeping, security, and training. In Alameda County, ACDEH is the designated CUPA.

Clean Water Act

The Clean Water Act (CWA) (Title 33 § 1251 *et seq.* of the United States Code [33 USC 1251, *et seq.*]) is the major federal legislation governing water quality. The CWA established the basic structure for regulating discharges of pollutants into waters of the United States (not including groundwater). The objective of the act is “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States. Responsibility for administering the CWA resides with the State Water Board and nine RWQCBs; the San Francisco Bay RWQCB administers the CWA for Alameda County. Section 404 of the CWA regulates temporary and permanent fill and disturbance of waters of the United States, including wetlands. The United States Army Corps of Engineers (USACE) requires that a permit be obtained if a project proposes to place fill in navigable waters and/or to alter waters of the United States below the ordinary high-water mark in non-tidal waters. Section 401 of the CWA requires compliance with State water quality standards for actions within State waters. Compliance with the water quality standards required under Section 401 is a condition for issuance of a Section 404 permit. Under Section 401 of the CWA, every applicant for a permit or license for any activity that may result in a discharge to a water body must obtain a State water

quality certification from the RWQCB to demonstrate that the proposed activity would comply with State water quality standards.

State

California Hazardous Waste Control Law

The HWCL is the primary hazardous waste statute in the State of California and implements RCRA as a “cradle-to-grave” waste management system for handling hazardous wastes in a manner that protects human health and the environment and would reduce potential resulting impacts. The law specifies that generators have the primary duty to determine whether their waste is hazardous and to ensure proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous waste used or reused as raw materials. The law exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of waste and waste management activities that are not covered by federal law.

California Health and Safety Code

The California Health and Safety Code (HSC § 25141) defines hazardous waste as a waste or combination of waste that may:

- . . . because of its quantity, concentration, or physical, chemical, or infection characteristics:
- (1) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitation-reversible illness.
 - (2) Pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of or otherwise managed.

These regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous waste that commonly would be disposed of in landfills.

Under both the RCRA and the HWCL, hazardous waste manifests must be retained by the generator for a minimum of 3 years. The generator must match copies of the manifests with copies of manifest receipts from the treatment, disposal, or recycling facility.

In accordance with Chapter 6.11 of the California Health and Safety Code (HSC § 25404, *et seq.*), local regulatory agencies enforce many federal and State regulatory programs through the CUPA program, including:

- Hazardous Materials Business Plans (HMBPs) (HSC § 25501, *et seq.*).

- State Uniform Fire Code (UFC) requirements (UFC § 80.103, as adopted by the State Fire Marshal pursuant to HSC § 13143.9).
- Underground storage tanks (USTs) (HSC § 25280, *et seq.*).
- Aboveground storage tanks (HSC § 25270.5(c)).
- Hazardous waste-generator requirements (HSC § 25100, *et seq.*).

California Code of Regulations, Title 8

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations. These regulations concern the use of hazardous materials in the workplace, including requirements for employee safety training; availability of safety equipment; accident and illness prevention programs; hazardous substance exposure warnings; and preparation of emergency action and fire prevention plans.

Cal/OSHA also enforces hazard communication program regulations, including procedures for identifying and labeling hazardous substances, and requires that safety data sheets (formerly known as material safety data sheets) be available for employee information and training programs. Cal/OSHA standards are generally more stringent than federal regulations. Construction workers and operational employees at the project site would be subject to these requirements.

California Code of Regulations, Title 8, Section 1529 authorizes Cal/OSHA to implement the survey requirements of Code of Federal Regulations Title 29 relating to asbestos. These federal and State regulations require facilities to take all necessary precautions to protect employees and the public from exposure to asbestos. Workers who conduct asbestos abatement must be trained in accordance with federal and State OSHA requirements. The Bay Area Air Quality Management District (BAAQMD) oversees the removal of regulated asbestos-containing materials (see “Asbestos Demolition, Renovation, and Manufacturing Rule” below).

California Code of Regulations, Title 8, Section 1532.1 includes requirements to manage and control exposure to lead-based paint. These regulations cover the demolition, removal, cleanup, transportation, storage, and disposal of lead-containing material. The regulations outline the permissible exposure limit, protective measures, monitoring, and compliance to ensure the safety of construction workers exposed to lead-based material. Loose and peeling lead-based paint must be disposed of as a State and/or federal hazardous waste if the concentration of lead equals or exceeds applicable hazardous waste thresholds. Federal and State OSHA regulations require a supervisor who is certified with respect to identifying existing and predictable lead hazards to oversee air monitoring and other protective measures during demolition activities in areas where lead-based paint may be present. Special protective measures and notification of Cal/OSHA are required for highly hazardous construction tasks related to lead, such as manual demolition, abrasive blasting, welding, cutting, or torch burning of structures, where lead-based paint is present.

California Code of Regulations Title 22, Division 4.5

California Code of Regulations, Title 22, Division 4.5, contains the Environmental Health Standards for the Management of Hazardous Waste, which includes California waste identification and classification

regulations. California Code of Regulations, Title 22, Chapter 11, Article 3, “Soluble Threshold Limits Concentrations/Total Threshold Limits Concentration Regulatory Limits,” identifies the concentrations at which soil is determined to be a California hazardous waste. California’s Universal Waste Rule (22 California Code of Regulations [CCR] § 66273) provides an alternative set of management standards in lieu of regulation as hazardous wastes for certain common hazardous wastes, as defined in California Code of Regulations, Title 22, Section 66261.9. Universal wastes include fluorescent lamps, mercury thermostats, and other mercury-containing equipment. Existing structures may contain fluorescent light ballasts that could contain mercury or lead. The Alternative Management Standards for Treated Wood Waste (22 CCR § 67386) were developed by the DTSC to allow for disposal of treated wood as a nonhazardous waste, to simplify and facilitate the safe and economical disposal of such waste. Chemically treated wood can contain elevated levels of hazardous chemicals (e.g., arsenic, chromium, copper, pentachlorophenol, or creosote) that equal or exceed applicable hazardous waste thresholds. The Alternative Management Standards provide for less stringent storage requirements and extended accumulation periods, allow shipments without a hazardous waste manifest and a hazardous waste hauler, and allow disposal at specific nonhazardous waste landfills.

Porter-Cologne Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California’s statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State’s waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt water quality control plans (also known as basin plans) for all areas of the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of State Water Board and RWQCBs to adopt and periodically update water quality control plans that recognize and reflect the differences in existing water quality, the beneficial uses of the region’s groundwater and surface water, and local water quality conditions and problems. It also authorizes the State Water Board and RWQCBs to issue and enforce waste discharge requirements and to implement programs for controlling pollution in State waters. Finally, the Porter-Cologne Act also authorizes the State Water Board and RWQCBs to oversee site investigation and cleanup for unauthorized releases of pollutants to soils and groundwater and in some cases to surface waters or sediments.

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the California Governor’s Office of Emergency Services, which coordinates the responses of other agencies. Emergency response team members respond and work with local fire and police agencies, emergency medical providers, the California Highway Patrol (CHP), CAL FIRE, California Department of Fish and Wildlife (CDFW), and California Department of Transportation (Caltrans).

California Department of Forestry and Fire Protection

CAL FIRE has mapped fire threat potential throughout California. CAL FIRE maps fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The threat levels include no fire threat, Moderate, High, and Very High fire threat.

Additionally, CAL FIRE produced a 2019 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California’s natural and built environments. CAL FIRE’s Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Building Code

The State of California provided a minimum standard for building design through the 2022 California Building Standards Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The 2022 CBC is based on the 2021 International Building Code, but has been modified for California conditions. It is generally adopted on a jurisdiction by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and particular types of construction.

California Public Resources Code

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors¹⁶ on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code [PRC] § 4442);
- Appropriate fire suppression equipment would be maintained during the highest fire danger period—from April 1 to December 1 (PRC § 4428);
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC § 4427); and
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (PRC § 4431).

¹⁶ A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

Local

County of Alameda

East County Area Plan

The East County Area Plan (ECAP) is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to geology and soils:

Air Quality

Goal To ensure that air pollution levels do not threaten public health and safety, economic development, or future growth.

Policy 299 The County shall require projects that generate high levels of air pollutants, such as manufacturing facilities, hazardous waste handling operations, drive-through restaurants, and banks to incorporate air quality mitigations in their design.

Policy 302 The County shall include buffer zones within new residential and sensitive receptor site plans to separate those uses away from freeways, arterials, point sources, and hazardous material locations.

Environmental Health and Safety

Goal To minimize the risks to lives and property due to fire hazards.

Policy 318 The County shall limit residential development to very low densities in high fire hazard zones as identified by the Fire Hazard Severity Scale.

Policy 321 The County shall require all new homes in rural residential areas that are located in “high” or “very high” fire hazard areas to be sited and designed to minimize risks to life and property.

Policy 324 The County shall require the use of fire-resistant building materials, fire-resistant landscaping, and adequate clearance around structures in “high” and “very high” fire hazard areas.

Alameda County Emergency Operations Plan

The Alameda County Emergency Operations Plan (EOP) provides an overview of the jurisdiction’s approach to emergency operations. It identifies emergency response policies, describes the response and recovery organization, and assigns specific roles and responsibilities to County departments, agencies, and community partners. The EOP has the flexibility to be used for all emergencies and will facilitate response and recovery activities in an efficient and effective way.

The Alameda County Office of Homeland Security and Emergency Services (OHSES) prepares, coordinates, publishes, and distributes the EOP and any revisions made to it.

3.8.4 - Thresholds of Significance

The lead agency utilizes the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether hazards and hazardous materials impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working the project area?
- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires?

3.8.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Routine Transport, Use, or Disposal of Hazardous Materials

Impact HAZ-1: **The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

Impact Analysis

Construction

During construction activities commercially available hazardous materials (e.g., fuels, solvents, paints, and some consumer electronics) could be used and may temporarily generate small amounts of hazardous waste. However, all new development (construction and operations) would be required to comply with mandatory regulations for hazardous materials adopted by the EPA, OSHA, USDOT, DTSC, Caltrans, CHP, ACDEH, and BAAQMD as described in Section 3.8.3, Regulatory Framework.

Mandatory compliance with applicable regulations would ensure that all impacts would be less than significant.

The Alameda County Fire Department (ACFD) and Alameda County Building Department coordinate review of building permits to ensure hazardous materials requirements are met prior to construction, including required separation between hazardous materials and sensitive land uses and proper hazardous materials storage facilities. The proposed project would also be subject to existing hazardous materials regulations such as those implemented by the local CUPA. The CUPA and ACFD also conduct inspections for fire safety and hazardous materials management of businesses and residential dwellings. Businesses storing or handling hazardous materials over threshold quantities are required to submit HMBPs pursuant to federal, State, and local regulations. These HMBPs must include measures for safe storage, use, and handling of hazardous materials, along with a contingency plan that describes the facility's response procedures in the event of a hazardous materials release.

The disposal of hazardous materials is regulated and monitored by the ACDEH, ACFD, Cal/OSHA, and the DTSC consistent with the requirements of federal, State, and local regulations and policies.

In conclusion, while the proposed project could result in an increase in the transportation, use, and disposal of hazardous materials, the proposed project would be required to comply with applicable requirements and regulations set forth by Alameda County, EPA, OSHA, USDOT, DTSC, Caltrans, CHP, ACDEH, and BAAQMD. Therefore, impacts related to hazards from the routine transportation, use, and disposal of hazardous materials would be less than significant.

Operation

The proposed project operation may require the use and/or storage of common household hazardous materials. Compliance with the applicable laws and regulations would ensure operational impacts would be less than significant.

Additionally, as discussed above, none of Cal Water's active water sources in Livermore District System would have levels of PFAS compounds over current California response levels. The proposed project would not exacerbate or contribute to PFAS levels in its water sources as residential uses are not uses associated with the production of PFAS.¹⁷ At the time this Draft EIR is drafted, the State Water Board has only issued investigative orders to determine existing levels of PFAS in non-drinking water.¹⁸ Cal Water, the provider of water to the drinking, has already proactively tested active sources in their systems for all six PFAS and took the affected sources out of service until treatment was installed. Thus, none of their active water sources have levels of the six PFAS compounds over current California response levels. The proposed water storage and booster pump facility and sewer treatment plant included in the proposed project's off-site improvements would be constructed and operated consistent with federal and State regulations related to PFAS while Cal Water is developing its own regulations. To the extent new PFAS-related regulations or water quality standards are

¹⁷ City of Pleasanton. 2022. City of Pleasanton 2023-2031 (6th Cycle) Housing Element Update, Hydrology and Water Quality.

¹⁸ California State Water Resources Control Board (State Water Board). 2024. PFAS | Per- and Polyfluoroalkyl Substances. Non-Drinking Water PFAS Information and Resources. Website: https://www.waterboards.ca.gov/pfas/non_drinking_water.html. Accessed August 23, 2024.

adopted by the State Water Board or San Francisco Bay RWQCB, those agencies and/or the County, as the Lead Agency, would ensure that the proposed project adheres to all applicable regulations and standards through the standing permitting and oversight processes. Thus, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Risk of Upset

Impact HAZ-2: The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Impact Analysis

Two Phase I ESA reports were prepared for the proposed project: one that corresponds to the APN associated with the project site (APN 946-4634-1) and one that corresponds to the APNs associated with the off-site improvements (i.e., the water storage and booster pump facility, recycled water storage facility, sewer treatment plant, agricultural irrigation fields, and two bioretention areas on APNs 946-4634-2 and 946-1350-3-10). The Phase I ESAs are included in the Draft EIR as Appendix F.

The Phase 1 ESAs revealed no evidence of an REC; however, the Former Hanson Aggregate Radum Facility is considered an open CREC. Four nearby sites were identified as having the potential to have impacted the project site due to their location or status; however, after review of these sites, it was determined that none of them represents a potential concern to the project site. Vapor migration risk was also evaluated, and it was determined that it is unlikely vapor migration currently exists beneath the project site.

As discussed above, AOC 6 is in the southern portion of the residential component of the project site where the Busch Pit was formerly located. Environmental inspections in 2006 and 2007 led to establishing the Busch Pit area as AOC 6; however, subsequent soil and groundwater sampling indicates that the subsurface conditions within AOC 6 do not pose a potential risk to human health or the environment.

As discussed above, APN 946-4634-2 (part of the off-site improvements) is associated with AOC 7. None of the off-site improvements associated with the proposed project would be built in AOC 7; however, this area has been identified as a potential soil harvest site. AOC 7 is not within the residential component of the project site; it is approximately 0.25 mile east and is approximately 500 feet northwest of the proposed sewer treatment plant. AOC 7 was established based on soil sampling at a boring location referred to as “SS-31.” Subsequent sampling at boring SS-31 indicates that the AOC indicated by boring SS-31 (AOC 7) does not pose a potential risk to human health or the environment.

Construction

As discussed in Impact HAZ-1, construction activities would require the use of commercially available hazardous materials and may generate small amounts of hazardous waste. The use, storage, transportation, and disposal of hazardous materials at the project site could result in an accidental release of hazardous materials into the environment. Also noted in Impact HAZ-1, the proposed project would be required to comply with multiple mandatory federal, State, and local regulations, which would reduce the potential for an accidental release of hazardous materials. In the event of an accidental release the ACFD and ACDEH would be notified to respond to address the release. Compliance with applicable mandatory regulations would reduce all potential construction-related impacts to a less than significant level.

Furthermore, as identified by the Phase I ESA, none of the environmental conditions on the project pose a potential risk to human health or the environment. Therefore, construction of the proposed project is not likely to exacerbate any potential reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Operation

The proposed project operation may require the use and/or storage of common household hazardous materials. However, as discussed above, businesses handling or storing hazardous materials over threshold quantities are required to submit an HMBP to the local CUPA (i.e., ACDEH). Transportation and disposal of wastes (such as cleaning solutions) would also be subject to regulations for the safe handling, transportation, and disposal that would include appropriate containerization and labeling, transportation by licensed hazardous materials haulers, and disposal at licensed facilities permitted to accept the waste. Compliance with the existing laws and regulations would ensure operational impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Hazardous Emissions Proximate to a School

Impact HAZ-3: **The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

Impact Analysis

The Montessori School of Pleasanton is located approximately 0.25 mile from the project site. Additionally, although not within 0.25 mile of the site, Alisal Elementary School (approximately 0.75 mile southwest of the project site) and Amador Valley High School (approximately 0.95 mile southwest of the project site) are in the project vicinity.

Construction

As discussed in Impact HAZ-1, construction activities would require the temporary handling of commercially available hazardous materials. However, the proposed project would be subject to multiple federal, State, and local regulations, which would reduce impacts associated with handling hazardous materials. Adherence to all applicable, mandatory existing regulations would ensure that the proposed project would not result in impacts to any schools within 0.25 mile of the proposed project. Impacts related to the emission or handling of hazardous materials within 0.25 mile of a school would be less than significant.

Operation

The proposed project would not emit or handle hazardous materials that could result in an impact to schools in proximity to the project site. Adherence to all applicable, mandatory existing regulations would ensure that the proposed project would not result in impacts during operations related to being within 0.25 miles of the Montessori School of Pleasanton. The impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Government Code Section 65962.5 Sites

Impact HAZ-4: **The proposed project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; however, as a result, it would not create a significant hazard to the public or the environment.**

Impact Analysis

As discussed in Section 3.8.2, Environmental Setting, the project site is included on a list of hazardous materials sites (the Cortese List). The Cleanup Program Site at the project site is currently open and undergoing long-term management as of 2017. The Phase I ESAs for the proposed project indicate that the areas of concern associated with past contamination at the site (AOC 6 and AOC 7) no longer pose a significant risk to human health or the environment. In 2018 and 2019, soil was tested and imported to the proposed project site from two sources. Soil imported to the proposed project site was graded and compacted. A total of 33, 078 cubic yards of soil was imported to the project site; the depth of the imported fill is between 2 and 2.5 feet (average of 8 to 9 inches). As previously discussed, ACDEH has concluded that potential environmental impacts from former mining operations have been adequately investigated and delineated and found not to present an adverse risk to human health or the environment. Thus, ACDEH believes no threat is imminent from contamination that occurs within AOC 6 or 7. Additionally, the ACDEH has provided clearance for the proposed project provided that specific conditions of approval are met. These conditions of approval include submitting a Final Soil Import Report to ACDEH to review and approve, obtaining permits from Zone 7, RWQCB, and ACDEH for the proposed on-site wastewater treatment system,

implementing corrective action and soil management protocols during development, as well as submitting the project schedule, soil imports documents, a Stockpile Characterization Sampling, Evaluation, and Resue Plan, and Soil Excavation Report to ACDEH. As previously discussed, the condition of approval related to submitting a Final Soil Report has been met, as of July 19, 2023.¹⁹ A Soil Import Summary Update was provided to ACDEH on March 23, 2023, and based on that report, ACDEH determined that the condition has been met. The remaining conditions of approval are included as HAZ COA-4a through HAZ COA-4e below. Furthermore, the proposed project would require all necessary permits, including permitting from the State Water Board for the construction and operation of the proposed wastewater treatment facilities.

Construction

Construction activities associated with the proposed project could expose contaminants to workers, the public or the environment if not properly managed. Compliance with conditions of approval established by ACDEH, and all applicable laws and regulations associated with development on hazardous materials sites, would reduce any potential impact associated with the proposed project site being located on a site included on the Cortese List. Impacts during construction would be less than significant.

Operation

Once constructed, the proposed project would have met the applicable regulatory requirements to allow for operation of the proposed project. Additionally, the proposed project would be subject to ongoing regulatory requirements. Impacts during operation would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No project specific mitigation measures are required; however, four conditions of approval will be required.

Conditions of Approval

- COA HAZ-4a** During site redevelopment, the Applicant shall implement corrective actions and soil management protocols identified in the Final Soil Report submitted to the Alameda County Department of Environmental Health (ACDEH) for review and approval.
- COA HAZ-4b** Prior to the start of site grading, the Applicant shall submit the project schedule to the Alameda County Department of Environmental Health (ACDEH) for review and approval.
- COA HAZ-4c** Prior to the import of soil to the project site, the Applicant shall submit soil import documentation to the Alameda County Department of Environmental Health (ACDEH) for review and approval.

¹⁹ Roe, Dilan, PE. Chief, Land and Water Division. Alameda County Department of Environmental Health (ACDEH). Personal communication: email. July 19, 2023.

COA HAZ-4d Prior to the reuse of excavated stockpile material on the project site, the Applicant shall submit a Stockpile Characterization Sampling, Evaluation, and Reuse Plan to the Alameda County Department of Environmental Health (ACDEH) for review and approval.

COA HAZ-4e Prior to the beginning of construction, the Applicant shall submit a soil excavation report to the Alameda County Department of Environmental Health (ACDEH) for review and approval.

Proximity to Public Airport Safety Hazard

Impact HAZ-5: 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, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area.

Impact Analysis

The Livermore Municipal Airport is approximately 1.6 miles northeast of the project site. According to the Livermore Municipal Airport Land Use Compatibility Plan (ALUCP), the proposed project site is not within any established noise contours or airport safety zones.²⁰ As the project site is outside of the established noise contours and safety zones, the proposed project would not result in a safety hazard or excessive noise for people residing or working in the area. The construction and operational impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Emergency Response and Evacuation

Impact HAZ-6: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Impact Analysis

As described in Section 3.8.2, Environmental Setting, Alameda County has developed an EOP that establishes policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the Alameda County Operational Area. The Alameda County EOP does not list any specific evacuation routes throughout the County. These routes would be determined based on the location and nature of the emergency by the Alameda County Sheriff's Office. Major roadway networks including State Route (SR) 84, Interstate 580 (I-580), and I-680 provide regional access to the proposed project site and would likely be used as evacuation routes in

²⁰ Alameda County Airport Land Use Commission (ALUC). 2012. Livermore Municipal Airport Land Use Compatibility Plan (ALUCP). August.

the event of an emergency. Traffic-related impacts are further discussed in Section 3.16, Transportation.

Construction

The proposed project would include frontage improvements along Busch Road, including the construction of an approximately 8-foot-wide sidewalk, an approximately 6-foot-wide Class II bicycle lane and street landscaping. In front of the project site, Busch Road would be redeveloped into a two-lane road with a split median. The street would have a width of 100 feet and would not provide on-street parking. If construction work encroaches within the public right-of-way, a traffic control plan would be submitted for vehicles that conforms to standards and guidelines provided by the California Manual on Uniform Traffic Control Devices (CA-MUTCD) and/or Caltrans Standard Plans.

Proposed project construction would not include any road closures or roadwork that would impair or interfere with an adopted emergency response or evacuation plan. Adherence to applicable County regulations in place to regulate traffic control would ensure the proposed project would not impair or interfere with an adopted emergency response or evacuation plan, and the impact would be less than significant.

Development and growth under the proposed project could result in an increase in demand for emergency response services. New development under the proposed project would be considered in the context of the Alameda County EOP and is not expected to impair implementation of or physically interfere with the Alameda County EOP because the proposed project would not block evacuation routes and would adhere to all applicable County regulations that regulate traffic control. Therefore, impacts would be less than significant.

Operation

As discussed in Chapter 2, Project Description, during proposed project operation emergency access to the proposed project site would be provided via four different access routes. The first emergency access route would be provided via Busch Road from Valley Avenue, and emergency vehicles would enter the site through the first project driveway on Busch Road. The second emergency access route would be provided via El Charro Road from Stoneridge Drive, and emergency vehicles would enter at the northeast corner of the project site via an emergency vehicle access route that will be developed as part of the project along the southern boundary of Lake I. The third emergency access route would be provided via El Charro Road, where emergency vehicles would enter Stoneridge Drive and access the site via the project driveways on Busch Road. The fourth emergency access route would be provided via a road to be developed as part of a future development south of the proposed project site that would connect Boulder Street to Busch Road where emergency vehicles could access the site. As the proposed project would include these emergency access routes, the impact during proposed project operation would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Wildland Fires

Impact HAZ-7: **The proposed project would not expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.**

Impact Analysis

According to the available CAL FIRE FRAP maps, the proposed project site is not within a FHSZ in an SRA or a VHFHSZ in an LRA.

Construction and Operation

The use of construction equipment and the possible on-site storage of fuels and/or other flammable construction chemicals could pose an increased fire risk, resulting in injury to workers or the public during construction. Contractors would be required to comply with hazardous materials storage and fire protection and prevention regulations, as defined in Title 8 of the California Code of Regulations. Additionally, contractors would be required to adhere all guidelines included in the Hazardous Materials Management Plan that is required by the California Fire Code, as Part of Title 24 in the California Code of Regulations; which would minimize the risk for ignition and reduce the risk of wildland fires associated with construction and operation, and the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.8.6 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for hazards and hazardous materials is the East County Area. This analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development identified in Table 3-1 of Chapter 3, Environmental Impact Analysis, of this Draft EIR, would result in a cumulatively significant impact related to hazards and hazardous materials. This analysis then considers whether incremental contribution to cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to a level of significance.

Impacts from hazards and hazardous materials are generally site-specific and typically do not combine with impacts from cumulative projects to result in significant cumulative impacts. New developments in the vicinity of the proposed project site would be subject to the same regulatory requirements as the proposed project. As such, large or unexpected releases of hazardous materials of the type that would contribute to significant cumulative impacts would not be expected. In addition, compliance with existing federal, State, and local regulations regarding the treatment and management of hazardous materials, would ensure that the proposed project would not combine with cumulative projects in the vicinity to result in a significant cumulative impact.

Hazardous Materials Exposure Risk

Cumulative projects would be subject to the applicable requirements and regulations set forth by the EPA, OSHA, USDOT, DTSC, Caltrans, CHP, local CUPA, and BAAQMD related to transport, use, and disposal of hazardous materials. Accordingly, cumulative development would not result in physical changes that would result in a significant environmental effect. Cumulative projects will also be required to implement a Storm Water Pollution Prevention Plan (SWPPP) and comply with the California Code of Regulations during construction, site grading, and excavation operations. For these reasons, cumulative projects would have a less than significant cumulative effect.

Moreover, the proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As previously discussed, development under the proposed project would result in additional residential and nonresidential development, which could result in an increase in the routine transportation, use, and disposal of hazardous materials. Potential impacts would be reduced to below a level of significance, as discussed above, because construction must comply with the California Code of Regulations and implement a SWPPP to prevent hazardous materials spills and protect public safety. This would ensure potential impacts related to sites with known hazardous materials are less than significant.

Additionally, as previously stated, development under the proposed project would be required to comply with all requirements and regulations set forth by the County, EPA, OSHA, USDOT, DTSC, Caltrans, CHP, local CUPA, and BAAQMD related to transport, use, and disposal of hazardous materials. Accordingly, development under the proposed project would not result in physical changes that would incrementally contribute to a significant environmental effect. For these reasons, the proposed project's contribution to cumulative impacts would be considered less than significant.

Hazards and Emergency Response

Cumulative impacts related to emergency response and evacuation plans would be less than significant. The County has an EOP that is regularly updated. Adjacent jurisdictions also have emergency response plans and emergency evacuation plans. Furthermore, larger regional and statewide resource areas are regulated by State agencies to address larger-scale Statewide issues. For these reasons, cumulative impacts associated with emergency response and evacuation plans are less than significant.

Additionally, new development under the proposed project would be considered in the context of the County's EOP and is not expected to impair implementation of or physically interfere with the County's EOP. Therefore, the proposed project's contribution to cumulative impacts would be considered less than significant.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.9 - Hydrology and Water Quality

3.9.1 - Introduction

This section describes the existing hydrology and water quality setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based, in part, on the Arroyo Lago, Alameda County – Hydrology Analysis provided by Carlson, Barbee, and Gibson, Inc. (CBG) on May 3, 2023, and revised on January 24, 2024, and the Arroyo Lago Off-site Utility Flood Study prepared by Schaaf and Wheeler on March 13, 2024 (Appendix G).

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to the project’s potential hydrologic impacts. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should evaluate water supply and water quality, including polyfluoroalkyl substances (PFAS) contamination.
- The Draft EIR should analyze wastewater impacts on groundwater quality.
- The Draft EIR should evaluate stormwater treatment and runoff impacts, as well as stormwater retention facilities.
- The Draft EIR should analyze the potential impacts to Cope Lake from the sewer treatment plant.
- The Draft EIR should describe and evaluate the adequacy of the wastewater treatment system.
- The Draft EIR should evaluate whether the Zone 7 Water Agency (Zone 7) has accounted for the new water demand where water supply would come from.
- The Draft EIR should evaluate how the water storage site would be filled.
- Request to evaluate potential contamination in proposed water sources and potential mitigation.
- Request to evaluate potential stormwater impacts to nearby lakes and potential mitigation.
- Concern regarding sewer treatment plant and how the effluent will be addressed in relation to Alameda Creek.
- Concerns regarding water drainage into adjacent homes.
- Concern for grading and flooding of residences adjacent to the Village at Ironwood.
- Concern for water and PFAS contamination in some wells. Request that water issues for the proposed project are analyzed and planned for. Request that sewage treatment and water treatment are also studied more.
- Suggestion to develop a long-term plan to accommodate growth in the area for clean water and capacity, road infrastructure, and emergency services.

- Request further study of elimination of Zone 7 easement east of the eastern wall of the Village at Ironwood impacting water use.
- Discussion of Zone 7 as a Required Ministerial Approval and whether there is sufficient clean water to support the proposed project.
- Request to study the impacts on PFAS plume navigation that could result from the proposed project.
- Request that the Draft EIR review grading and water runoff impacts.
- Request that the County requires a Conditional Use for the proposed project ensuring eastbound runoff.
- Concern regarding flooding problems at the Village at Ironwood caused by the elevation change on the project site.
- Concern regarding stormwater drainage and flooding of eastern Village at Ironwood homes bordering the proposed project.
- Suggestion that Alameda County review the Draft EIR to ensure that stormwater drainage from the proposed project will be mitigated.
- Concern regarding water quality impacts caused by PFAS contamination and the proposed sewage treatment facility.
- Discussion of previous flooding issues at the Village at Ironwood properties caused by grading and increased fill dirt.
- Discussion regarding water quality and PFAS contamination.
- Discussion of comprehensive plan to address water and wastewater issues in the area, such as PFAS contamination.
- Concern for PFAS contamination in City wells, and whether a new well will be required.
- Concern regarding bioretention areas, agricultural spray area, and sewer treatment plant being located adjacent to Zone 7's lakes.
- Request for the Plan Set showing stormwater runoff.
- Concern for stormwater runoff causing flooding at the Village at Ironwood homes.
- Concern regarding air, water, and soil pollutants, such as PFAS.
- Concern regarding water bodies and the protection of habitations within them.
- Concerns regarding water quality and PFAS impacts from new and existing wells.
- Concern regarding setbacks, elevation, and stormwater runoff/flooding. Suggestion to create a 6 to 8-foot setback as a flood control area.
- Concern regarding potential toxic elements, such as PFAS, in groundwater and soil.
- Request to analyze existing and potential pollutants and contaminants on the project site within the soil, such as PFAS.

- Request to study contaminants which may impact the adjacent Lakes used by Zone 7.
- Concern regarding water bodies and the protection of habitations within them.
- Concern regarding the quality of Zone 7 water, including PFAS contamination and causes, impacted by additional housing and wastewater treatment.
- Concern regarding disruption and environmental pollution near the commenter's neighborhood during construction.
- Question regarding potential contamination in the land and groundwater from past uses.
- Concern regarding health and safety related to air and water quality.
- Concern regarding rain runoff and flooding in adjacent communities, as well as potential contamination.
- Concern regarding water pollution/quality and drought.
- Request to evaluate water and wastewater impacts during construction, including disposal and potential contamination.
- Request to evaluate the availability and quality of water resources.
- Concern regarding natural disasters.
- Concern regarding toxic contaminants present on the project site and fugitive dust caused by mining and construction, especially polluting the Lake I water.
- Request for studies of any filed documents and reports of contaminants.

3.9.2 - Environmental Setting

The project site is generally located northwest of the intersection of Busch Road and El Charro Road in unincorporated Alameda County. The project site is an empty parcel with light vegetation and gently slopes toward the center of the project site, where stormwater is conveyed via a small swale and into a larger earthen channel. The existing earthen channel (southeast of the project site) conveys the stormwater from the project site to an existing culvert under El Charro Road. The existing storm drain discharges on the east side of El Charro Road, where the stormwater continues east toward Cope Lake.

The project site is within the 660-square mile Alameda Creek Watershed, which extends as far south as Mount Hamilton, north to Mount Diablo, east to the Altamont Hills, and west to the San Francisco Bay. Each stream, tributary, and reservoir within this area has its own smaller watershed that ultimately feeds into Alameda Creek.¹ Alameda Creek flows northwest from its origin on Mount Hamilton until it meets the Arroyo de la Laguna near Sunol and then runs west through the Niles Canyon to the San Francisco Bay.²

¹ Alameda County Flood Control & Water Conservation District. 2024. Alameda Creek Watershed. Website: <https://acffloodcontrol.org/the-work-we-do/resources/alameda-creek-watershed/>. Accessed February 13, 2024.

² Alameda County Flood Control & Water Conservation District. 2024. Alameda Creek Watershed: Major Creeks and Waterbodies. Website: <https://acffloodcontrol.org/the-work-we-do/resources/alameda-creek-watershed/>. Accessed February 13, 2024.

Surface Hydrology

Alameda County

The Alameda County Clean Water Program (ACCWP) designates watersheds in the County. According to the ACCWP, the project site is within the Alameda Creek Watershed extends to Mount Hamilton in the south, Mount Diablo in the north, the Altamont Hills (Livermore) in the east, and San Francisco Bay in the west.^{3,4} Major tributaries feeding the watershed include Arroyo de la Laguna and the south fork of Alameda Creek.

The Alameda Creek Watershed is divided into two sections, upper and lower. The following subwatersheds are included in the northern section of the Upper Alameda Creek Watershed: Arroyo de la Laguna, Alamo Canal, Arroyo Mocho Canal, Arroyo Las Positas, and Chain of Lakes. The project site is within the 4.6 square mile Chain of Lakes subwatershed.

Chain of Lakes

The Chain of Lakes is a series of former gravel quarry pits that will be converted into 10 lakes (Lakes A through I and Cope Lake) connected through a series of conduits. Zone 7 currently owns Lake I and Cope Lake and expects Lakes A and H to be transferred to Zone 7 within the coming years. The remaining lakes (Lakes B through G) will be transitioned to Zone 7 over the next several decades, likely through 2060. The Chain of Lakes aims to enhance the groundwater recharge and groundwater quality, boosting local groundwater supply and surface water storage. Water from the Arroyo Mocho is released periodically into the Chain of Lakes area. The Arroyo Mocho flows through the Tri-Valley and near the Chain of Lakes but is separated from it by levees. Surface water does not flow out of the Chain of Lakes area; thus, the area is not considered part of the Arroyo Mocho Watershed.⁵

Arroyo Mocho

The Arroyo Mocho flows in an east to west and northwest direction through the Chain of Lakes area, then turns in a southwesterly direction west of El Charro Road to its confluence with the Alamo Canal near Interstate 680 (I-680).⁶ The channel is trapezoidal in shape, with levees along its upper length within the watershed. The creek bed between Alamo Canal and Santa Rita Road has been actively incised to an average bottom width of 20 feet with side slopes of 3:1 to 4:1.

The Arroyo Mocho drains approximately 36,000 acres (56.2 square miles) of mixed agriculture, urban, and undeveloped lands starting in Santa Clara County, where it flows generally to the northwest.⁷ Because of the regional Mediterranean climate, flow within the Arroyo Mocho is variable; summer flows are low and often depend upon releases from Zone 7 storage facilities for groundwater recharge to the Chain of Lakes system. This arroyo may run dry during the summer.

³ Alameda County Flood Control & Water Conservation District. 2024. The Work We Do: Resources –Explore Watersheds. Website: <https://acffloodcontrol.org/the-work-we-do/resources/#explore-watersheds>. Accessed February 13, 2024.

⁴ Alameda County Flood Control & Water Conservation District. 2024. Upper Alameda Creek Watershed –Northern Section: Overview. Website: <https://acffloodcontrol.org/the-work-we-do/resources/upper-alameda-creek-watershed-north/#:~:text=Chain%20of%20Lakes%20is%20a,of%20the%20Livermore%E2%80%90Amador%20Valley>. Accessed February 13, 2024.

⁵ City of Pleasanton. 2005. General Plan 2005-2025 Draft Environmental Impact Report.

⁶ Ibid.

⁷ Ibid.

Arroyo Las Positas

Arroyo Las Positas originates at the confluence of Arroyo Seco and Cayetano Creek north of Livermore and empties into the Arroyo Mocho.⁸ Its major tributaries include Cayetano Creek, Altamont Creek, and Arroyo Seco.

Arroyo del Valle

The Arroyo del Valle is an unchanneled stream that originates at the Del Valle Reservoir and flows west through unincorporated Alameda County and continues to meander through the City of Pleasanton to its confluence with the Arroyo de la Laguna and Alamo Canal.⁹ A distinctive riparian corridor is present on both sides of the stream channel.

Project Site

There are no water bodies that transect the project site; however, Lake I of the Zone 7 Chain of Lakes is adjacent to the project site to the north. Cope Lake is approximately 0.45 mile east of the project site and is adjacent to the agricultural irrigation recycled water spray fields.

Surface Water Quality

The San Francisco Bay Basin Water Quality Control Plan (Basin Plan) indicates the beneficial uses for Arroyo Mocho are groundwater recharge, cold freshwater habitat, fish migration, fish spawning, warm freshwater habitat, wildlife habitat, water contact recreation, and noncontact water recreation. The current 2018 303(d) List identifies Arroyo Mocho, Arroyo Las Positas, and Arroyo del Valle as impaired water bodies due to high levels of diazinon. Total Maximum Daily Load (TMDL) was adopted by the California State Water Resources Control Board (State Water Board) in 2006 to reduce diazinon and other urban toxicity contaminants. Additionally, Arroyo Mocho is impaired for water temperature, and Arroyo Las Positas is impaired for eutrophication.¹⁰

Groundwater Basin Hydrology

Livermore Valley Groundwater Basin

The project site is within the Livermore Valley Groundwater Basin, which extends east from the Pleasanton Ridge to the Altamont Hills (approximately 14 miles) and north from the Livermore Upland to the Orinda Upland (approximately 3 miles).¹¹ The surface area of the basin is approximately 69,600 acres and is subdivided into the Main Basin and fringe subbasins. Within the Main Basin there are four primary subbasins: Castle, Bernal, Amador, and Mocho II. The project site is within the Amador Subbasin of the Livermore Valley Groundwater Basin.¹²

Amador Subbasin

Surface drainage features (discussed above) include Arroyo del Valle, Arroyo Mocho, and Arroyo Las Positas as principal streams. Alamo Creek, South San Ramon Creek, and Tassajara Creek are minor

⁸ City of Pleasanton. 2005. General Plan 2005-2025 Draft Environmental Impact Report.

⁹ Ibid.

¹⁰ California State Water Resources Control Board (State Water Board). 2020. Final Staff Report, 2018 Integrated Report for Clean Water Act Section 305(b) and 303(d). Adopted on October 20, 2020.

¹¹ Department of Water Resources (DWR). 2006. Bulletin 118 Livermore Valley Groundwater Basin. January 20, 2006.

¹² Zone 7 Water Agency (Zone 7). 2014. Preliminary Lake Use Evaluation for the Chain of Lakes. March 2014.

streams within the basin.¹³ Average annual precipitation in the basin ranges from 16 inches on the valley floor to more than 20 inches along the southeast and northwest basin margins.

The Chain of Lakes is hydraulically connected to the Amador Subbasin. Natural recharge occurs through infiltration of rainfall directly into the basin or through the Arroyo Mocho and Arroyo del Valle. Zone 7 manages groundwater levels in the basin through artificial groundwater recharge.¹⁴ One key objective for the Chain of Lakes is to enhance groundwater recharge.¹⁵

Project Site

The project site does not contain any active groundwater wells. As previously discussed, the project site is located within the Livermore Valley Groundwater Basin.

Groundwater Water Quality

Livermore Valley Groundwater Basin

Water chemistry is highly varied around the basin with the northern extent dominated by sodium cation water. Much of the water underlying the western part of the basin near Pleasanton has magnesium-sodium as the dominant cation. Nearly the entire basin has bicarbonate as the dominant anion. Some areas have elevated boron concentrations. Boron is generally highest in shallow wells because of marine sediments located adjacent to the basin. The most elevated boron concentrations occur in the northeast portion of the basin.¹⁶

The Livermore Valley Groundwater Basin Groundwater Sustainability Plan (GSP) identifies total dissolved solids (TDS) and salt loading, nitrate and nutrient loading, additional inorganic compounds of concern (boron and hexavalent chromium), and toxic sites as groundwater quality issues in the basin.¹⁷

Project Site

The proposed project is located within the basin area under sustainable groundwater management by Zone 7 as per the Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin.

Per- and Polyfluoroalkyl Substances

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of chemicals used since the 1940s to make commercial products including carpets, clothing, food packaging, and cookware because they are waterproof, stain-resistant, and non-stick; they also have been used in fire-retarding foam and various industrial processes.¹⁸ They can be introduced into the body through

¹³ Zone 7 Water Agency (Zone 7). 2014. Preliminary Lake Use Evaluation for the Chain of Lakes. March 2014.

¹⁴ Artificial groundwater recharge is the process by which State Water Project agreements provide turnouts from the South Bay Aqueduct that allow water to be routed into local streams to help replenish the groundwater basin.

¹⁵ Zone 7 Water Agency (Zone 7). 2014. Preliminary Lake Use Evaluation for the Chain of Lakes. March 2014.

¹⁶ Department of Water Resources (DWR). 2006. Bulletin 118 Livermore Valley Groundwater Basin. January 20, 2006.

¹⁷ Zone 7 Water Agency (Zone 7). 2016. Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin. December 2016.

¹⁸ United States Environmental Protection Agency (EPA). 2023. Our Current Understanding of the Human Health and Environmental Risks of PFAS. Website: <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>. Accessed February 13, 2024.

ingestion of contaminated food or liquid and inhaling or touching products with packaging treated with the substance. They can contaminate drinking water supplies when products containing PFAS are used or spilled on the ground and they migrate into groundwater, and, once in groundwater, PFAS can travel large distances and contaminate drinking water wells. Major sources of PFAS contamination include fire training/fire response sites, military bases, industrial sites, and landfills.

In March 2019, the State Water Board initiated a Statewide PFAS phased investigation for hundreds of drinking water sources, including Zone 7 and the Livermore District. The Livermore District has 12 groundwater wells within its service area.

In March 2023, the United States Environmental Protection Agency (EPA) issued a proposed national primary drinking water regulation for certain PFAS. The proposed regulation calls for a maximum containment level for PFOS and PFOA of 4 parts per trillion (ppt) each. Four additional PFAS—PFNA, PFHxS, PFBS, and GenX—would have a combined hazard index limit of 1.0; the hazard index calculation would determine whether the levels of these PFAS as a mixture pose a potential risk.¹⁹

According to the California Water Service (Cal Water) 2022 Water Quality Report for the Livermore District System, prior to issuance of this regulation, Cal Water had already proactively tested active sources in their systems for all six PFAS and took the affected sources out of service until treatment was installed. Thus, none of their active water sources have levels of the six PFAS compounds over current California response levels. The response level, which is the level at which a water system should make operational changes to reduce the concentration of a compound, is set with a margin of protection for all people (including sensitive populations) over a lifetime of exposure.²⁰

On April 10, 2024, the EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS, including individual Maximum Contaminant Levels (MCLs) for PFOA and PFOS at 4 parts per trillion (ppt), individual MCLs for PFHxS, PFNA, and GenX Chemicals at 10 ppt, and an MCL for a mixture of four PFAS (PFHxS, PFNA, GenX Chemicals, and PFBS) at no greater than a hazard index of 1.0.²¹

The EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS. Public water systems must monitor for these PFAS and have 3 years to complete initial monitoring (by 2027), followed by ongoing compliance monitoring. Public water systems will have 5 years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs. Primary agencies, such as the State, will have up to 2 years to adopt standards that are no less stringent than the federal standards.²²

¹⁹ California Water Service (Cal Water). 2022. Water Quality Report for Livermore District, Livermore System. Website: <https://www.calwater.com/docs/ccr/2022/liv-liv-2022.pdf>. Accessed May 7, 2024.

²⁰ California Water Service (Cal Water). 2022. Water Quality Report for Livermore District, Livermore System. Website: <https://www.calwater.com/docs/ccr/2022/liv-liv-2022.pdf>. Accessed May 7, 2024.

²¹ Zone 7 Water Agency. 2024. PFAS Information. Website: <https://www.zone7water.com/pfas#:~:text=On%20April%2010%2C%202024%2C%20the%20U.S.%20Environmental%20Protection,Zone%20has%20been%20doing%20voluntarily%20since%202019>. Accessed July 2, 2024.

²² Zone 7 Water Agency. 2024. PFAS Information. Website: <https://www.zone7water.com/pfas#:~:text=On%20April%2010%2C%202024%2C%20the%20U.S.%20Environmental%20Protection,Zone%20has%20been%20doing%20voluntarily%20since%202019>. Accessed July 2, 2024.

Zone 7 has already begun implementing voluntary changes to meet the MCLGs, including the following actions:

- Reduced the production of the Mocho wellfield by nearly two-thirds.
- Increased the use of surface water.
- Started a conceptual design for a Mocho PFAS treatment facility with the goal of having the facility online in 2 to 3 years, which will be Zone 7's third PFAS treatment facility.
- Installed Ion Exchange PFAS Treatment at the Stoneridge Well facility, which is online now.
- Began installing Ion Exchange PFAS Treatment at the Chain of Lakes Facility which will be online by the end of 2024.²³

Stormwater Runoff

Alameda County

The San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB) administers the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program and regulates stormwater in the San Francisco Bay region. The Alameda County Department of Environmental Health (ACDEH), in partnership with the Alameda County Public Works Agency implements the industrial and commercial site control program to comply with the San Francisco Bay Municipal Regional Stormwater Permit (MRP), which covers stormwater discharges within Alameda County.

The Arroyo de la Laguna collects the surface water runoff from the Tri-Valley and carries it south to Alameda Creek.²⁴

Project Site

Stormwater from the project site is conveyed via a small swale and into a larger earthen channel. The existing earthen channel, located southeast of the project site, conveys stormwater from the project site (as well as stormwater from the adjacent parcel) east to an existing 24-inch culvert under El Charro Road. The existing storm drain discharges on the east side of El Charro Road, where the stormwater continues east toward Cope Lake.

Flooding and Inundation

Alameda County

Areas susceptible to flooding are mapped by the Federal Emergency Management Agency (FEMA). FEMA maps do not take into account future conditions. To protect such areas from flood hazards, FEMA administers the National Flood Insurance Program (NFIP). The NFIP is a federal program created to avert future flood losses through building and zoning ordinances and to provide federally backed flood insurance protection for property owners. The County is a participant in the NFIP.

²³ Ibid.

²⁴ City of Pleasanton. 2005. General Plan 2005-2025 Draft Environmental Impact Report.

To support the NFIP, FEMA publishes Flood Insurance Rate Maps (FIRMs) for participating communities, which are used for flood insurance and floodplain management purposes. The FIRMs delineate different special flood hazard area zones. Special flood hazard areas associated with the 1 percent probability of annual exceedance are zones that begin with the letter “A” (e.g., Zone A, Zone AE, and Zone AO).

In areas such as Alameda County that do not have extended periods of below-freezing temperatures or significant snowfall, floods usually occur during the season of highest precipitation or during heavy rainfalls after prolonged dry periods. The County is dry during the late spring, summer, and early fall and receives most of its rain during the winter months. The rainfall season extends from November through April.²⁵

The County has several 100-year and 500-year floodplains which are mapped by FEMA in the most recent FIRMs.²⁶

Tsunamis are a series of traveling ocean waves caused by the displacement of a large volume of water, usually due to earthquakes, volcanic eruptions, or underwater landslides. Additionally, seiches are water level oscillations in an enclosed or semi-enclosed body of water (i.e., bays, lakes, or reservoir). Seiches are typically caused by strong winds, rapid changes in atmospheric pressure, or earthquakes; seismic events and atmospheric changes can force water from one end of a body of water to the other, causing water level oscillations.

Project Site

According to the FEMA FIRM, the project site is mapped within Zone X, indicating the area is determined to be outside of the 0.2 percent annual chance floodplain.²⁷ However, the adjacent Zone 7 Chain of Lakes are mapped within areas determined to be subject to inundation by the 1 percent annual chance flood.²⁸ Furthermore, some of the off-site improvement sites are located within flood hazard zones, including the agricultural irrigation recycled water spray fields, the water storage and booster pump facility, and a bioretention area. Additionally, a second bioretention area is located in a flood hazard zone under Design Option B. These off-site improvements would be located in Flood Zone A, which represents a high-risk area designated as Special Flood Hazard Area (SFHA) with a 1 percent annual chance of flooding. The FEMA FIRM maps for the project site and the associated off-site improvements are shown on Exhibit 3.9-1a and 3.9-1b.

The project site is 16.4 miles east of the San Francisco Bay and 35.7 miles east of the Pacific Ocean. The 2021 Alameda County Local Hazard Mitigation Plan indicates that the project site is not at risk of being inundated by a tsunami.²⁹

²⁵ Alameda County. 2022. 2021 Alameda County Local Hazard Mitigation Plan (LHMP). Website: https://lhmp.acgov.org/documents/FinalHMP_AlamedaCo_Mar2022.pdf. Accessed February 12, 2024.

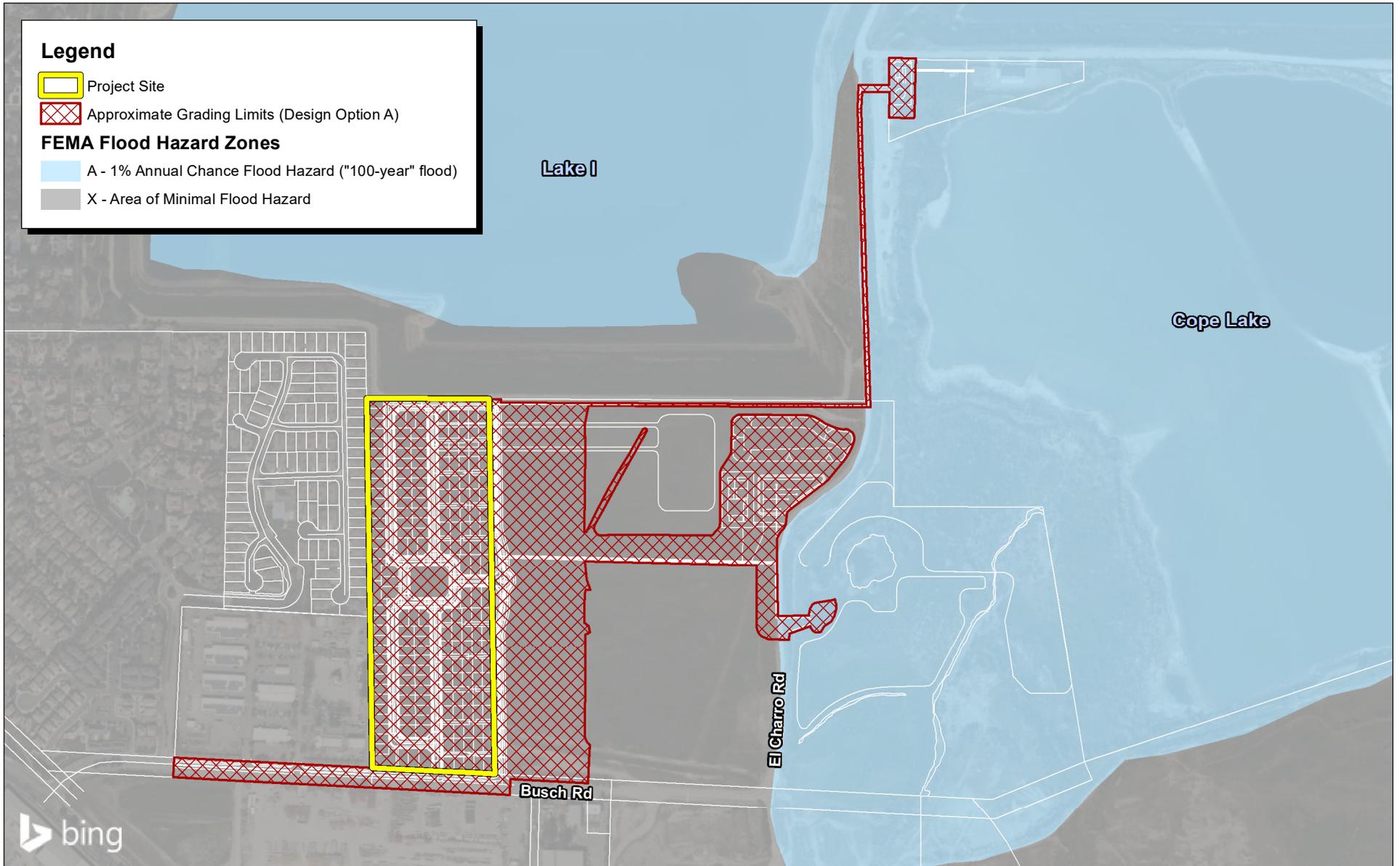
²⁶ Ibid.

²⁷ Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map (FIRM), Alameda County, California. Panel 0336G (Panel 336-725). Map Number 06001C0336G. National Flood Insurance Program (NFIP). Effective Date August 3, 2009. Map. Scale 1:500.

²⁸ Ibid.

²⁹ Alameda County. 2021. Final 2021 Alameda County Local Hazard Mitigation Plan. December 2021.

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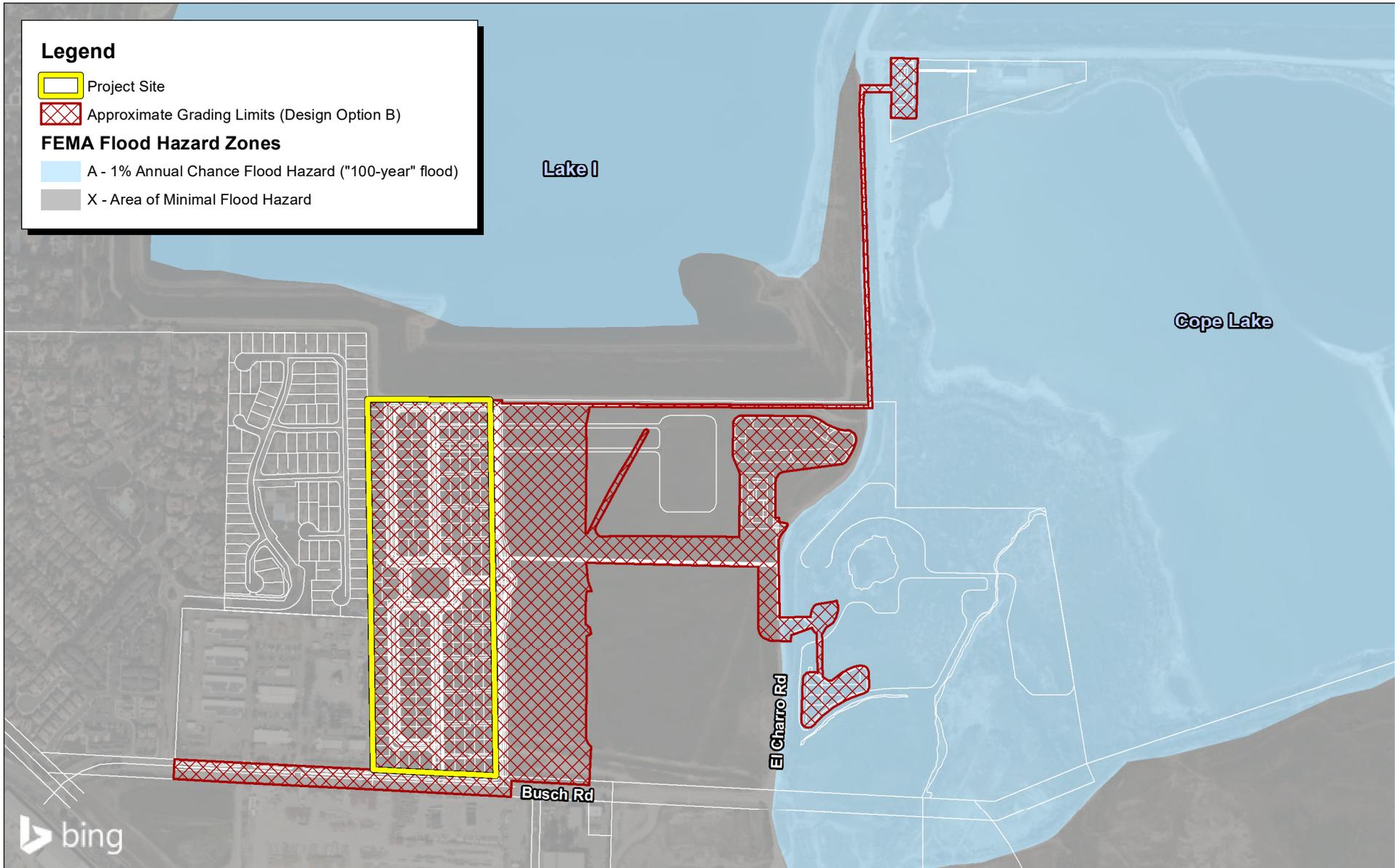
Source: Bing Aerial Imagery. CBG Civil Engineers. 12/2023. FEMA National Flood Hazard Layer (NFHL).



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Exhibit 3.9-1a Flood Zone Map - Design Option A

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Source: Bing Aerial Imagery. CBG Civil Engineers. 12/2023. FEMA National Flood Hazard Layer (NFHL).



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3.9.3 - Regulatory Framework

Federal

Clean Water Act

The Clean Water Act (CWA) (33 United States Code [USC] § 1251, *et seq.*) is the major federal legislation governing the water quality aspects of construction and operation of the project or variant. The CWA established the basic structure for regulating discharges of pollutants into waters of the United States (not including groundwater) and waters of the State. The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States.

The CWA authorizes the EPA to implement pollution control programs. Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters, unless an NPDES permit is obtained. In addition, the CWA requires each state to adopt water quality standards for receiving water bodies and to have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality objectives necessary to support those uses.

Responsibility for protecting water quality in California resides with the State Water Board and nine RWQCBs. The State Water Board establishes Statewide policies and regulations for the implementation of water quality control programs mandated by federal and State water quality statutes and regulations. The RWQCBs develop and implement water quality control plans (basin plans) that consider regional beneficial uses, water quality characteristics, and water quality problems. Water quality standards applicable to the project are listed in the Basin Plan.

Section 303—Water Quality Standards and Total Maximum Daily Loads

Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for all surface waters of the United States based on the water body’s designated beneficial use. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based on biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards.

CWA Section 303(d) requires states and authorized Native American tribes to develop a list of water quality-impaired segments of waterways. The list includes waters that do not meet water quality standards necessary to support a waterway’s beneficial uses even after the minimum required levels of pollution control technology have been installed. Listed water bodies are to be priority ranked for development of a TMDL. A TMDL is a calculation of the total maximum daily load (amount) of a pollutant that a water body can receive on a daily basis and still safely meet water quality standards. The TMDLs include waste load allocations for urban stormwater runoff as well as municipal and industrial wastewater discharges, with allocations apportioned for individual Municipal Separate Storm Sewer Systems (MS4s) and wastewater treatment plants. For stormwater, load reductions would be required to meet the TMDL waste load allocations within the 20 years required by the TMDLs.

The State Water Board, RWQCBs, and EPA are responsible for establishing TMDL waste load allocations and incorporating approved TMDLs into water quality control plans, NPDES permits, and Waste Discharge Requirements (WDRs) in accordance with a specified schedule for completion. The San Francisco Bay RWQCB develops TMDLs for Polychlorinated Biphenyls in the San Francisco Bay.

The project site does not include any waterways included on the Section 303(d) list. The closest Section 303(d) waterways to the project site include Arroyo Mucho and Arroyo Las Positas.³⁰

Section 401—Water Quality Certification

Section 401 of the CWA requires compliance with State water quality standards for actions within State waters. Under CWA Section 401, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) must first obtain a certificate from the appropriate agency stating that the fill is consistent with the State’s water quality standards and criteria. In California, the State Water Board delegates authority to either grant water quality certification or waive the requirements to the nine RWQCBs. The San Francisco Bay RWQCB is responsible for the project site.

Section 402—National Pollution Discharge Elimination System Permits

The RWQCBs administer the NPDES stormwater permitting program, under Section 402(d) of the federal CWA, on behalf of EPA. The objective of the NPDES program is to control and reduce levels of pollutants in water bodies from discharges of municipal and industrial wastewater and stormwater runoff. CWA Section 402(d) establishes a framework for regulating nonpoint-source stormwater discharges (33 USC 1251). Under the CWA, discharges of pollutants to receiving water are prohibited unless the discharge complies with an NPDES permit. The NPDES permit specifies discharge prohibitions, effluent limitations, and other provisions, such as monitoring deemed necessary to protect water quality based on criteria specified in the National Toxics Rule (NTR), the California Toxics Rule (CTR), and the Basin Plan.

Discharge prohibitions and limitations in an NPDES permit for wastewater treatment plants are designed to maintain public health and safety, protect receiving water resources, and safeguard the water’s designated beneficial uses. Discharge limitations typically define allowable effluent quantities for flow, biochemical oxygen demand, total suspended matter, residual chlorine, settleable matter, total coliform, oil and grease, pH, and toxic pollutants. Limitations also typically encompass narrative requirements regarding mineralization and toxicity to aquatic life. Under the NPDES permits issued to the City/County to operate the treatment plants, the City/County is required to implement a pretreatment program. This program must comply with the regulations incorporated in the CWA and the General Pretreatment Regulations (Code of Federal Regulations [CFR] Title 40, Part 403 [40 CFR 403]).

Section 404—Water Quality Certification

Section 404 of the CWA regulates temporary and permanent fill and disturbance of wetlands and waters of the United States. Under Section 404, the discharge (temporary or permanent) of dredged

³⁰ California State Water Resources Control Board (State Water Board). 2024. 2024 California Integrated Report Map. Website: <https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=f0e4ac76fd0e4a53bebead89339ef3c9>. Accessed February 12, 2024.

or fill material into waters of the United States, including wetlands, typically must be authorized by the United States Army Corps of Engineers (USACE) through either the Nationwide Permit (general categories of discharges with minimal effects) or the Individual Permit.

River and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires that regulated activities conducted below the ordinary high-water elevation of navigable waters of the United States be approved and permitted by the USACE. Regulated activities include the placement or removal of structures, work involving dredging, disposal of dredged material, filling, excavation, or any other disturbance of soils/sediments or modification of a navigable waterway. Navigable waters of the United States are those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce. Section 10 also regulates tributaries and backwater areas that are associated with navigable waters of the United States and are located below the ordinary high-water elevation of the adjacent navigable waterway.

A project proponent can apply for a permit/letter of permission for work regulated under Section 404 (CWA) and Section 10 (Rivers and Harbors Act) by completing and submitting one application form. An application for a USACE permit will serve as an application for both Section 404 and Section 10 permits.

Federal Antidegradation Policy

The federal antidegradation policy is designed to protect existing water uses, water quality, and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- Existing instream uses and the water quality necessary to protect those uses shall be maintained and protected.
- Where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development.
- Where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

National Toxics Rule and California Toxics Rule

In 1992, the EPA promulgated the NTR under the CWA to establish numeric criteria for priority toxic pollutants for 14 states to bring all states into compliance with the requirements of CWA Section 303(c)(2)(B). The NTR established water quality standards for 42 pollutants not covered under California's Statewide water quality regulations at that time. As a result of the court-ordered revocation of California's Statewide basin plans in September 1994, the EPA initiated efforts to promulgate additional federal water quality standards for California. In May 2000, the EPA issued the

CTR, which includes all the priority pollutants for which the EPA has issued numeric criteria not included in the NTR.

Executive Order 11988

Executive Order 11988, “Floodplain Management,” directs all federal agencies to avoid, to the extent possible, long- and short-term adverse impacts of occupancy and modification of floodplains, and to avoid supporting development in a floodplain either directly or indirectly wherever there is a practicable alternative. Compliance requirements are outlined in 23 Code of Federal Regulations 650, Subpart A, “Location and Hydraulic Design of Encroachment on Floodplains.”

If a project involves significant encroachment into the floodplain, the final environmental document must include:

- The reasons why the proposed action must be located in the floodplain,
- Alternatives considered and the reasons they were not practicable, and
- A statement indicating whether the action conforms to applicable state or local floodplain protection standards.

National Toxics Rule and California Toxics Rule

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 were enacted to reduce the need for flood protection structures and limit disaster relief costs by restricting development in floodplains. FEMA, established in 1979, is responsible for predicting hazards from flooding events and forecasting the level of inundation under various conditions. As part of its duty to develop standards for delineating fluvial and coastal floodplains, FEMA provides information on FIRMs about the potential for flood hazards and inundation and, where appropriate, designates regions as special flood hazard areas. Special flood hazard areas are defined as areas that have a 1 percent chance of flooding in a given year.

FEMA also administers the NFIP, a federal program that enables property owners in participating communities to purchase insurance as protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California’s statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State’s waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt basin plans for all areas in the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of the State Water Board and RWQCBs to adopt and periodically update basin plans. The San Francisco Bay RWQCB is responsible for the project site.

Basin plans are the regional water quality control plans required by both the CWA and the Porter-Cologne Act that establish beneficial uses, water quality objectives, and implementation programs for each of the nine regions in California. The Act also requires waste dischargers to notify the RWQCBs of their activities by filing reports of waste discharge and authorizes the State Water Board and RWQCBs to issue and enforce WDRs, NPDES permits, CWA Section 401 water quality certifications, or other approvals. The RWQCBs are also authorized to issue waivers to reports of waste discharge and WDRs for broad categories of “low threat” discharge activities that have minimal potential to cause adverse water quality effects when implemented according to prescribed terms and conditions.

National Pollutant Discharge Elimination System

The NPDES permits all involve similar processes, which include submitting notices of intent for discharging to water in areas under the San Francisco Bay RWQCB’s jurisdiction and implementing Best Management Practices (BMPs) to minimize those discharges. The San Francisco Bay RWQCB may also issue site-specific WDRs, or waivers to WDRs, for certain waste discharges to land or waters of the State.

Construction Activity

The State Water Board NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) (Order WQ 2022-0057-DWQ, NPDES No. CAS000002) applies to all construction activities that would disturb 1 acre of land or more. Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters.

Through the NPDES and WDR processes, the State Water Board seeks to ensure that the conditions at a project site during and after construction do not cause or contribute to direct or indirect impacts on water quality (i.e., pollution and/or hydromodification) upstream and downstream. To comply with the requirements of the Construction General Permit, the project applicant must file a notice of intent with the State Water Board to obtain coverage under the permit; prepare a Storm Water Pollution Prevention Plan (SWPPP); and implement inspection, monitoring, and reporting requirements appropriate to the project’s risk level as specified in the SWPPP. The SWPPP includes a site map, describes construction activities and potential pollutants, and identifies BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources, such as petroleum products, solvents, paints, and cement. The permit also requires the discharger to consider using post-construction permanent BMPs that will remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements.

Project sites served by the combined sewer system are not required to obtain coverage under the NPDES General Permit.

Industrial General Stormwater Permit

The Statewide NPDES General Permit for Storm Water Discharges Associated with Industrial Activities (Order WQ 2014-0057-DWQ, as amended by Order WQ 2015-0122-DWQ) regulates

discharges associated with 10 broad categories of industrial activities, such as operation of wastewater treatment works, and with recycling facilities. The industrial general permit requires the implementation of Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to achieve performance standards. The permit also requires development of a SWPPP that identifies the site-specific sources of pollutants and describes the measures at the facility applied to reduce stormwater pollution. A monitoring plan is also required.

Stormwater

In November 1990, the EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase I of the permitting program applied to municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons. Phase II of the NPDES stormwater permit regulations, which became effective in March 2003, required that NPDES permits be issued for construction activity for projects disturbing 1–5 acres. Phase II of the municipal permit system (known as the NPDES General Permit for Small MS4s, Order No. 2003-0005-DWQ as amended by 2013-0001-DWQ) required small municipalities of fewer than 100,000 persons to develop stormwater management programs. This permit authorizes discharges of stormwater and some categories of non-stormwater that are not “significant contributors of pollutants.”

California Toxics Rule and State Implementation Policy

The CTR, presented in 2000 in response to requirements of EPA’s NTR, establishes numeric water quality criteria for approximately 130 priority pollutant trace metals and organic compounds. The CTR criteria are regulatory criteria adopted for inland surface waters, enclosed bays, and estuaries in California that are on the CWA Section 303(c) list for contaminants. The CTR includes criteria for the protection of aquatic life and human health. Human health criteria (water- and organism-based) apply to all waters with a municipal and domestic water supply beneficial use designation as indicated in the basin plans. The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, also known as the State Implementation Policy, was adopted by the State Water Board in 2000. It establishes provisions for translating CTR criteria, NTR criteria, and basin plan water quality objectives for toxic pollutants into:

- NPDES permit effluent limits,
- Effluent compliance determinations,
- Monitoring for 2,3,7,8-tcdd (dioxin) and its toxic equivalents,
- Chronic (long-term) toxicity control provisions,
- Site-specific water quality objectives, and
- Granting of effluent compliance exceptions.

The goal of the State Implementation Plan is to establish a standardized approach for permitting discharges of toxic effluent to inland surface waters, enclosed bays, and estuaries throughout the State.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) of 2014 (Water Code Section 10723) provides a framework for sustainable management of groundwater resources. In groundwater basin designated by the Department of Water Resources (DWR) as medium or high priority, local public agencies, and locally controlled Groundwater Sustainability Agencies (GSAs) are required to develop and implement GSPs or alternatives to GSPs. Each GSP must include measurable objectives and interim milestones for achieving sustainability goals for the given groundwater basin. Plans must also include a physical description of the basin, including information on groundwater levels, groundwater quality, subsidence, and groundwater/surface water interaction, historical, and projected water supply and demand data, monitoring and management provisions, and a description of how the plan will affect other plans.

Under SGMA, Zone 7 has been designated as the exclusive GSA for the Livermore Valley Groundwater Basin and the Alternative GSP for the Livermore Valley Groundwater Basin is the regulatory document that manages the basin. According to DWR, the basin is considered a medium-priority basin.³¹ The project site is within the Amador Subbasin of the Livermore Valley Groundwater Basin.

Local

County of Alameda

East County Area Plan

The East County Area Plan (ECAP) is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County Area. The ECAP establishes the following goals and policies related to hydrology and water quality:

Land Use

Goal **To protect watershed land from the direct and indirect effects of development.**

Policy 103 The County shall designate an area outside of the San Francisco Water Department lands that extends to the limit of the watershed boundary as “Resource Management.” Within this area, the County shall encourage land use activities to adhere to management guidelines developed for the protection of the watershed lands and shall ensure that subdivisions of lands or quarry operations and reclamation plans within this designation are approved only where such subdivisions or quarry operations would not adversely affect the watershed protection objectives of the San Francisco Water Department.

Public Services

Goal **To provide efficient, cost effective, and environmentally sound storm drainage and flood control facilities.**

³¹ Zone 7. 2016. Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin. December 2016.

- Policy 277** The County shall work with the Alameda County Flood Control & Water Conservation District (Zone 7) to provide for development of adequate storm drainage and flood control systems to serve existing and future development.
- Policy 278** The County shall promote flood control measures that advance the goals of recreation, resource conservation (including water quality and soil conservation), groundwater recharge, preservation of natural riparian vegetation and habitat, and the preservation of scenic values of the County’s arroyos and creeks.
- Policy 280** The County shall regulate new development on a case-by-case basis to ensure that, when appropriate, project storm drainage facilities shall be designated so that peak rate flow of stormwater from new development will not exceed the rate of runoff from the site in its undeveloped state.
- Policy 282** The County shall encourage use of natural or nonstructural stormwater drainage systems to preserve and enhance natural features of a site.

Environmental Health and Safety

Goal To protect and enhance surface and groundwater quality.

- Policy 306** The County shall protect surface and groundwater 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, 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 large land areas.

Goal To minimize the risks to lives and property due to flood hazards.

Policy 316 The County shall require new residential, public, commercial, and industrial development to have protection from a 100-year flood.

3.9.4 - Methodology

Impacts related to hydrology and water quality were determined by reviewing information regarding regional and local hydrology, climate, topography, and geology contained in the San Francisco Bay RWQCB Basin Plan, FEMA FIRMs, and preliminary stormwater treatment plans for the proposed project, and the Hydrology Analysis Memorandum prepared by CBG on May 3, 2023, and revised on January 24, 2024. Evaluation of impacts is based on comparison of existing conditions to the proposed project’s built condition, such as changes in impervious area and facilities located within flood zones (Exhibit 3.9-1a and 3.9-1b). Specifically, the impact evaluation focuses on effects on

surface and groundwater quality, groundwater supply, and drainage (in terms of erosion, siltation, flooding, stormwater system exceedance, and polluted runoff).

Water quality conditions are compared with water quality standards and WDRs by identifying potential contaminants and pollution pathways, amount of impervious area, and runoff treatment requirements. Additionally, as part of the analysis, inundation and flooding on the project site is assessed by reviewing potential inundation zone elevations relative to the final grade elevations of facilities and features for the project.

3.9.5 - Thresholds of Significance

The lead agency utilizes the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether hydrology and water quality impacts resulting from the implementation of the proposed project would be considered significant if the project would:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - (i) Result in substantial erosion or siltation on- or off-site;
 - (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - (iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - (iv) Impede or redirect flood flows?
- d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.9.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Surface and Groundwater Quality

Impact HYD-1: **The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.**

Impact Analysis

Construction

Construction associated with the proposed project would include grading, excavation, and removal of vegetative cover that has the potential to result in runoff that contains sediment and other pollutants that could degrade surface and groundwater quality, if not properly controlled. Sources of potential pollution associated with construction include fuel, grease, oil and other fluids, concrete material, sediment, and litter. These pollutants have the potential to result in impacts due to chemical contamination from construction activities and materials that could pose a hazard to the environment or degrade water quality if not properly managed and controlled.

As construction of the proposed project would disturb more than 1.0 acre of land, compliance with the NPDES General Permit would be required. The General Permit would require the development and implementation of a SWPPP. As discussed in Section 3.9.3, Regulatory Framework, the objectives of a SWPPP are to identify pollutant sources that may be delivered off-site (in the form of runoff) and affect the quality of stormwater discharge; to implement site controls and practices to reduce stormwater pollution; and to protect water quality of receiving waters. The SWPPP would include site-specific BMPs, such as strategically placed silt fences and straw wattles, to minimize erosion on-site and reduce or otherwise prevent conditions or erosion and stormwater runoff during construction. Additionally, the proposed project would be required to comply with the County's MRP, which regulates stormwater discharges in the County.

Implementation of a SWPPP and associated BMPs, and compliance with the County's MRP, would reduce potential impacts related to violating water quality standards or waste discharge requirements. The impact would be less than significant.

Operation

The proposed project would add additional areas of impervious surfaces and could therefore increase the volume of pollutants that are typically associated with urban runoff into the stormwater. These pollutants can include sediments, petroleum hydrocarbons, pesticides, fertilizers, and heavy metals such as lead, zinc, and copper that tend to build up during the dry months of the year. Precipitation during the early portion of the wet season (generally from November to April) washes away most of these pollutants, resulting in high pollutant concentrations in the initial wet weather runoff. Subsequent periods of rain would result in less concentrated pollutant levels in the runoff. An increase in impervious surfaces could result in a corresponding increase in urban runoff pollutants and first flush roadway contaminants, as well as an increase in nutrients and other chemicals from landscaped areas. These constituents could result in water quality impacts to on-site and off-site drainage flows to area waterways.

Stormwater Water Quality

As discussed in Chapter 2, Project Description, Section 2.2.2, Proposed Off-site Improvements, the proposed project would include the addition of two bioretention areas, which would treat all incoming stormwater from the project site. All on-site stormwater would be conveyed through a new 48-inch storm drain pipe to a new 60-inch storm drain pipe under El Charro Road and discharge via a new outfall on the east side of El Charro Road. Low flows would be pumped to the primary bioretention treatment area which will be located either west of El Charro Road (Design Option A) or east of El Charro Road (Design Option B). Using Alameda County Flood Control District & Water Conservation District methodology, the Hydrology Analysis provided by CBG on May 3, 2023, and revised on January 24, 2024 (Appendix G) calculated the proposed 10-year and 100-year stormwater runoff and total capacity of the proposed 48-inch storm drain pipe and the capacity of the existing northern culvert under El Charro Road.

Table 3.9-1: Storm Peak Flow Compared to Proposed Storm Drain Capacity Post Development Summary

Drainage Area	Size	Location	10-year Storm Peak Flow	100-year Storm Peak Flow	Capacity of Storm Drain
1	32.3 acres	Residential Component of Project Site and Off-site Sewer Treatment Plant	17.5 cfs	26.1 cfs	45.4 cfs
2A	47.1 acres	Existing Northern El Charro Culvert	12.7 cfs	19.0 cfs	260 cfs
2B	14.8 acres	Existing Southern El Charro Culvert	5.9 cfs	–	10.8 cfs

Notes:
All numerical values are approximate.
cfs = cubic feet per second
Source: Carlson, Barbee, and Gibson, Inc. (CBG). 2024.

As shown in Table 3.9-1 above, the post development capacities at each drainage location is greater than the anticipated storm peak flows. Therefore, the bioretention areas would have sufficient capacity to meet the stormwater needs of the proposed project. As such, the proposed project would not create any runoff that would reach nearby surface waters, such as Lake I and Cope Lake.

Further, the proposed project would comply with the County’s MRP for post-construction management. The MRP includes standards for design for Low Impact Development (LID) BMPs and post-project compliance monitoring for new development or redevelopment projects. Compliance with the County’s MRP would reduce impacts during proposed project operation.

Groundwater and Wastewater Treatment Plant Water Quality

The proposed project is located within the basin area under sustainable groundwater management by Zone 7 as per the Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin. Thus, the proposed project would meet all applicable sustainable groundwater management actions as required. Implementation of these management impacts would ensure that groundwater quality is not impacted.

As previously discussed, the proposed wastewater treatment facility would be a membrane bioreactor treatment plant capable of producing disinfected tertiary recycled water as defined in California Code of Regulation, Title 22, Section 60301.230. Disinfected tertiary recycled water produced by the wastewater treatment facility would be stored in lined storage ponds and would be disposed of through irrigation of agricultural spray fields.³² The proposed wastewater treatment facility would also be required to meet the applicable requirements of the Water Reclamation Requirements for Recycled Water Use (Order WQ 2016-0068-DDW). Thus, all recycled water discharged from the wastewater treatment facility would be treated per State guidelines, including Title 22. Further, the treatment plant would have further oversight through permitting with the State Water Board and San Francisco Bay RWQCB. Additionally, the project applicant would file a Notice of Intent (NOI) under the Statewide General Recycled Water Order with the San Francisco Bay RWQCB for WDRs related to its treatment and agricultural spray field in compliance with Title 22.

Finally, as discussed above, none of Cal Water’s active water sources in Livermore District System would have levels of PFAS compounds over current California response levels. The proposed project would not exacerbate or contribute to PFAS levels in its water sources as residential uses are not uses associated with the production of PFAS.³³ At the time this Draft EIR is drafted, the State Water Board has only issued investigative orders to determine existing levels of PFAS in non-drinking water.³⁴ Cal Water, the provider of water to the drinking, has already proactively tested active sources in their systems for all six PFAS and took the affected sources out of service until treatment was installed. Thus, none of their active water sources have levels of the six PFAS compounds over current California response levels. The proposed water storage and booster pump facility and sewer treatment plant included in the proposed project’s off-site improvements would be constructed and operated consistent with federal and State regulations related to PFAS while Cal Water is developing its own regulations. To the extent new PFAS-related regulations or water quality standards are adopted by the State Water Board or San Francisco Bay RWQCB, those agencies and/or the County, as the Lead Agency, would ensure that the proposed project adheres to all applicable regulations and standards through the standing permitting and oversight processes. Thus, impacts related to water quality standards or groundwater quality would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

³² EKI Environment & Water. 2024. Updated Recycled Water Balance for Arroyo Lago, Pleasanton, CA Technical Memorandum. January 5.

³³ City of Pleasanton. 2022. City of Pleasanton 2023-2031 (6'h Cycle) Housing Element Update, Hydrology and Water Quality.

³⁴ California State Water Resources Control Board (State Water Board). 2024. PFAS | Per- and Polyfluoroalkyl Substances. Non-Drinking Water PFAS Information and Resources. Website: https://www.waterboards.ca.gov/pfas/non_drinking_water.html. Accessed August 23, 2024.

Groundwater Supply/Recharge

Impact HYD-2: **The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.**

Impact Analysis

The proposed project would create approximately 18.8 acres of new impervious surfaces; however, all the runoff collected would be discharged to the bioretention areas and treated. Water supplies for the proposed project would be supplied via on-site water storage and would not require groundwater pumping.

A Water Supply Evaluation prepared by EKI Environment and Water, Inc. (EKI) in March 2024 (Appendix G) concluded that water supplies would be sufficient to meet the demands of the Livermore District, as well as the proposed project, during normal and dry hydrologic years for a 20-year time horizon. Results of the water supply evaluation are further discussed in Section 3.17, Utilities and Service Systems, of this Draft EIR.

Construction

Impacts related to depletion of groundwater supplies or interference with groundwater recharge are limited to operational impacts because any water utilized during construction would be temporary, and, as discussed in Impact HYD-1, the proposed project would comply with applicable stormwater requirements and incorporate BMPs to address water quality and control runoff from the project site; therefore, runoff would not be absorbed into the groundwater supplies. While dewatering is not expected to be required during project construction, such actions would be temporary and, therefore, would not substantially interfere with groundwater supplies, recharge, or management.

Operation

The project site would be served by Cal Water. The proposed project could lead to an increased demand for water, which could lead to an increase in demand for groundwater production. The Cal Water Livermore District derives its water supply from a combination of groundwater and surface water purchased from Zone 7.³⁵ Groundwater supply is pumped from the Livermore Valley Groundwater Basin with a groundwater pumping quota set under the terms of the Livermore District's contract with Zone 7. The basin is not adjudicated and is not considered to be critically overdrafted. It is instead considered a medium-priority groundwater basin. As such, the basin is regulated under SGMA, and the preparation and implementation of a GSP is required. Adherence to the objectives and sustainability goals provided in the GSP would reduce impacts to groundwater quality within the Livermore District.

As discussed above, the proposed project is located within the basin area under sustainable groundwater management by Zone 7 as per the Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin. Thus, the proposed project would meet all applicable sustainable groundwater management actions as required.

³⁵ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

Additionally, as previously stated, water supplies would be sufficient to meet the demands of the proposed project. Therefore, impacts related to groundwater recharge and supply would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Drainage Leading to Erosion/Siltation, Flooding, Additional Sources of Polluted Runoff, or Impedance of Flood Flows

Impact HYD-3:	The proposed project would not 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: <ul style="list-style-type: none">i) Result in substantial erosion or siltation on- or off-site;(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or(iv) Impede or redirect flood flows.
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Impact Analysis

As discussed in Chapter 2, Project Description, stormwater from the project site would be drained by 6-inch storm gutters located on the sides of the proposed internal streets. Stormwater would flow into 18-inch pipes located under the streets, and then would be drained out of the site using a 36-inch diameter pipe that would be constructed along Busch Road, flowing eastward. The pipe would continue beyond Busch Road and then turn north, eventually depositing in the proposed primary bioretention area that would be located approximately 0.45 mile east of the project site.

The proposed project would collect all on-site stormwater through a new storm drain system and convey the stormwater via a new 48-inch storm drain pipe along the northern side of Busch Road and discharge into the primary bioretention area shown in Exhibit 2-6a and Exhibit 2-6b. The proposed project would create approximately 18.8 acres of new impervious surface, which would be treated in the bioretention treatment area.

A berm and drainage ditch would be constructed to intercept and convey the existing surface drainage from the adjacent parcel. The routing of the off-site stormwater would emulate the existing conditions and stormwater would flow via the existing earthen channel to a proposed 60-inch culvert under El Charro Road, where the stormwater continues east toward Cope Lake.

The Hydrology Analysis analyzed the existing 10-year stormwater runoff and total capacity of the existing 24-inch culvert under El Charro Road as well as the proposed 10-year and 100-year

stormwater runoff and total capacity of the proposed 48-inch storm drain pipe and the proposed 60" culvert under El Charro Road. The analysis used for these calculations is in accordance with Alameda County Flood Control & Water Conservation District. The Hydrology Analysis concluded that the proposed drainage systems for the two drainage areas have sufficient capacity to convey the flow from the proposed development and the off-site area east of the project site.

According to the FEMA FIRM for the area, the project site is within Zone X, which is an area that has been determined is outside of the 0.2 percent annual chance floodplain.

i) Erosion and Siltation

Construction

The proposed project would have a significant impact if it were to substantially alter the existing drainage pattern of the site in a manner that would result in substantial erosion or siltation on- or off-site. Such drainage effects could occur from grade changes at the project site, exposure of soils for periods of time during stormwater discharge, or alterations to creek beds. These types of changes would have a potentially significant impact to on-site drainage patterns.

The proposed project would involve grading and construction of a 26.6-acre site that is currently primarily composed of pervious surfaces. Construction activity could result in substantial erosion or siltation, leading to drainage pattern alteration and the increased potential for polluted runoff to enter nearby water bodies, such as Lake I or Cope Lake. This would represent a potentially significant impact.

However, the proposed project would be required to comply with the regulations of its NPDES permit. Additionally, the proposed project would be required to comply with construction-phase BMPs and requirements for erosion and sedimentation control plans, as outlined above. These BMPs may include scheduling and timing of grading (soil disturbing) activities, timely revegetation of graded areas, the use of hydroseed and hydraulic mulches, and installation of erosion control blankets. Sediment control may include properly sized detention basins, dams, or filters to reduce entry of suspended sediment into the storm drain system and watercourses and installation of construction entrances to prevent tracking of sediment onto adjacent streets. Pollution prevention practices may include designated washout areas or facilities, control of trash and recycled materials, covering of materials stored on-site, and proper location of and maintenance of temporary sanitary facilities.

Additionally, as described above, the proposed project would be required to design and implement a SWPPP to ensure that erosion, siltation, and flooding are prevented or minimized to the maximum extent feasible during construction. The SWPPP would include both structural (physical devices or measures) and operational (timing of construction) BMPs that would prevent or reduce the discharge of pollutants directly or indirectly into waterbodies. Therefore, construction impacts related to alteration of drainage patterns resulting in erosion or siltation would be less than significant.

Operation

Development of the project site would increase impervious surfaces compared to existing conditions. Thus, proposed project operation could result in increased amounts of stormwater runoff that could carry pollutants into nearby water bodies. However, the proposed project's bioretention areas would have sufficient capacity to serve the proposed project. Therefore, operational impacts related to alteration of drainage patterns resulting in erosion or siltation would be less than significant.

ii) Surface Runoff

Construction

As discussed under Impact HYD-1, the proposed project would implement a project-specific SWPPP and incorporate BMPs contained within to reduce the potential for water quality impacts related to erosion, sedimentation, and other construction-related pollutants that may result in surface runoff. As such, construction-related impacts would be less than significant.

Operation

The proposed project would result in the development of an approximately 26.6-acre site. The proposed project would increase the number of impervious surfaces by approximately 18.8 acres, thereby increasing the amount of surface runoff. This increase could result in a potentially significant impact. However, as described above, the proposed project's bioretention areas would have sufficient stormwater capacity to serve the proposed project, preventing surface runoff. As such, the operation of the proposed project would not result in substantial on-site flooding. Therefore, the operational impact related to increased impervious surfaces in turn increasing the rate or amount of surface runoff resulting in flooding would be less than significant.

iii) Exceedance of Storm Drain Capacity

Construction

The proposed project would be required to implement a SWPPP as part of its Construction General Permit to ensure that additional sources of polluted runoff is prevented during construction. Thus, construction of the proposed project would not create or contribute runoff water that would provide substantial additional sources of polluted runoff. Therefore, the construction impact related to additional sources of polluted runoff would be less than significant.

Operation

The proposed project would result in increased impervious surface area and increased runoff. Consistent with Provision C.3 San Francisco Bay Regional Municipal Stormwater NPDES Permit, LID techniques are required to be implemented in order to treat stormwater runoff. LID techniques, such as bioretention areas, allow for stormwater infiltration into the soil and detain stormwater on-site in order to reduce peak flows and prevent erosion and siltation. Stormwater on the project site would be captured in two bioretention areas designed in accordance with all applicable standards with adequate capacity to accommodate stormwater flows at the project site. Because stormwater would be treated through bioretention areas to ensure no net increase in off-site stormwater flow, the

proposed project would not result in an exceedance of storm drain capacity. Therefore, impacts would be less than significant.

iv) Flood Flows

Construction

Impacts related to impedance of flood flows would only occur during the operational phase of the proposed project. As such, no construction impedance of flood flow impacts would occur.

Operation

As described above, the project site is not within a flood hazard zone, and stormwater would be captured in bioretention areas off-site, which would be designed in accordance with all applicable standards with adequate capacity to accommodate the project site during storm events to ensure no net increase in off-site flow of stormwaters. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Risk of Pollutant Release Due to Inundation

Impact HYD-4: The proposed project could be located in a flood hazard zone, tsunami, or seiche zone, or risk release of pollutants due to project inundation.

Impact Analysis

The project site is 16.4 miles east of the San Francisco Bay and 35.7 miles east of the Pacific Ocean. The project site would not be at risk of inundation from a tsunami.

Construction

Potential pollutants stored on-site during construction would be stored in a manner consistent with the proposed project's NPDES mandated SWPPP, as well as applicable regulations by OSHA, Department of Hazardous Substances and Materials, which prevent pollutant release. As described in detail below, the project site is not located in a tsunami or seiche zone. The residential project site is not located in a flood hazard zone, but a few off-site improvements, including the agricultural irrigation spray fields, the water storage and booster pump facility and associated bioretention area, and a second bioretention area under Design Option B, would be located in Flood Zone A, which represents a high-risk area designated as SFHA with a 1 percent annual chance of flooding (Exhibit 3.9-1a and 3.9-1b). The proposed project would comply with all applicable requirements and regulations, such as NPDES and OSHA. Therefore, no construction-related impacts would occur.

Operation

As described above, the residential project site is not located in a flood hazard zone and is not likely to be inundated with flood flows that would result in the release of pollutants into surface waters. Moreover, the proposed project includes residential land uses, which do not represent the type of

use that would otherwise degrade water quality (e.g., industrial land uses that utilize hazardous materials that could adversely affect water quality). Anticipated and potential pollutants generated by the proposed project would be limited to household items and normal and expected materials for the proposed land uses and include sediment, nutrients, pesticides, metals, pathogens, oil, and grease. These materials would be limited to personal use quantities.

However, while the residential project site is not likely to be inundated with flood flows, a few of the proposed off-site improvements, including the agricultural irrigation spray fields, the water storage and booster pump facility and associated bioretention area, and a second bioretention area under Design Option B, would be located in Flood Zone A, which represents a high-risk area designated as SFHA with a 1 percent annual chance of flooding (Exhibit 3.9-1a and 3.9-1b). While potential flooding of the proposed bioretention facilities, including the one proposed under Design Option B, the agricultural spray fields, and the water storage and booster pump facility would likely not result in the release of any pollutants, flooding of the water storage and booster pump could impact the operation of that facility. However, due to the location of the water storage and booster pump facility being in close proximity to Lake I, Lake H, and Cope Lake, it is likely that the water storage and booster pump facility would not be significantly impacted by flooding because all three lakes would need to complete fill and overflow in order for the facility to flood. Furthermore, the Arroyo Lago Off-site Utility Flood Study prepared by Schaaf and Wheeler on March 13, 2024, for the proposed project (Appendix G) indicates that the proposed off-site improvements would likely not be inundated during a 100-year storm event because it is unlikely that the 100-year water surface elevation would be above ground at the location for the off-site improvements and spills that occur from the nearby lakes would be contained into the quarry ponds. Additionally, the water storage and booster pump facility would be designed following the FEMA-published guidelines for development occurring within a 100-year flood hazard zone. Additionally, the stormwater drainage facilities would have sufficient capacity to serve the proposed project. Therefore, impacts related to flood hazards and pollutants would be less than significant.

A tsunami is a sea wave generated by an earthquake, landslide, volcanic eruption, or even by a large meteor hitting the ocean. An event such as an earthquake creates a large displacement of water resulting in a rising or mounding at the ocean surface that moves away from this center as a sea wave. Tsunamis generally affect coastal communities and low-lying (low-elevation) river valleys in the vicinity of the coast. The California Geological Survey (CGS) Tsunami Hazard Area Map does not show the project site as being located in a Tsunami Hazard Area.³⁶ Because the site is not identified as within a tsunami inundation area or low-lying flood-prone area and due to its elevation, the proposed project is not likely to experience impacts from a tsunami.

Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents, or earthquakes. The effect of this phenomenon is a standing wave that would occur when influenced by external causes. The project site is located immediately south of Lake I of the Zone 7 Chain of Lakes, which could be susceptible to a seiche. However, the proposed project would comply with all applicable regulations and requirements from

³⁶ California Department of Conservation (DOC). Alameda County Tsunami Hazard Areas. Website: https://maps.conservation.ca.gov/cgs/informationwarehouse/ts_evacuation/?extent=-13660824.1095%2C4512285.6761%2C-13543416.8341%2C4564415.7294%2C102100&utm_source=cgs+active&utm_content=alameda. Accessed February 13, 2024.

the ECAP, Municipal Code, and NPDES. Therefore, impacts related to inundation from a seiche would be less than significant.

Furthermore, the proposed project stormwater drainage system, including two bioretention areas, would have sufficient capacity to serve the proposed project. The stormwater system would be designed in accordance with all applicable standards with adequate capacity to accommodate the project site during storm events and ensure no net increase in off-site flow of stormwaters. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Water Quality Control or Sustainable Groundwater Management Plans Consistency

Impact HYD-5: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact Analysis

Construction

The RWQCB has established regulatory standards and objectives for water quality in San Francisco Bay in its Water Quality Control Plan for the San Francisco Bay Basin, commonly referred to as the Basin Plan. The proposed project would not conflict with the Basin Plan or the County's NPDES program. Given that proposed construction would disturb more than one acre of land, the proposed project would be required to comply with the terms of the Construction General Permit, which require the preparation and implementation of a SWPPP that includes BMPs to ensure reduction of pollutants from construction activities potentially entering surface waters. Therefore, construction impacts related to a water quality control plan or groundwater management plan consistency would be less than significant.

Operation

As discussed in Impact HYD-2, above, the proposed project would be served by Cal Water. The Cal Water Livermore District derives its water supply from a combination of groundwater and surface water purchased from Zone 7.³⁷ Groundwater supply is pumped from the Livermore Valley Groundwater Basin with a groundwater pumping quota set under the terms of the Livermore District's contract with Zone 7. The basin is not adjudicated and is not considered to be critically overdrafted. It is instead considered a medium-priority groundwater basin. As such, the basin is regulated under SGMA, and the preparation and implementation of a GSP is required. Adherence to the objectives and sustainability goals provided in the GSP would reduce impacts to groundwater quality within the Livermore District. Additionally, as discussed above, the proposed project would meet all applicable sustainable groundwater management actions as required.

³⁷ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

Thus, the proposed project would not interfere substantially with groundwater supply. Therefore, impacts related to sustainable groundwater management would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.9.7 - Cumulative Impacts

Cumulative impacts related to hydrology and water quality typically occur within a defined watershed. The project site is located in the Chain of Lakes Watershed, a subwatershed of the Alameda Creek Watershed. The Chain of Lakes Watershed is a 4.6 square mile subwatershed, which includes a series of former quarry lakes, including Cope Lake and Shadow Cliff Lakes.³⁸ Thus, the geographic scope of the cumulative hydrology and water quality analysis is the Upper Alameda Creek Watershed. The cumulative analysis considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project.

Surface and Groundwater Quality

Cumulative development in the watershed, as identified in Table 3-1, Cumulative Projects, contributes to an incremental increase in impervious surfaces that could introduce pollutants that are typically associated with urban runoff into the stormwater system and/or contribute to cumulative flood conditions in the watershed. Cumulative development could also contribute to water quality impacts in the watershed from construction activities. Cumulative impacts would be less than significant because future cumulative development, infrastructure, and planning projects would be subject to local, State, and federal permit requirements and would be required to comply with applicable ordinances and policies, as well as other water quality regulations that control construction-related and operational discharge of pollutants in stormwater. The water quality regulations implemented by the RWQCB take a basin-wide approach and consider water quality impairment in a regional context that addresses the entire geographic context of the watershed. For example, the Construction General Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the Municipal Separate Storm Sewer System (MS4) Permit works with all municipalities within the Alameda Creek Watershed to manage stormwater systems to be collectively protective of water quality. If a CWA 404 Permit is required, the USACE would have approval authority. For these reasons and because of the nature and types of surrounding development, existing stormwater infrastructure, and regulatory requirements, cumulative impacts related to water pollutants or flooding would be less than significant.

³⁸ Alameda County Flood Control & Water Conservation District. 2024. Upper Alameda Creek Watershed – Northern Section: Subwatersheds. Website: <https://acffloodcontrol.org/the-work-we-do/resources/upper-alameda-creek-watershed-north/#:~:text=Chain%20of%20Lakes%20is%20a,of%20the%20Livermore%E2%80%90Amador%20Valley>. Accessed February 13, 2024.

The proposed project's incremental contribution to less than significant cumulative impacts would not be cumulatively considerable. The proposed project would also be required to conform to applicable federal, State, and local policies that would reduce hydrology and water quality impacts to less than significant levels.

More specifically, the proposed project would be required to comply with the terms of NPDES permits, including implementation of a SWPPP which would ensure reduction of pollutants from construction activities potentially entering surface waters. The proposed project's storm drainage system would have sufficient capacity to serve the proposed project and would prevent untreated water from entering nearby surface and groundwater. As such, the proposed project would not result in significant water quality degradation, exceed storm drain capacity, require significant groundwater supplies, or affect groundwater quality. Therefore, the proposed project's incremental contribution to less than significant cumulative impacts related to hydrology and water quality would not be significant.

Groundwater Supply/Recharge

The geographic context for addressing cumulative impacts to groundwater supply and recharge is the Cal Water Livermore District service area. Cumulative projects could lead to an increased demand for water, which could lead to an increase in demand for groundwater production. While Cal Water does obtain a portion of its water supply from groundwater, Cal Water is projected to have sufficient supplies to meet projected demands in normal and dry hydrologic years for a 20-year time horizon.

Additionally, a Water Supply Evaluation prepared for the proposed project (Appendix G) concluded that Cal Water would have sufficient water supplies to provide adequate water services to the proposed project and the rest of the projects within its service area during normal, dry, and multiple dry years. Furthermore, the proposed project has the potential to reduce on-site groundwater recharge through additional impervious surfaces; however, much of the project site would remain pervious and on-site stormwater management infrastructure, such as bioretention basins, would allow for groundwater recharge. Jurisdictional water features in adjacent areas would remain undisturbed, further allowing groundwater recharge to continue. Therefore, cumulative impacts related to groundwater recharge and supply would be less than significant, and the proposed project's incremental contribution would not be cumulatively considerable.

Erosion/Siltation, Flooding, Additional Sources of Polluted Runoff, or Impedance of Flood Flows

Cumulative projects could have a significant impact if they were to substantially alter the existing drainage pattern in a manner that would result in substantial erosion or siltation. Such drainage effects could occur from grading changes at individual project sites, exposure of soils for periods of time during stormwater discharge, or alterations to creek beds.

However, the nearest project is located adjacent to the project site and would be required to comply with the regulations of its NPDES permit. Additionally, any cumulative projects would be required to comply with construction-phase BMPs and requirements for erosion and sediment control plans.

These BMPs may include scheduling and timing of grading (soil disturbing) activities, timely revegetation of graded areas, the use of hydroseed and hydraulic mulches, and installation of erosion control blankets. Sediment control may include properly sized detention basins, dams, or filters to reduce entry of suspended sediment into the storm drain system and watercourses and installation of construction entrances to prevent tracking of sediment onto adjacent streets. Pollution prevention practices may include designated washout areas or facilities, control of trash and recycled materials, covering of materials stored on-site, and proper location of and maintenance of temporary sanitary facilities. Because of the distance of the nearest cumulative project and with compliance with NPDES permit requirements and BMPs, cumulative impacts would be less than significant.

Additionally, the proposed project would be required to design and implement a SWPPP to ensure that erosion, siltation, and flooding are prevented or minimized during construction. The SWPPP would include both structural (physical devices or measures) and operational (timing of construction) BMPs that would prevent or reduce the discharge of pollutants directly or indirectly into waterbodies. Additionally, during operation, implementation of the stormwater control plan would prevent erosion and siltation caused by stormwater flows in accordance with the County's NPDES. Therefore, construction and operation impacts related to alteration of drainage patterns resulting in erosion or siltation would be less than significant, and the proposed project would not have a cumulatively considerable contribution to less than significant impacts.

Impacts related to impedance of flood lows would only occur during operation. As such, no cumulative construction impedance of flood flow impacts would occur. Cumulative projects could increase the amount of new impervious surfaces. However, all cumulative development would be required to adhere to existing regulations to address stormwater management in a manner that ensures that flooding would not increase, and flood flows would not be redirected to other areas not currently prone to flooding. All cumulative projects would be required to include stormwater management features, and, therefore, cumulative impacts would be less than significant.

Additionally, the proposed project would not have a cumulatively considerable contribution to the less than significant cumulative impact. The proposed project's bioretention areas and stormwater treatment infrastructure would have sufficient capacity to accommodate the proposed project during storm events to ensure no net increase in off-site flow of stormwaters. Therefore, the proposed project's contribution to cumulative impacts would be less than significant.

Risk of Pollutant Release Due to Inundation

Implementation and operation of the proposed project (as well as the cumulative projects listed in Table 3-1) would require conformance with State and federal regulatory requirements related to hydrology and water quality, including applicable elements of the CWA, NPDES, Porter-Cologne Water Quality Control Act, FEMA floodplain standards, and RWQCB Basin Plan. These regulatory requirements constitute a regional basin-wide effort to implement hydrology and water quality protections. Accordingly, there is not a cumulative impact related to pollutant release due to inundation.

Moreover, the proposed project's contribution to this less than significant cumulative impact would not be cumulatively considerable. The residential project site is not located within a 100-year flood zone or other hazard area, but various off-site improvements would be located in Flood Zone A, which represents a high-risk area designated as SFHA with a 1 percent annual chance of flooding (Exhibit 3.9-1a and 3.9-1b). As such, neither the residential project site nor the off-site improvements located in the SFHA are expected to result in the release of pollutants due to flood flows. While there is a potential for flooding of the proposed bioretention facilities, including the one proposed under Design Option B, the agricultural spray fields, and the water storage and booster pump facility, this would likely not result in the release of any pollutants. Flooding of the water storage and booster pump could impact the operation of that facility; however, due to the location of the water storage and booster pump facility being in close proximity to Lake I, Lake H, and Cope Lake, it is likely that the water storage and booster pump facility would not be significantly impacted by flooding because all three lakes would need to complete fill and overflow in order for the facility to flood.

Furthermore, the Arroyo Lago Off-site Utility Flood Study prepared by Schaaf and Wheeler on March 13, 2024, for the proposed project (Appendix G) indicates that the proposed off-site improvements would likely not be inundated during a 100-year storm event because it is unlikely that the 100-year water surface elevation would be above ground at the location for the off-site improvements and spills that occur from the nearby lakes would be contained into the quarry ponds. Additionally, the water storage and booster pump facility would be designed following the FEMA-published guidelines for development occurring within a 100-year flood hazard zone, and the stormwater drainage facilities would have sufficient capacity to serve the proposed project. Therefore, impacts related to flood hazards and pollutants would be less than significant.

Water Quality Control or Sustainable Groundwater Management Plans Consistency

The RWQCB has established regulatory standards and objectives for water quality in San Francisco Bay in its Basin Plan. The cumulative projects listed in Table 3-1 would be subject to compliance with the Basin Plan and/or, as applicable, the County's NPDES program. Because conformance with these requirements would be required for all cumulative projects, cumulative hydrology/water quality impacts would be less than significant.

Moreover, the proposed project would not have a cumulative considerable contribution to this less than significant impact. The project site would be served by Cal Water. The Cal Water Livermore District derives its water supply from a combination of groundwater and surface water purchased from Zone 7.³⁹ Groundwater supply is pumped from the Livermore Valley Groundwater Basin with a groundwater pumping quota set under the terms of the Livermore District's contract with Zone 7. The basin is not adjudicated and is not considered to be critically overdrafted. It is instead considered a medium-priority groundwater basin. As such, the basin is regulated under SGMA, and the preparation and implementation of a GSP is required. Adherence to the objectives and sustainability goals provided in the GSP would reduce impacts to groundwater quality within the Livermore District.

³⁹ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

Thus, the proposed project would not interfere substantially with groundwater supply. Therefore, the proposed project's incremental contribution to impacts related to sustainable groundwater management would not be cumulatively considerable.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.10 - Land Use and Planning

3.10.1 - Introduction

This section describes the existing land use and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on the Alameda County Zoning Map, the East County Area Plan (ECAP), the City of Pleasanton's Parcel Zoning Map, and the City of Pleasanton General Plan.

The following public comments were received during the Draft Environmental Impact Report (EIR) Notice of Preparation (NOP) scoping period related to land use and planning. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should address the existing easements and exceptions for Pacific Gas and Electric Company (PG&E) utility poles.
- The Draft EIR should describe and evaluate land use changes that could occur from the proposed project.
- The Draft EIR should discuss the Agricultural (A) zoning designation and rezoning.
- The Draft EIR should discuss compliance with R-1 requirements.
- The Draft EIR should evaluate using a larger setback for the houses on the east wall with a minimum of 20 to 30 feet to further separate from homes in the Village at Ironwood.
- The Draft EIR should clarify the designation and uses for the proposed agricultural field adjacent to Cope Lake.
- The Draft EIR should evaluate density and conformance with the Pleasanton Master Plan.
- The Draft EIR should discuss consistency with neighboring housing.

3.10.2 - Environmental Setting

Land Uses

Project Area

Residential Project Site

The project site is vacant with no structures or existing development. An informal access road travels from the southeast corner of the project site, across the site, and to the northwest corner along the western boundary of the site.

Off-site Improvements

The sites for the off-site improvements (including the water storage and booster pump facility, sewer treatment plant, recycled water storage facility, agricultural irrigation recycled water spray fields, and two bioretention areas) are vacant with no structures or existing development. Shrubs, vegetation, and grasses are located throughout these locations.

Surrounding Area

West

The northern portion of the project site is adjacent to an age-qualified single-family residential neighborhood to the northwest, while the southern portion of the project site is adjacent to the Pleasanton Operations Center, the Livermore-Pleasanton Fire Department Training Tower, and Pleasanton City Water Services facilities. Further to the west of the Pleasanton Operations Center is a private elementary (Montessori) school and a single-family residential neighborhood.

North

Lake I of the Zone 7 Chain of Lakes is located 0.06 mile to the north. Areas beyond Lake I consist primarily of residential uses. Mohr Elementary school is approximately 0.72 mile to the north while I-580 is approximately 1.38 miles to the north.

East

The project site is adjacent to vacant land designated Large Parcel Agriculture (LPA) by the County. Approximately 5,000 feet farther east of the project site are mineral extraction operations. North of the mineral extraction operations and approximately 0.6 mile east of the project site is Cope Lake, which is part of the complex of water bodies that includes the Zone 7 Chain of Lakes.

South

The project site is bounded by Busch Road to the south and adjacent industrial uses, including truck storage and yard facilities and the Pleasanton Garbage Service. The Union Pacific Railroad (UPRR), which supports the Altamont Corridor Express (ACE) passenger trains, and Stanley Boulevard are located farther south, approximately 0.36 mile from the project site.

Land Use Designations

Residential Project Site

The project site is designated Medium Density Residential (MDR) according to the ECAP. Additionally, it is zoned Agriculture (A) according to the Alameda County Zoning Map.

Off-site Improvements

The ECAP designates the water storage and booster pump facility site and one of the bioretention areas as Water Management (WM). The ECAP designates the area that encompasses the recycled water storage facility, the sewer treatment plant, the agricultural irrigation recycled water spray fields, and the primary bioretention area as LPA. Both design options for the primary bioretention area would be designated as LPA.

The off-site improvements are located on land zoned Agriculture (A) according to the Alameda County Zoning Map.

Surrounding Area

West

The land just west of the north part of the project site is zoned as Planned Unit Development (PUD)-Low Density Residential (LDR), MDR, High Density Residential (HDR), Single Family Residential (R-1), and Mixed R-1/MDR according to the City of Pleasanton's Parcel Zoning Map.

The land just west of the southern part of the project site is zoned as Office Commercial (O), Study District (S), and Commercial (C) according to the City of Pleasanton's Parcel Zoning Map.

North

The land just north of the project site is designated as MDR according to the ECAP. Further north of that is Lake 1 of the Zone 7 Chain of Lakes. Lake 1 is designated as WM according to the ECAP.

East

The project site is adjacent to vacant land designated as LPA by the ECAP.

South

The land just south of the project site is zoned as General Industrial, 40,000 Square Foot Minimum Lot (I-G-40) according to the City of Pleasanton's Parcel Zoning Map.

3.10.3 - Regulatory Framework

Federal

Code of Federal Regulations Part 77

Title 14 of the Code of Federal Regulations Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace, governs the Federal Aviation Administration (FAA) review of proposed construction exceeding certain height limits, defines airspace obstruction criteria, and provides for FAA aeronautical studies of proposed construction. The regulations contain three key elements: (1) standards for determining obstructions in the navigable airspace and designation of imaginary surfaces for airspace protection; (2) requirements for project sponsors to provide notice to the FAA of certain proposed construction or alteration of structures that may affect the navigable airspace; and (3) the initiation of aeronautical studies, by the FAA, to determine the potential effect(s), if any, of proposed construction or alterations of structures on the subject airspace. Pursuant to these federal regulations, any new structure or alterations to an existing structure (including portions of structures, mechanical equipment, flag poles, and other projections) with a height that would exceed Part 77 elevation thresholds is required to file a Notice of Proposed Construction or Alteration with the FAA. Part 77 Subpart C establishes obstruction standards for the airspace around airports including approach zones, conical zones, transitional zones, and horizontal zones known as "imaginary surfaces." These imaginary surfaces rise from the primary surface (ground level at the SFO runways), and gradually rise along the approach slopes and sides of the runways. The FAA considers any objects that penetrate these imaginary surfaces as potential obstructions to air navigation. Obstructions may occur without compromising safe air navigation, but they must be marked, lighted, and noted on aeronautical publications to ensure that pilots can see and avoid them.

State

Housing Accountability Act

The Housing Accountability Act (Government Code Section 65589.5) establishes substantial limitations on a local government's ability to deny, reduce the density of, or make infeasible housing development projects that are consistent with applicable, objective local development standards and contribute to meeting the regional housing need. The Housing Accountability Act acknowledges that the lack of housing is a critical problem that threatens the economic, environmental, and social quality of life in the State.

The Housing Accountability Act provides that when a proposed housing development complies with the applicable, objective general plan and zoning standards, but a local agency proposes to deny the project or approve it only if the density is reduced, the agency must base its decision on written findings supported by substantial evidence that:

1. The development would have a specific adverse impact on public health or safety unless, disapproved, or approved at a lower density; and
2. There is no feasible method to satisfactorily mitigate or avoid the specific adverse impact, other than the disapproval, or approval at a lower density. "Specific, adverse impact" means a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.

The Housing Accountability Act also provides that a housing development project shall be deemed consistent, compliant, and in conformity with an applicable plan, program, policy, ordinance, standard, requirement, or other similar provision if there is substantial evidence that would allow a reasonable person to conclude that the housing development project is consistent, compliant, or in conformity.

Density Bonus Law

California's Density Bonus Law provides developers with a density bonus and other incentives for constructing affordable housing units within a development provided the developer meets certain requirements, as enumerated in Section 65915(b) of the Government Code:

- 65915 (b) A city, county, or city and county shall grant a density bonus and incentives or concessions described in subdivision (d) when the applicant for the housing development seeks and agrees to construct at least any one of the following:
- (1) 10 percent of the total units of a housing development for lower income households, as defined in Section 50079.5 of the Health and Safety Code.
 - (2) 5 percent of the total units of a housing development for very low income households, as defined in Section 50105 of the Health and Safety Code.
 - (3) A senior citizen housing development as defined in Sections 51.3 and 51.12 of the Civil Code.

- (4) 10 percent of the total dwelling units in a for-sale development for persons and families of moderate income, as defined in Section 50093 of the Health and Safety Code.

With respect to parking requirements, Government Code Section 65915.p(1) states:

Upon the request of the developer no city, county, or city and county shall require a vehicular ratio, inclusive of handicapped and guest parking, of a development meeting the criteria of subdivision (b) that exceeds the following ratios:

- (A) Zero to one bedrooms: one on-site parking space
- (B) Two to three bedrooms: two on-site parking spaces

Local

County of Alameda

East County Area Plan

The ECAP is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to land use:

Urban and Rural Development

Goal **To achieve a balanced subregion featuring compact communities, a diverse economic base, affordable housing, and a full complement of public facilities and amenities.**

Policy 10 The County shall require that development be phased according to the availability of infrastructure and public services allowed by the Initiative, and in conformance with policies which encourage compact development.

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 or 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.

Policy 15 The County shall evaluate all proposed major projects for their effect on the East County jobs/housing ratio and the provision of housing affordable to East County workers as well as the potential impacts on adjacent counties, especially in terms of

in-commuting. To the extent feasible, the County shall impose measures on projects in the unincorporated County to reduce potential impacts arising from inadequate provision of housing, and shall encourage the cities to do the same.

Policy 16 The County shall approve urban development only if it is located within the Urban Growth Boundary.

Policy 17 The County shall support the eventual city annexation or incorporation of all existing and proposed urban development within the Urban Growth Boundary consistent with the East County Area Plan.

Policy 25 The County shall require new developments in unincorporated areas to pay their fair share of the costs for providing East County infrastructure, public facilities and services, open space, affordable housing, and child care.

Residential Uses

Goal **To provide an adequate supply of housing in a range of densities to meet State requirements, to accommodate projected housing growth consistent with this Plan and to respond to the needs of all income groups.**

Policy 37 The County shall require each residential and nonresidential project to contribute to meeting the housing needs of very low-, low- and moderate-income households (see definition in Table 1). All residential developments of 20 or more units, whether for rental or sale, must include and maintain affordable housing units. Developers may choose the percentage of affordable housing units depending on the degree of affordability provided; either 10 percent very low income, 15 percent low income, or 20 percent moderate income, or a fraction of each of these adding to 1. Affordability must be permanently ensured through deed restrictions.

Policy 40 The County shall require all new residential development to meet County standards for adequate road access, sewer and water facilities, fire protection, building envelope location, visual compatibility, and public services.

Policy 41 The County shall allow creation of new urban residential building sites only in areas located inside the Urban Growth Boundary which have public water and sewer service.

3.10.4 - Methodology

Analysis in this section focuses on whether project implementation would physically divide an established community and whether the proposed project would conflict with land use plans, policies, or regulations adopted to avoid or mitigate an environmental effect. The potential for land use impacts was assessed through review of applicable land use policy documents. Environmental impacts that would result from the proposed project in other environmental topic areas are discussed throughout Chapter 3 of this Draft EIR.

Conflicts and inconsistencies with a policy, in and of themselves, do not constitute significant environmental impacts for purposes of the California Environmental Quality Act (CEQA). Rather, it is only where (1) there is a conflict or inconsistency that (2) involves a policy that was adopted for the purpose of avoiding or mitigating an environmental effect, and (3) therefore a conflict with such a policy would result in a significant environmental impact.

3.10.5 - Thresholds of Significance

The lead agency utilizes the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether land use and planning impacts are significant environmental effects. Would the project:

- a) Physically divide an established community?
- b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

3.10.6 - Project Impacts Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Divide an Established Community

Impact LAND-1: The proposed project would not physically divide an established community.

Impact Analysis

Construction

Impacts related to physical division of an established community are limited to operational impacts. No respective construction impacts would occur.

Operation

The physical division of an already established community typically refers to construction of a linear feature, such as an interstate highway, railroad tracks, or the removal of a means of access that would impact mobility within an existing community and an outlying area. The proposed project would include the development of 194 market-rate single-family homes, 49 Accessory Dwelling Units (ADUs), and certain off-site improvements, including a sewer treatment plant, a recycled water storage facility, a water storage and booster pump facility, agricultural irrigation recycled water spray fields, and two bioretention areas. The primary bioretention area is being considered under two different design options. Design Option A would locate the bioretention area west of El Charro, and Design Option B would located the bioretention area east of El Charro Road.

The project site and associated off-site components' sites are currently vacant with no structures or existing development. The development of the proposed project would not involve construction of any type of linear feature that would impair mobility within an existing community, nor would it remove a means of access in a manner that would impede travel or otherwise constitute division of an established community. Rather, the proposed project would be designed in accordance with

relevant ECAP policies, which would help ensure a cohesive, integrated site and circulation plan. Therefore, the proposed project would have no impact related to dividing an established community.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Conflict with Applicable Plans, Policies, or Regulations

Impact LAND-2: The proposed project would not 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.

Impact Analysis

Construction

Impacts related to consistency with applicable land use plans and policies are limited to operational impacts. No respective construction impacts would occur.

Operation

Consistency with ECAP Land Use Designation

Medium Density Residential

The project site is designated MDR according to the ECAP, which allows for densities of 4.1 to 8.0 units per gross acre.¹ The MDR designation also provides for single-family detached and attached homes, multiple-family residential units, group quarters, public and quasi-public uses, limited agricultural units, community and neighborhood commercial uses, neighborhood support uses, and similar/compatible uses. The approximately 26.6-acre site would be developed with an approximate density of 7.3 dwelling units per gross acre, consistent with the applicable, objective requirements of the ECAP. Therefore, the proposed project would be consistent with the governing MDR designation, and the types of permitted uses set forth in the ECAP for this designation. Therefore, impacts would be less than significant.

Water Management

The WM designation provides for the following uses: sand and gravel quarries, reclaimed quarry lakes, watershed lands, arroyos, and similar and compatible uses.

The proposed locations for the water storage and booster pump facility and one of the bioretention areas (located on APN 946-1350-10), are designated WM under the ECAP. The WM designation requires a minimum parcel size of 100 acres and a maximum building intensity of 0.01 floor area ratio (FAR). One single-family home per parcel is allowed if all other County standards are met, and the residential buildings including ADUs are required to have a maximum floor space of 12,000 square feet.

¹ County of Alameda. 1994. East County Area Plan: Land Use. May 5.

The site for the approximately 0.4-acre water storage and booster pump facility and adjacent bioretention area is currently graded with no existing structures. The facility would have no full-time employees and fewer than one vehicle trip per day. The facility does not include a residential component. An existing maintenance building for the Alameda County Flood Control and Water Conservation District and an associated parking lot are located approximately 400 feet to the east of this proposed site on an approximately 1.12-acre site. Thus, the proposed water storage and booster pump facility and bioretention area would be generally consistent with the WM designation because they constitute similar uses to the types of permitted uses set forth in the ECAP for the WM designation and because they are compatible with surrounding uses. Therefore, impacts would be less than significant.

Large Parcel Agricultural

The locations for the proposed recycled water storage facility, sewer treatment plant, agricultural irrigation recycled water spray fields, and the primary bioretention area are designated LPA according to the ECAP under both Design Option A and Design Option B. The LPA designation requires a minimum parcel size of 100 acres, and the maximum building intensity for nonresidential buildings shall be 0.01 FAR. According to the ECAP, one single-family home per parcel is allowed if all other County standards are met, and the residential and residential accessory buildings are required to have a maximum floor space of 12,000 square feet (more residential buildings may be allowed if they are occupied by farm employees that are required to reside on-site).

The LPA designation permits agricultural uses, agricultural processing facilities, limited agricultural support service uses, secondary residential units, visitor-serving commercial facilities, recreational uses, public and quasi-public uses, solid waste landfills and related waste management facilities, quarries, wind farms and related facilities, utility corridors, and similar uses compatible with agriculture.

The sites for the proposed off-site improvements within the designation are not developed, and there are no adjacent or nearby uses. The uses for the proposed off-site improvements would be characterized as water, wastewater, and stormwater utilities, and therefore, would be generally consistent with the permitted uses related to utilities and service systems under the LPA designation. Therefore, impacts would be less than significant.

Consistency with the County's Zoning Map

The project site and off-site improvement areas are zoned as Agriculture (A) according to the County's zoning map.² Although the proposed project would not be consistent with the minimum lot size required for the A zoning designation, under the Housing Accountability Act, a rezoning is not required because the proposed project is consistent with the applicable, objective provisions of the site's ECAP land use designation and the zoning is inconsistent with the plan.^{3, 4}

² County of Alameda. 2023. Unincorporated Alameda County Public Access Map (PAM). Website: <https://acpwa.maps.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773>. Accessed February 26, 2024.

³ County of Alameda. 2022. Alameda County Zoning Ordinance, Chapter 17.06. Website: https://library.municode.com/ca/alameda_county/codes/code_of_ordinances?nodeId=TIT17ZO_CH17.06ADI. Accessed February 26, 2024.

⁴ See also Government Code Section 65589.5(i)(4).

Consistency with ECAP Land Use Goals and Policies

Although under the Housing Accountability Act the proposed project only needs to comply with the applicable, objective provisions of the ECAP (i.e., those allowing residential densities of 4.1 to 8.0 units per acre), a consistency analysis comparing the proposed project with the non-objective ECAP goals and policies related to land use is provided in Table 3.10-1 below. As shown in the table, the proposed project would be consistent with the ECAP’s non-objective goals and policies.

Table 3.10-1: ECAP Consistency Analysis

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
Land Use	Goal	To achieve a balanced subregion featuring compact communities, a diverse economic base, affordable housing, and a full complement of public facilities and amenities.	Consistent: The proposed project would feature a compact design including up to 194 single-family homes that would support up to 49 ADUs, which provides a range of housing types and affordability. The proposed project would also include off-site improvements to enhance Busch Road and provide a sidewalk to enhance pedestrian circulation and safety.
	Policy 10	The County shall require that development be phased according to the availability of infrastructure and public services allowed by the Initiative, and in conformance with policies which encourage compact development.	Consistent: The proposed project would develop utilities infrastructure and internal roadways as well as enhance existing roadways to serve the proposed project. These improvements would be developed concurrently with the proposed residential development to ensure adequate utilities and infrastructure would be available to the proposed 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 or 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	Consistent: The proposed project includes the utilities infrastructure adequately sized to service the needs of the proposed development, and it would not be in excess of what would be required.

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
		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.	
	Policy 15	The County shall evaluate all proposed major projects for their effect on the East County jobs/housing ratio and the provision of housing affordable to East County workers as well as the potential impacts on adjacent counties, especially in terms of in-commuting. To the extent feasible, the County shall impose measures on projects in the unincorporated County to reduce potential impacts arising from inadequate provision of housing, and shall encourage the cities to do the same.	Consistent: The proposed project would be evaluated by the County for its effect on the jobs/housing ratio and affordable housing. The proposed project would not result in unplanned direct or indirect population growth. Further, the proposed project is expected to credit the County toward the Regional Housing Needs Allocation (RHNA) required development and is accounted for in the County’s Housing Element Update. ⁵ See Section 3.13, Population and Housing, for further information.
	Policy 16	The County shall approve urban development only if it is located within the Urban Growth Boundary.	Consistent: The project site is located within the Urban Growth Boundary.
	Policy 17	The County shall support the eventual city annexation or incorporation of all existing and proposed urban development within the Urban Growth Boundary consistent with the East County Area Plan.	Consistent: The project site is located within the Urban Growth Boundary. An alternative to the proposed project that analyzes annexation of the proposed project into the City of Pleasanton is included in Chapter 5, Alternatives to the Proposed Project, of this Draft EIR.
	Policy 25	The County shall require new developments in unincorporated areas to pay their fair share of the	Consistent: The proposed project would pay all applicable developer fees for infrastructure, public

⁵ At the time this Draft EIR was prepared, the County’s Updated Housing Element and the Sixth Cycle Regional Housing Needs Assessment (RHNA) are currently under review. Any future changes to the County’s Updated Housing Element and RHNA is expected to be minimal and would not result in significant changes to the analysis.

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
		costs for providing East County infrastructure, public facilities and services, open space, affordable housing, and child care.	services, open space, affordable housing, and child care.
	Goal	To provide an adequate supply of housing in a range of densities to meet State requirements, to accommodate projected housing growth consistent with this Plan and to respond to the needs of all income groups.	Consistent: The proposed project would be consistent with the allowable range of densities for the project site and would accommodate projected housing growth and affordable ADUs.
	Policy 37	The County shall require each residential and nonresidential project to contribute to meeting the housing needs of very low-, low- and moderate-income households (see definition in Table 1). All residential developments of 20 or more units, whether for rental or sale, must include and maintain affordable housing units. Developers may choose the percentage of affordable housing units depending on the degree of affordability provided; either 10 percent very low income, 15 percent low income, or 20 percent moderate income, or a fraction of each of these adding to 1. Affordability must be permanently ensured through deed restrictions.	Consistent: The proposed project would develop approximately 49 deed-restricted ADUs.
	Policy 40	The County shall require all new residential development to meet County standards for adequate road access, sewer and water facilities, fire protection, building envelope location, visual compatibility, and public services.	Consistent: The proposed project would comply with applicable standards for road access, sewer and water facilities, fire protection, building envelope location, visual compatibility, and public services.
	Policy 41	The County shall allow creation of new urban residential building sites only in areas located inside the Urban Growth Boundary which have public water and sewer service.	Consistent: The proposed project would be located within the Urban Growth Boundary and would have sufficient water and sewer service through the development of a water storage and booster pump facility and sewer treatment plant proposed for the project. Cal Water would provide adequate

Element	Goal/Objective/Policy		Consistency Determination
	No.	Text	
			water service to the proposed project site.
	Goal	To maximize long-term productivity of East County’s agricultural resources.	Consistent: The proposed project would not remove or otherwise impact agricultural resources.
	Policy 81	The County shall give the highest priority in areas designated “Large Parcel Agriculture” to agricultural operations. Visitor-serving commercial facilities (such as wineries, inns, and food and beverage stores) shall be limited to facilities that promote agriculture and are subordinate and directly related to the area’s agricultural production.	Consistent: See discussion under Impact LAND-2, above, for LPA operations.
	Policy 82	In areas designated Large Parcel Agriculture, the County shall permit limited agriculture enhancing commercial uses that primarily support the area’s agricultural production, are not detrimental to existing or potential agricultural use, demonstrate an adequate and reliable water supply, and comply with other policies and programs of the Initiative.	Consistent: The proposed project, while partially designated as LPA, would not include commercial uses.
Source: County of Alameda. 2000. East County Area Plan.			

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.10.7 - Cumulative Impacts

The geographic context for analysis of cumulative impacts related to land use and planning generally includes Alameda County, including the City of Pleasanton. Land use decisions for both the project and for some of the other cumulative projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, as well as other relevant cumulative projects as required by CEQA, are made at the County level, while land use decisions for projects in the City of Pleasanton are made by the City of Pleasanton. Development within the County is governed by the Alameda County General Plan and

various specific plans, including the ECAP, as well as the Alameda County Municipal Code. These ensure logical and orderly development and require discretionary review to ensure that projects do not result in land use impacts due to inconsistency with the General Plan, ECAP, and other regulations.

Other cumulative development projects in the County would be required to demonstrate consistency with applicable provisions of the Alameda County General Plan and applicable codes, ordinances, and policies. Development projects in the City of Pleasanton would be required to demonstrate consistency with the City's General Plan and applicable codes and ordinances. This would ensure that these projects comply with applicable planning policies and regulations. The proposed project has been determined to be consistent with the General Plan's land use designations, as described above. It also has been determined that the proposed project would not divide an established community. Given the above information, the proposed project, in conjunction with other existing, planned, and probable future projects, would result in a less than significant cumulative impact related to land use and planning.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.11 - Mineral Resources

3.11.1 - Introduction

This section describes the existing conditions related to mineral resources in the region and project area and summarizes the relevant regulatory framework. This section also evaluates potential impacts related to mineral resources that could result from implementation of the proposed project. Information in this section is based, in part, on reports and maps from the California Department of Conservation (DOC) and the Alameda County General Plan (General Plan), including the East County Area Plan (ECAP) incorporated as part of the General Plan.

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to mineral resources. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should pursue consistency with Livermore-Amador Valley Quarry Area Reclamation (LAVQAR) Specific Plan before project approval.
- The Draft EIR should notify the United States Environmental Protection Agency (EPA) of the proposed project and study the deposits on the project site.
- The Draft EIR should study potential toxic contaminants in the soil and fill on the project site.
- The EPA should advise on building homes on potentially contaminated soil.

3.11.2 - Environmental Setting

County of Alameda

Mineral resources, such as aggregate material, are necessary to support urban development, as all public and private projects utilize this material for roadway paving, structural elements, and hardscape, including sidewalks, curbing, and gutters. Alameda County (County) contains one of three production areas in the San Francisco–Monterey Bay Area for Portland Concrete cement-grade sand and gravel, found in the Livermore-Sunol Valley-Niles Cone area.¹ Minerals from this production area are extracted via surface mining operations. Because of the zoning and General Plan designations in these areas and current mining operations in the County, portions of the East County have been designated by the California State Mining and Geology Board as Regionally Significant Construction Aggregate Resource Areas, described below and mapped in Figure 22 of the ECAP EIR:²

- **Sector A** is located in the Livermore and Amador Valleys, in the Cities of Pleasanton and Livermore, and contains aggregate deposits. Active Surface Mining Permits and Reclamation Plans in this area include surface mining permit (SMP-16 (Pleasanton Quarry) and SMP-23 (Eliot Quarry)).^{3,4} These SMPs are located approximately 1.5 miles and 1.2 miles east of the

¹ County of Alameda. 1993. East County Area Plan Draft Environmental Impact Report. June.

² Ibid.

³ County of Alameda. 2016. SMP-16 Pleasanton Quarry. Website: <https://nps.acgov.org/smp16pleasantonquarry.page?>. Accessed February 26, 2024.

⁴ County of Alameda. 2016. SMP-23 Eliot Quarry. Website: <https://nps.acgov.org/smp23eliotquarry.page?>. Accessed February 26, 2024.

project site, respectively, as shown in Exhibit 3.11-1a and Exhibit 3.11-1b. As of December 6, 2021, SMP-31 has completed a reclamation plan, and is no longer active.⁵

- **Sector B** is located along the Arroyo del Valle on the southwestern edge of the City of Livermore and is an alluvial deposit. The area of the deposit is under multiple private ownerships. According to the ECAP EIR, this deposit contains approximately 88 million tons of resource.
- **Sector C** is located on the eastern side of Livermore, along the Arroyo Mocho. The sector is an alluvial deposit. The deposit contains approximately 99 million tons of resources but does not contain active surface mining permits.
- **Sector D** is located east of Sunol Valley, on the Apperson Ridge. The sector is a greenstone deposit. There is approximately 1,040 million tons of resource in this area. Active Surface Mining Permits and Reclamation Plans in this area include SMP-17.

Additionally, lands in the County are classified as Mineral Resources Zones (MRZs) MRZ-1, MRZ-2, and MRZ-3, which are further defined in Section 3.11.3, Regulatory Framework. Areas classified as MRZ-2 indicate that mineral deposits are present or likely present.⁶

Project Site

The project site is located in Sector A, described above. The project site is also partially located within an MRZ-2 zone (further defined in Section 3.11.3, Regulatory Framework).⁷

Until December 6, 2021, areas on the project site within Sector A were under surface mining permit SMP-31, operated by USL Pleasanton Lakes. However, as mentioned above, SMP-31 is no longer active following the completion of its reclamation plan under the LAVQAR Specific Plan.⁸

On March 2, 2020, the Alameda County Community Development Agency conducted independent research to ensure that land permitted under SMP-31 had been reclaimed ‘consistently and appropriately’ in accordance with the California Surface Mining and Reclamation Act of 1975 (SMARA) and the County’s surface mining ordinance.⁹ This investigation concluded that substantial evidence exists in the State Resources Control Board’s GeoTracker database and in Alameda County’s Department of Environmental Health (ACDEH) approval documentation and administrative record to conclude that the SMP-31 site had been reclaimed according to State and local requirements, and that no further cleanup was required.¹⁰

⁵ County of Alameda. 2022. Notice of Completion, Radum (SMP-31) Reclamation Plan. June 24.

⁶ California Department of Conservation. 2022. CGS Warehouse: Mineral Land Classification. Website: <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>. Accessed February 26, 2024.

⁷ Ibid.

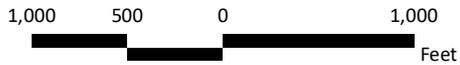
⁸ County of Alameda. 2022. Reclamation Plan Notice of Completion, Radum (SMP-31) Reclamation Plan. June 24.

⁹ County of Alameda. 2020. Busch Pit Site—Closure Process for Potential Contamination Areas of Concern. Letter. March 2.

¹⁰ Ibid.



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Source: Bing Aerial Imagery. CBG Civil Engineers 12/2023.



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The County's Community Development Agency Planning Department recorded a mining and aggregate production activities Notice of Completion with the County's Clerk-Recorder Office on June 24, 2022, which identifies completion of the associated reclamation plan. This Notice of Completion (NOC) establishes that mining operations have ceased, reclamation is certified complete, and no further action is required. As such, the site does not contain any active mining operations.

As previously discussed in Section 3.8, Hazards and Hazardous Materials, ACDEH provided clearance of the proposed project contingent upon implementation of the following conditions of approval:

1. Submittal of a Final Soil Import Report to ACDEH for review and approval, documenting soils imported to the proposed project site to restore the form quarry in accordance with the Reclamation Plan being implemented under the oversight of Alameda County Community Development Agency on the Former Aggregates Facility under Surface Mining Permit 31 to facilitate closure of the open environmental cleanup case.
2. Implementation of corrective actions and soil management protocols during site redevelopment.
3. Submittal of project schedule to ACDEH prior to the start of site grading.
4. Submittal of soil import documents to ACDEH prior to import of soil to the site.
5. Submittal of a Stockpile Characterization Sampling, Evaluation, and Reuse Plan to ACDEH prior to the reuse of excavated stockpile material on-site.
6. Submittal of a Soil Excavation Report to ACDEH prior to the beginning of construction.

A Final Soil Report (condition No. 1 above) was submitted to ACDEH on March 23, 2020 and determined that it met the condition on July 19, 2023 by ACDEH. The remaining conditions are included as HAZ COAs HAZ 4a through HAZ 4e in Section 3.8, Hazards and Hazardous Materials. Furthermore, the proposed project would be required to obtain any necessary permits, including permitting from the State Water Board for the construction and operation of the proposed wastewater treatment facilities. Please refer to Section 3.8, Hazards and Hazardous Materials, of this Draft EIR for further discussion.

Off-site Improvement Areas

Off-site improvements associated with the proposed project extend east and northeast of the project site, to a distance of approximately 0.5 miles. These improvement areas are also located within Sector A. As such, the proposed off-site improvement areas are within an MRZ-2 zone. The off-site improvement areas are also located within the boundary of the now inactive SMP-31. As such, the off-site improvement area does not contain any active mining operations.

3.11.3 - Regulatory Framework

Federal and State

California Surface Mining and Reclamation Act of 1975

SMARA mandates that a “classification/designation” analysis be done to provide information on the availability of mineral resource for construction and growth. The objective is to ensure that raw material will be available when needed—that this raw material will not become inaccessible for mining as the result of inappropriate land use decisions involving mineral resource areas. Areas are classified on the basis of geologic factors without regard to existing land use and land ownership. The areas are categorized into four MRZs:

- MRZ-1** An area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2** An area where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- MRZ-3** An area containing mineral deposits, the significance of which cannot be evaluated.
- MRZ-4** An area where available information is inadequate for assignment to any other MRZ zone.

Of the four categories, lands classified as MRZ-2 are of the greatest importance. Such areas are underlain by known mineral resources are located or where geologic data indicate that significant measured or indicated resources are present. MRZ-2 areas are designated by the State of California Mining and Geology Board as being regionally significant.

Local

East County Area Plan

The ECAP is part of the Alameda County General Plan and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to minerals:

General Open Space

Goal To protect regionally significant open space and agricultural land from development.

Policy 52 The County shall preserve open space areas for the protection of public health and safety, provision of recreational opportunities, production of natural resources (e.g., agriculture, wind power, and mineral extraction), protection of sensitive viewsheds (see definition in Table 1 of the ECAP), preservation of biological resources, and the physical separation between neighboring communities (see Figure 4 of the ECAP).

Quarries and Regionally Significant Aggregate Resource Areas

Goal **To recognize the regional value of the County's construction aggregate resources and to ensure compatibility between quarry operations and surrounding land uses.**

Policy 155 Except to the extent required by State law, no new quarry or other open-pit mine may be approved by the County outside the Urban Growth Boundary, unless approved by the voters of Alameda County. Excavation not adjacent to an existing quarry site and on the same or an adjoining parcel shall be regarded as a new quarry.

A quarry that has received all necessary discretionary County and other approvals and permits prior to the effective date of the ordinance but has not yet exercised those approvals and permits is to be considered an “existing” rather than a “new” quarry.

Policy 157 The County shall review proposals for development within or adjacent to State designated Regionally Significant Construction Aggregate Resource Sectors. If the development is proposed on unincorporated land, the County shall consider the effects of such development on the future or continued extraction of the resource and shall approve such development only if conditions are applied to minimize the potential of the new use to preclude continued or future access to the resource. If the development is proposed within a city, the County shall encourage the city to do the same.

Policy 158 The County shall require that, where conflicts between a new use and existing quarry are anticipated, notifying future residents, and mitigating the conflict shall be the responsibility of the new use.

Policy 159 The County shall impose conditions on approval of new Surface Mining Permits and Reclamation Plans to protect nearby uses from potential traffic, noise, dust, health and safety, visual and other impacts generated by sand and gravel quarries. Conversely, the County shall not approve land uses adjacent to any existing quarry or Regionally Significant Construction Aggregate Resource Sector if the development of the new uses would result in exposure of residential or other sensitive uses to possible adverse impacts of the quarry, unless the new uses can effectively mitigate the significant adverse impacts and notify potential homeowners of the risk, as required by Policy 158.

Policy 160 The County shall ensure that where quarry operations are located in areas designated as Water Management, extraction of the aggregate resource shall be allowed in the short-term. Reclamation of the land for water management and other compatible uses shall occur subject to conditions of Surface Mining Permits and Reclamation Plans and consistent with the Specific Plan for Livermore-Amador Valley Quarry Area Reclamation or the comparable plan prepared for the Sunol Valley/San

Francisco Water Department watershed lands pursuant to Policy 161 and Program 71, whichever is applicable.

Policy 164 The County shall ensure that where quarry operations will be reclaimed as open space, reclamation plans are designed to restore biological value to sites through appropriate revegetation, contouring of lakes to simulate natural bodies of water, and protection or in-kind replacement of significant trees.

Implementation Programs—Quarries and Regionally Significant Aggregate Resource Areas

Program 72 The County shall require that if a development is approved within 1,000 feet of a State designated Regionally Significant Construction Aggregate Resource Sector, a real estate disclosure notice shall be included in deeds to notify purchasers and lenders of the proximity of the resource sector and that, if the resource were mined in the future, there could be attendant nuisances associated with mining such as dust, noise, and unattractive physical appearance.

Alameda County Surface Mining Ordinance

The Alameda County Surface Mining Ordinance (Chapter 6.80, Surface Mining and Reclamation, of the Alameda County Ordinance Code) was adopted in 1983, pursuant to the requirements of SMARA. The purpose of the ordinance is to regulate surface mining operations and reclamation within the unincorporated areas of the County, while ensuring the continued availability of important mineral resources.

Livermore-Amador Valley Quarry Area Reclamation Specific Plan

Adopted on November 5, 1981 by the County, the purpose of the LAVQAR Specific Plan is to enable the competing resources of land, water, and sand and gravel to be utilized with a minimum of conflict and disruption, plan for reclamation, productive reuse, and rehabilitation of the Quarry Area, mitigate adverse effects of mining, satisfy requirements of the State Surface Mining and Reclamation Act of 1975 and the Alameda County Surface Mining Ordinance, and provide a coordinated plan for arrangement of mining-produced land and water masses into a coherent, flexible form, reflecting interrelatedness of geology, hydrology, land use, and other factors throughout the Livermore-Amador Valley Quarry Area. The following policy would be relevant to the proposed project:

Policy 13 Land areas may appropriately be used for mining, mining-related industry in conjunction with ongoing mining, agriculture, open space, and watershed uses. New or expanded uses in the Quarry Area shall be allowed only upon securing Zoning Approval to ensure compatibility with the Specific Plan and reclamation of the area. Reclaimed land should be capable of supporting beneficial uses. No uses shall be permitted which may unacceptably pollute the Lakes.

3.11.4 - Methodology

Impacts were assessed by evaluating the proposed project’s potential for impacting mineral resources within the Plan Area based, in part, on the ECAP, MRZs classified by SMARA, and the County’s Ordinance Code.

3.11.5 - Thresholds of Significance

The lead agency utilizes the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether impacts to mineral resources are significant environmental effects. Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?
- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

3.11.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Loss of Known Valuable Mineral Resources

Impact MIN-1: **The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.**

Impact Analysis

As previously discussed, the project site and proposed off-site improvement areas are located in an MRZ-2 zone, which indicates that the area could contain significant aggregate materials. However, the mining permit associated with the area of the project site and off-site improvement areas (SMP-31) is now inactive. On March 2, 2020, the Alameda County Community Development Agency concluded that the area had been reclaimed according to State and local requirements, and no further cleanup is required. Mining operations formally ceased on December 6, 2021, and the County's Community Development Agency Planning Department recorded a mining and aggregate production activities NOC with the County's Clerk-Recorder Office on June 24, 2022, which identifies completion of the associated reclamation plan. This NOC establishes that mining operations have ceased, reclamation is certified complete, and no further action is required.

Mined areas of the site have since been backfilled, which effectively precludes the resumption of surface mining operations. Furthermore, the SMP-31 Surface Mining Permit anticipated that the permitted quarry located in the project area prior to reclamation would be depleted and terminated around 2010, with the area thereafter being depleted of economically extractable mineral resources.¹¹

Therefore, the development of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State because mineral resources on the project site and proposed off-site improvement areas were deemed to have been depleted through prior extraction, and any remaining mineral resources were rendered

¹¹ Alameda County Planning Commission. 2000. Resolution No. 00-05: Amendment to Surface Mining Permit and Reclamation Plan SMP-31. April 3.

inaccessible by the backfill of all mining sites in the project area. Further, mining operations and reclamation has been deemed complete by the County for the project site and off-site improvement areas. Therefore, the loss of mineral resources from project implementation would be considered a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Loss of Important Mineral Resource Recovery Sites

Impact MIN-2: **The proposed project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other local land use plan.**

Impact Analysis

The ECAP maps the project site as “Land Within Urban Growth Boundary” and designates the land use of the project site as Medium Density Residential. Furthermore, the site is zoned as Agriculture by the County zoning map. These designations do not currently support or allow surface mining activities. Furthermore, as previously discussed, the County recorded an NOC of mining and aggregate production activities with the County’s Clerk-Recorder Office, including completion of the associated reclamation plan on June 24, 2022. The LAVQAR Specific Plan, County Surface Mining Ordinance, and ECAP additionally enforce the conclusion of mineral extraction activities through the completion of a reclamation plan.

The proposed project would result in the construction of up to 194 single-family residential units with up to 49 accessory dwelling units (ADUs), which would comply with the Medium Density Residential (MDR) land use designation of the project site in the ECAP. The LAVQAR Specific Plan anticipated that the project site and off-site improvement areas would be developed consistent with Development, Class 3 by 2030.¹² The Development, Class 3 classification is not clearly defined in the LAVQAR other than expected uses under this classification would include agriculture, including aquaculture, and recreation. The ECAP land use designation takes precedence over the LAVQAR Specific Plan designation; however, regardless, both the ECAP and the LAVQAR do not anticipate mining or mineral extraction to continue at the project site. Additionally, as discussed under 3.11.2, Environmental Setting, the proposed project would be required to obtain necessary permits prior to construction of the residential component and the off-site improvements, including, but not limited to, permitting from the State Water Board for the construction and operation of the proposed wastewater treatment facilities. This is consistent with Policy 13 of the LAVQAR Specific Plan, which requires all land development in the Specific Plan area to obtain approval from Zone 7 for future development.

¹² Alameda County Board of Supervisors. 1981. Specific Plan for Livermore-Amador Valley Quarry Area Reclamation. November 5.

The LAVQAR Specific Plan intended to remove mineral resource extraction activities on-site; neither the project site's ECAP designation nor zoning allow mineral extraction; and the proposed project would not interfere with existing plans to remove mineral resource extraction operations anywhere off-site. Therefore, the proposed project would result in less than significant impacts related to the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other local land use plan.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.11.7 - Cumulative Impacts

Impacts related to mineral resources are generally site-specific and limited in geographic scope; however, in areas where mining or mineral extraction is more common, such as the area surrounding the project site, it is more accurate to define the geographic context for a discussion of cumulative impacts to mineral resources to the jurisdiction of the agency that oversees mining operations in the area. In this case, the geographic scope would be the Regionally Significant Construction Aggregate Resource Area within which the project is located, Sector A, as identified by the California State Mining and Geology Board. The analysis also considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project.

As identified in 3.11.2, Environmental Setting, the County contains one of three production areas in the San Francisco. Because of the zoning and General Plan designations in these areas and current mining operations in the County, portions of the East County have been designated by the California State Mining and Geology Board as Regionally Significant Construction Aggregate Resource Areas, including Sector A. Sector A is located in the Livermore and Amador Valleys, in the Cities of Pleasanton and Livermore, and contains aggregate deposits. Active Surface Mining Permits and Reclamation Plans in this area include SMP-16 and SMP-23. These SMPs are located approximately 1.5 miles and 1.2 miles east of the project site. SMP-31, which was located on the project site and also within Sector A, has completed a reclamation plan and is no longer active.

Loss of Known Valuable Mineral Resources

As the quarries located at SMP-16 and SMP-23 are actively mining valuable mineral resources and none of the cumulative projects identified in Chapter 3, Environmental Impact Analysis, would be located at SMP-16 or SMP-23, there would not be an existing cumulative impact related to the loss of valuable mineral resources. Further, as identified above, the proposed project would have less than significant impacts related to the loss of valuable mineral resources; therefore, the project would not have a direct or indirect incremental contribution to cumulative impacts. Therefore, cumulative impacts related to the loss of valuable mineral resources would be less than significant.

Loss of Important Mineral Resource Recovery Sites

Similarly, neither the proposed project nor the cumulative projects identified in Chapter 3, Environmental Impact Analysis, are located on sites designated for mineral recovery by the ECAP and Pleasanton General Plan. Similar to the proposed project, Cumulative Project No. 7 (3300 Busch Road Square Miles Pleasanton, LLC Property) and Cumulative Project No. 13 (3000 Busch Road Amazon-Owned Property) are included in the LAVQAR Specific Plan and are identified with the classification of Development, Class 2 by 2030.¹³ Cumulative Project No. 4 (Senior East County Lakes) and a portion of Cumulative Project No. 5 (Chain of Lakes Conveyance Project) are included in the LAVQAR Specific Plan and are identified with the classification of Development, Class 3 by 2030.¹⁴ Development, Class 2 is not well-defined by the LAVQAR Specific Plan, but identifies that the intended uses include agriculture, including aquaculture, recreation, and industrial uses. Development, Class 3 areas are generally suitable for agriculture, aquaculture, and recreation. Therefore, the LAVQAR Specific Plan does not anticipate mineral extraction to occur at these sites. Therefore, no cumulative impact exists related to loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other local land use plan. Further, as identified above, the proposed project would have less than significant impacts related to the loss of mineral resource recovery sites as identified by the ECAP and LAVQAR Specific Plan; therefore, the project would not have a direct or indirect incremental contribution to cumulative impacts. Therefore, cumulative impacts related to the loss of mineral resource recovery sites would be less than significant.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

¹³ Alameda County Board of Supervisors. 1981. Specific Plan for Livermore-Amador Valley Quarry Area Reclamation. November 5.

¹⁴ Ibid.

3.12 - Noise

3.12.1 - Introduction

This section describes the existing noise setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on noise modeling performed by FirstCarbon Solutions (FCS). The noise modeling output is included in this Draft Environmental Impact Report (EIR) as Appendix H.

The following public comments were received during the EIR Notice of Preparation (NOP) scoping period related to noise.

- The Draft EIR should analyze noise impacts associated with proximity to the City of Pleasanton Operations Services Center, Fire Training Facility, and Police Department practice range.
- The Draft EIR should evaluate noise impacts from the proposed project on surrounding land uses, including the Village at Ironwood community.
- The Draft EIR should analyze noise disruption and pollution during construction.
- The Draft EIR should evaluate vibration impacts from the proposed project.

3.12.2 - Environmental Setting

Characteristics of Noise

Noise is generally defined as unwanted or objectionable sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in the extreme, hearing impairment. Noise effects can be caused by pitch or loudness. *Pitch* is the number of complete vibrations or cycles per second of a wave that result in the range of tone from high to low; higher-pitched sounds are louder to humans than lower-pitched sounds. *Loudness* is the intensity or amplitude of sound.

Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit, which expresses the ratio of the sound pressure level being measured to a standard reference level. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Only audible changes in existing ambient or background noise levels are considered potentially significant.

The human ear is not equally sensitive to all frequencies within the audible sound spectrum, so sound pressure level measurements can be weighted to better represent frequency-based sensitivity of average healthy human hearing. One such specific “filtering” of sound is called “A-weighting.” A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible

spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear. Table 3.12-1 provides examples of A-weighted noise levels from common sources. Because decibels are logarithmic units, they cannot be added or subtracted by ordinary arithmetic means. For example, if one noise source produces a noise level of 70 dB, the addition of another noise source with the same noise level would not produce 140 dB; rather, they would combine to produce a noise level of 73 dB.

Table 3.12-1: A-Weighted Decibel Scale

Common Noise Sources	Sound Level, dBA
Near Jet Engine	130
Rock and Roll Band	110
Jet Flyover at 1,000 feet	100
Power Motor	90
Food Blender	80
Living Room Music	70
Human Voice at 3 feet	60
Residential Air Conditioner at 50 feet	50
Bird Calls	40
Quiet Living Room	30
Average Whisper	20
Rustling Leaves	10
<p>Notes: These noise levels are approximations intended for general reference and information use. They do not meet the standard required for detailed noise analysis but are provided for the reader to gain a rudimentary concept of various noise levels. Source: Cowan, James P. 1993. Handbook of Environmental Acoustics.</p>	

Noise Descriptors

There are many ways to rate noise for various intervals, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and community noise equivalent level (CNEL) or the day-night average level (L_{dn}) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source, as well as ground absorption, atmospheric conditions (wind, temperature gradients, and humidity) and refraction, and shielding by natural and manmade features. Sound from point sources, such as an air conditioning condenser, a piece of construction equipment, or an idling truck, radiates uniformly outward as it travels away from the source in a spherical pattern.

The attenuation or sound drop-off rate is dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in noise models: soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA per each doubling of the distance (dBA/DD) is typically observed over soft ground with landscaping, as compared with a 6 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources, such as traffic noise on a roadway, a 4.5 dBA/DD is typically observed for soft-site conditions, compared to the 3 dBA/DD drop-off rate for hard-site conditions. Table 3.12-2 briefly defines these measurement descriptors and other sound terminology used in this section.

Table 3.12-2: Sound Terminology

Term	Definition
Sound	A vibratory disturbance created by a vibrating object which, when transmitted by pressure waves through a medium such as air, can be detected by a receiving mechanism such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Ambient Noise	The composite of noise from all sources near and far in a given environment.
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which represents the squared ratio of sound pressure amplitude to a reference sound pressure. The reference pressure is 20 micropascals, representing the threshold of human hearing (0 dB).
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level that approximates the frequency response of the human ear.

Term	Definition
Equivalent Noise Level (L_{eq})	The average sound energy occurring over a specified time period. In effect, L_{eq} is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period.
Maximum and Minimum Noise Levels (L_{max} and L_{min})	The maximum or minimum instantaneous sound level measured during a measurement period.
Day-Night Level (DNL or L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m. (nighttime).
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring between 7 p.m. and 10 p.m. and 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m.
Source: Data compiled by FirstCarbon Solutions (FCS). 2023.	

Traffic Noise

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of noise levels, a doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the Federal Highway Administration (FHWA) community noise assessment criteria, this change is “barely perceptible.” For reference, a doubling of perceived noise levels would require an increase of approximately 10 dBA. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

Stationary Noise

A stationary noise producer is any entity in a fixed location that emits noise. Examples of stationary noise sources include machinery, engines, energy production, and other mechanical or powered equipment and activities such as loading and unloading or public assembly that may occur at commercial, industrial, manufacturing, or institutional facilities. Furthermore, while noise generated by the use of motor vehicles over public roads is preempted from local regulation, although the use of these vehicles is considered a stationary noise source when operated on private property such as at a construction site, a truck terminal, or warehousing facility. The emitted noise from the producer can be mitigated to acceptable levels either at the source or on the adjacent property through the use of proper planning, setbacks, block walls, acoustic-rated windows, dense landscaping, or by changing the location of the noise producer.

The effects of stationary noise depend on factors such as characteristics of the equipment and operations, distance and pathway between the generator and receptor, and weather. Stationary noise

sources may be regulated at the point of manufacture (e.g., equipment or engines), with limitations on the hours of operation, or with provision of intervening structures, barriers or topography.

Construction activities are a common source of stationary noise. Construction-period noise levels are higher than background ambient noise levels but eventually cease once construction is complete. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on each construction site and, therefore, would change the noise levels as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 3.12-3 shows typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

Table 3.12-3: Typical Construction Equipment Maximum Noise Levels

Type of Equipment	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Impact Pile Driver	95
Auger Drill Rig	85
Vibratory Pile Driver	95
Jackhammers	85
Pneumatic Tools	85
Pumps	77
Scrapers	85
Cranes	85
Portable Generators	82
Rollers	85
Bulldozers	85
Tractors	84
Front-end Loaders	80
Backhoe	80
Excavators	85
Graders	85
Air Compressors	80
Dump Truck	84
Concrete Mixer Truck	85
Pickup Truck	55
Source: Federal Highway Administration (FHWA). 2006. Highway Construction Noise Handbook. August.	

Noise from Multiple Sources

Because sound pressure levels in decibels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. Therefore, sound pressure levels in decibels are logarithmically added on an energy summation basis. In other words, adding a new noise source to an existing noise source, both producing noise at the same level, will not double the noise level. Instead, if the difference between two noise sources is 10 dBA or more, the louder noise source will dominate, and the resultant noise level will be equal to the noise level of the louder source. In general, if the difference between two noise sources is 0–1 dBA, the resultant noise level will be 3 dBA higher than the louder noise source, or both sources if they are equal. If the difference between two noise sources is 2 to 3 dBA, the resultant noise level will be 2 dBA above the louder noise source. If the difference between two noise sources is 4 to 10 dBA, the resultant noise level will be 1 dBA higher than the louder noise source.

Characteristics of Vibration

Groundborne vibration consists of rapidly fluctuating motion through a solid medium, specifically the ground, which has an average motion of zero and in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The effects of groundborne vibration typically only causes a nuisance to people, but in extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room, and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Because of the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels—denoted as LV—and is based on the reference quantity of 1 microinch per second. To distinguish vibration levels from noise levels, the unit is written as “VdB.”

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as rms velocity in units of decibels of 1 microinch per second, with the unit written in VdB. Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. Human perception of vibration starts at levels as low as 67 VdB. Annoyance due to vibration in residential settings starts at approximately 70 VdB.

Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible groundborne noise or vibration. Construction activities, such as blasting, pile driving and operating heavy earthmoving equipment, are common sources of groundborne vibration. Construction vibration

impacts on building structures are generally assessed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 3.12-4.¹

Table 3.12-4: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer—small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer—large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller (large)	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112
Notes: PPV = peak particle velocity rms = root mean square VdB = velocity in decibels Source: Compilation of scientific and academic literature, generated by Federal Transit Administration (FTA) and Federal Highway Administration (FHWA).		

¹ Federal Highway Administration (FHWA). 2006. Highway Construction Noise Handbook. August.

The propagation of groundborne vibration is not as simple to model as airborne noise. This is because noise in the air travels through a relatively uniform medium, while groundborne vibrations travel through the earth, which may contain significant geological differences. Factors that influence groundborne vibration include:

- **Vibration source:** Type of activity or equipment, such as impact or mobile, and depth of vibration source;
- **Vibration path:** Soil type, rock layers, soil layering, depth to water table, and frost depth; and
- **Vibration receiver:** Foundation type, building construction, and acoustical absorption.

Among these factors that influence groundborne vibration, there are significant differences in the vibration characteristics when the source is underground compared to at the ground surface. In addition, soil conditions are known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Vibration propagation is more efficient in stiff clay soils than in loose sandy soils, and shallow rock seems to concentrate the vibration energy close to the surface and can result in groundborne vibration problems at large distance from the source. Factors such as layering of the soil and depth to the water table can have significant effects on the propagation of groundborne vibration. Soft, loose, sandy soils tend to attenuate more vibration energy than hard, rocky materials. Vibration propagation through groundwater is more efficient than through sandy soils. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil type, but it has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests. The vibration level (calculated below as PPV) at a distance from a point source can generally be calculated using the vibration reference equation:

$$PPV = PPV_{ref} * (25/D)^n \text{ (in/sec)}$$

Where:

- PPV_{ref} = reference measurement at 25 feet from vibration source
- D = distance from equipment to the receptor
- n = vibration attenuation rate through ground

According to Chapter 12 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual, an “n” value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.²

Existing Noise Levels

Existing Ambient Noise

The existing noise environment in the vicinity of the project site was documented through a noise monitoring effort performed at the project site. Noise monitoring measurement data sheets are contained in Appendix H. A total of three short-term noise measurements (15 minutes each) were taken on Thursday, February 23, 2023, starting at 1:04 p.m. and ending at 3:33 p.m., during the midday peak noise hour. One long-term ambient noise measurement (48 hours) was also conducted on the project site, starting at 4:15 p.m. on Thursday, February 12, 2023, and ending at 5:10 p.m. on Friday, February 13, 2023. These measurements provide a baseline of existing noise conditions.

Short-term Noise Measurements

The short-term noise measurement results are summarized in Table 3.12-5. The noise measurements determined that daytime ambient noise levels range from 45.2 dBA to 57.1 dBA L_{eq} in the vicinity of the project site. The noise measurements indicate that noise within the vicinity of the project site is generally characterized by construction activities, vehicle traffic on Busch Road, transfer station operations, private trucking operations, birds, overhead planes, lawn-mowing, a private trucking business, a Fire Department training center, and highway traffic in the distance. The noise measurement documented noise levels from all noise sources in the project vicinity, including any noise from the City of Pleasanton Operations Services Center, the Fire Department training facility, and the Police Department practice range.

Table 3.12-5: Existing Ambient Noise Levels in the Vicinity of the Project Site

Site Location	Location Description	L_{eq} (dBA)	Primary Noise Sources
ST-1	Northwest corner of project site	45.2	Lawn-mowing and other residential noises, distant industrial noises from truck and business to the south.
ST-2	Southeast corner of project site	57.1	Busch Road traffic, Transfer Station operations, birds on the project site, private truck rental site adjacent to the garbage station.
ST-3	Southwest corner of project site	54.8	Busch Road traffic, Transfer Station Operations, private trucking operations directly south, highway traffic in the distance, overhead planes,

Source: FCS. 2023.

Long-term Noise Measurement

The long-term noise measurement was conducted on the southwestern corner of the project site, approximately 20 feet off Busch Road on the southwest corner gate post. The resulting

² Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. May.

measurement determined that ambient noise levels at this location averaged 59 dBA CNEL. As was observed by the technician at the time of the noise measurement, the dominant noise sources in the project vicinity are vehicular traffic on Busch Road, the Fire Department training facility, trucks from industrial use to the south, and the Pleasanton Garbage Station.

Existing Traffic Noise

In addition to the ambient noise measurements, existing traffic noise on local roadways in the areas surrounding the project site was calculated to quantify existing traffic noise levels, based on the existing traffic volumes included in Appendix H. Existing traffic noise levels along selected roadway segments in the project vicinity were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). Site-specific information is entered, such as roadway traffic volumes, roadway active width, source-to-receiver distances, travel speed, noise source and receiver heights, and the percentages of automobiles, medium trucks, and heavy trucks that the traffic is made up of throughout the day, among other variables. Traffic volume data was obtained from the Traffic Operations Study prepared for the proposed project.³ The model inputs and outputs, including the 60 dBA, 65 dBA, and 70 dBA CNEL traffic noise contour distances, are provided in Appendix H. A summary of the modeling results is shown in Table 3.12-6. The modeling results show that existing traffic noise levels on roadway segments adjacent to the project site range up to 54.2 dBA CNEL as measured at 50 feet from the centerline of the outermost travel lane.

Table 3.12-6: Existing Traffic Noise Levels in the Vicinity of the Project Site

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Busch Road—Valley Avenue to Ironwood Drive	2,400	< 50	< 50	< 50	56.5
Busch Road—Ironwood Drive to Project Site	1,000	< 50	< 50	< 50	54.2

Note:
ADT = Average Daily Traffic
Modeling results do not take into account mitigating features such as topography, vegetative screening, fencing, building design, or structure screening. Rather, the results assume a worst-case of having a direct line of site on flat terrain.
Source: FCS. 2023.

Noise-Sensitive Land Uses

Noise-sensitive land uses generally consist of those uses where exposure to noise would result in adverse effects, as well as uses for which quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other typical noise-sensitive land uses include hospitals, convalescent facilities, hotels, religious institutions, libraries, and other uses where low noise levels are essential.

³ W-Trans. 2023. Traffic Operations Study for the Arroyo Lago Residential Project. November 28.

Noise-sensitive land uses in the vicinity of the project site include an age-qualified single-family residential neighborhood located to the west of the northern portion of the project site and, further to the west of the Pleasanton Operations Center, a private elementary school (Montessori School of Pleasanton) and a single-family residential neighborhood.

3.12.3 - Regulatory Framework

Federal

Noise Control Act

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees.

Among the agencies now regulating noise are the Occupational Safety and Health Administration (OSHA), which limits noise exposure of workers to 90 dB L_{eq} or less for 8 continuous hours or 105 dB L_{eq} or less for 1 continuous hour; the United States Department of Transportation (USDOT), which assumed a significant role in noise control through its various operating agencies; and the Federal Aviation Administration (FAA), which regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the FTA. Transit noise is regulated by the federal Urban Mass Transit Administration, while freeways that are part of the interstate highway system are regulated by the FHWA. Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise-sensitive” uses are either prohibited from being sited adjacent to a highway, or alternatively, that developments are planned and constructed in such a manner that minimize potential noise impacts.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by transportation sources, local jurisdictions are limited to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

Federal Transit Administration Standards and Guidelines

FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment Manual (FTA 2018). The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 3.12-7.

Table 3.12-7: Federal Transit Administration Construction Vibration Impact Criteria

Building Category	PPV (in/sec)	Approximate VdB
I. Reinforced-Concrete, Steel, or Timber (no plaster)	0.5	102
II. Engineered Concrete and Masonry (no plaster)	0.3	98
III. Non-engineered Timber and Masonry Buildings	0.2	94
IV. Buildings Extremely Susceptible to Vibration Damage	0.12	90
Notes: PPV = peak particle velocity VdB = velocity in decibels Source: Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual.		

State

California General Plan Guidelines

Established in 1973, the California Department of Health Services Office of Noise Control was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to delineate compatibility of sensitive uses with various incremental levels of noise.⁴

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise/land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. The project is also subject to review under the State of California Environmental Quality Act (CEQA). Appendix G of the CEQA Guidelines provides impact thresholds for potential noise and vibration impacts.

California Building Standards Code

The State of California has established noise insulation standards for new hotels, motels, apartment houses, and dwellings (other than single-family detached housing). These requirements are provided in the 2022 California Building Standards Code (CBC) (California Code of Regulations [CCR] Title 24).⁵ As provided in the CBC, the noise insulation standards set forth an interior standard of 45 dBA CNEL as measured from within the structure’s interior. When such structures are located within a 65-dBA CNEL (or greater) exterior noise contour associated with a traffic noise along a roadway, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL threshold. However, this project only includes single-family housing, so this project is exempt from

⁴ California Department of Health Services Office of Noise Control. 1976. “Land Use Compatibility for Community Noise Environments Matrix.”

⁵ ICC Digital Codes: 2022 California Building Code, Title 24, Part 2 (Volumes 1 and 2) with Jan 2023 Errata. Website: https://codes.iccsafe.org/content/CABC2022P2/chapter-12-interior-environment#CABC2022P2_Ch12_Sec1206. Accessed: November 1, 2023.

these noise insulation standards. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

Local

County of Alameda

Alameda County General Plan Noise Element

The Alameda County General Plan Noise Element⁶ contains goals, objectives, and implementation programs for the entire County to provide its residents with an environment that is free from excessive noise and promotes compatibility of land uses with respect to noise.

Countywide Policies

The Alameda County General Plan Noise Element establishes the following noise policies that may be applicable to the project.

Goal 1 **The peace, health, safety, and welfare of the residents of Alameda County require protection from excessive, unnecessary, and unreasonable noise from any and all sources in the cities and unincorporated territory.**

Goal 2 **Promote the compatibility of land uses with respect to noise generation by legislatively protecting sensitive land uses from noise sources.**

Objective 1 Investigate and implement physical and legislative techniques to reduce noise impacts where appropriate.

Principle 1 Community noise control standards which establish maximum permitted noise levels for sensitive land uses – residential, community care facilities, hospitals, nursing homes, etc., schools, and any other use considered by the community to be sensitive to noise should be developed and implemented by each jurisdiction.

Principle 2 Local governments in cooperation with transportation agencies should promote the abatement of highway, circulation, aircraft, and rapid transit noise.

Principle 3 Local governments should exercise authority in controlling the noise problem because they have the responsibility for land development control and zoning.

Unincorporated Area Policies

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.**

Goal 2 **Alameda County should encourage noise compatible land uses near highways and other noise generators.**

⁶ Alameda County, 2021. Alameda County General Plan. November 30. Website: https://library.qcode.us/lib/pleasanton_ca/pub/municipal_code/item/title_9-chapter_9_04?view=all. Accessed: November 22, 2023.

- Objective 1** In order to control objectionable noise Alameda County should survey noise sources and impacts in the incorporated area and develop acceptable noise level standards for noise impacted areas.
- Objective 2** The County should seek to develop regional planning agreements for zoning and soundproofing to reduce noise incompatibilities across the jurisdictional boundaries.
- Objective 3** The County should examine existing County ordinances and regulations to determine the effectiveness of existing controls and where additional performances standards are needed to reduce noise problems.
- Objective 4** Alameda County should develop and adopt a County Noise Ordinances to prohibit unwanted and unnecessary sounds of all types within the unincorporated territory.
- Objective 5** The County should encourage architectural designers, developers, and builders to employ physical techniques to reduce noise impacts.
- Objective 6** The public should be informed of the significant financial and social costs of noise incompatibilities.

The Alameda County General Plan does define the term “noise-sensitive uses” as residential, community care facilities, hospitals, nursing homes, schools, and similar locations where excess noise could reasonably pose a disruption, interference, or annoyance.

East County Area Plan

The East County Area Plan (ECAP) is part of the Alameda County General Plan and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to noise:

Noise

Goal To minimize East County residents' and workers' exposure to excessive noise.

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 development in areas exposed to projected noise levels exceeding 60 Db based on the California Office of Noise Control Land Use Compatibility Guidelines.

Policy 290 The County shall require noise studies as part of development review for projects located in areas exposed to high noise levels and in areas adjacent to existing residential or other sensitive land uses. Where noise studies show that noise levels in areas of existing housing will exceed "normally acceptable" standards (as defined by the California Office of Noise Control Land Use Compatibility Guidelines), major development projects shall contribute their prorated share to the cost of noise mitigation measures such as those described in Program 104.

Program 104 The County shall require the use of noise reduction techniques (such as buffers, building design modifications, lot orientation, soundwalls, earth berms, landscaping, building setbacks, and real estate disclosure notices) to mitigate noise impacts generated by transportation-related and stationary sources as specified in the California Office of Noise Control Land Use Compatibility Guidelines.

Alameda County Code of Ordinances

Chapter 6.60 of the Alameda County Code of Ordinances (Code of Ordinances) contains a number of regulations that are relevant to construction and operations of the proposed project. Section 6.60.040 sets exterior noise level standards for various land uses. The following are relevant to the proposed project:

- A. It is unlawful for any person at any location within the unincorporated area of the County to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the exterior noise level when measured at any single- or multiple-family residential, school, hospital, church, public library or commercial properties situated in either the incorporated or unincorporated area to exceed the noise level standards as set forth in Table 6.60.040A following:

Table 6.60.040A—Receiving Land Use—Single- or Multiple-Family Residential, School, Hospital, Church or Public Library Properties Noise Level Standards, dB(A)

Category	Cumulative Number of Minutes in Any 1-Hour Time Period	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

- C. Each of the noise level standards specified in Tables 6.60.040A and B shall be reduced by five dB(A) for simple tone noises, noises consisting primarily of speech or music or for recurring impulsive noises

Section 6.60.050 exempts the following noise sources from the provisions of Chapter 6.60. The following are relevant to the proposed project:

- E. The restrictions contained in Section 6.60.050(B)(1), (2) and (3) shall not apply to:
 1. Activities which are governed by conditional use permits or other permits issued by the County, if those permits expressly regulate or control the amount of noise or sound which may be generated by the activities which are governed by the permit;
 2. Unincorporated areas of the County within the ECAP; or

3. Unincorporated areas of the County outside the urban growth boundary, as defined by "Measure D" ("Save Agricultural and Open Space Lands Initiative of 2000").

Section 6.60.050 prohibits operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on a public space or public right-of-way. However, these provisions do not apply to noise sources associated with construction, provided said activities do not take place before 7:00 a.m. or after 7:00 p.m. on any day except Saturday or Sunday, or before 8:00 a.m. or after 5:00 p.m. on Saturday or Sunday.

Section 6.60.070 limits construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure to the following hours:

- E. Construction. The provisions of this chapter shall not apply to noise sources associated with construction, provided said activities do not take place before 7:00 a.m. or after 7:00 p.m. on any day except Saturday or Sunday, or before 8:00 a.m. or after 5:00 p.m. on Saturday or Sunday.

Livermore Executive Airport—Airport Land Use Compatibility Plan

The Livermore Executive Airport—Airport Land Use Compatibility Plan (ALUCP) encourages compatibility between airports and the various land uses that surround them. Table 3-1, Noise Compatibility Criteria, of the ALUCP describes exterior noise exposure compatibility for various land uses. The proposed project consists of single-family residential units. An exterior noise exposure less than 59 dB CNEL is permitted for both indoor and outdoor uses. Standard construction methods would sufficiently attenuate exterior noise to an acceptable indoor CNEL, and activities associated with the land use may be carried out with essentially no interference from aircraft noise. An exterior noise exposure of 60 dB to 64 dB CNEL is conditionally permitted, and an exterior noise level above 65 dB CNEL would be incompatible.

3.12.4 - Methodology

Construction Noise Analysis Methodology

Construction noise impacts are analyzed at a programmatic level. A reasonable worst-case scenario was analyzed assuming each piece of modeled equipment would operate simultaneously on an individual development site. Noise emission levels recommended by FHWA's Highway Construction Noise Handbook were used to ascertain the noise generated by specific types of construction equipment. The construction noise impact was evaluated in terms of maximum levels (L_{max}). Analysis requirements were based on the sensitivity of nearby receptors and compliance with the City's construction noise requirements in Section 6.60.070 of the Noise Ordinance.

Traffic Noise Modeling Methodology

Traffic noise impacts are analyzed at a programmatic level. The FHWA highway traffic noise prediction model (FHWA-RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the potential sites for housing. The modeled Average Daily Traffic (ADT) volumes were

derived from the PM peak-hour traffic data provided by W-Trans. The PM peak-hour volumes are, on average, higher than the AM peak-hour volumes. The resultant noise levels were weighted and summed over a 24-hour period in order to determine the CNEL values. The traffic noise modeling input and output files—including the 60 dBA, 65 dBA, and 70 dBA CNEL noise contour distances—are included in Appendix H.

The FHWA-RD-77-108 Model arrives at a predicted noise level through a series of adjustments to the reference energy mean emission level. Adjustments are then made to the reference energy mean emission level to account for the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway); the total ADT; the percentage of ADT that flows during the day, evening, and night; the travel speed; the vehicle mix on the roadway; a percentage of the volume of automobiles, medium trucks, and heavy trucks; the roadway grade; the angle of view of the observer exposed to the roadway; and the site conditions (“hard” or “soft”) as they relate to the absorption of the ground, pavement, or landscaping. The identified roadway segments were chosen to be modeled since they are the segments that would carry the highest percentages of the traffic volumes in the vicinity of the potential sites for housing. Roadway segments identified in the traffic analysis as arterials were modeled using established vehicle distribution percentages for arterial or expressway roadways. All other roadway segments were modeled using default surface street vehicle distribution percentages.

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires.

The model calculated traffic noise levels under without-project conditions and levels that would occur under project-generated traffic conditions. The traffic noise levels were calculated based on a single-lane-equivalent noise source combining both directions of travel. A single-lane-equivalent noise source is when the vehicular traffic from all lanes is combined into a theoretical single-lane that has a width equal to the distance between the two outside lanes of a roadway, which provides almost identical results to analyzing each lane separately where elevation changes are minimal. The modeling assumes a direct line of sight to the roadway and flat terrain conditions. Impacts are determined based on whether development consistent with the proposed project would result a substantial permanent increase, identified by the General Plan as an increase of greater than 4 dBA compared to levels that would exist without development consistent with the proposed project.

Stationary Noise Source Analysis Methodology

Stationary source noise impacts are analyzed at a programmatic level. The proposed project would generate noise from future development that could contain new exterior mechanical equipment sources, such as mechanical ventilation systems. To provide a conservative analysis, the highest end of the range of reference noise levels for these stationary noise sources was used to calculate the reasonable worst-case hourly average noise levels. These noise levels were then compared to the County’s applicable noise performance threshold to determine whether these noise sources would result in a substantial increase in excess of this standard.

Vibration Impact Analysis Methodology

Groundborne vibration impacts are analyzed at a programmatic level. Reasonable worst-case construction vibration levels are identified based on reference vibration levels for construction equipment identified in Table 3.12-4. The potential for future development of the potential sites for housing resulting in permanent operational groundborne vibration impacts is also identified. The applicable General Plan policies are applied to the analysis and any potential impacts are identified.

3.12.5 - Thresholds of Significance

The lead agency utilizes the criteria in the CEQA Guidelines Appendix G Environmental Checklist to determine whether noise impacts resulting from the implementation of the proposed project would be considered significant if the project would cause:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b) Generation of excessive groundborne vibration or groundborne noise levels?
- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

3.12.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Substantial Noise Increase in Excess of Standards

Impact NOI-1: **The proposed project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

Construction

For purposes of this analysis, a significant impact would occur if construction activities would generate a substantial temporary increase in ambient noise levels in the vicinity of the proposed project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies. While the County has established standard permissible hours for construction (7:00 a.m. to 7:00 p.m. on any day except Saturday or Sunday, or 8:00 a.m. to 5:00 p.m. on Saturday or Sunday) to which the proposed project would comply, the County has not adopted construction-related noise thresholds of significance for CEQA consideration. Therefore, the following analysis adopts the FTA's "Detailed Analysis Construction Noise Criteria" as thresholds of significance to assess the effect of the proposed project's construction-related noise impacts at nearby sensitive receptors. For residential uses, which are the only noise-sensitive land use types within 1,000 feet of the proposed project, the FTA's criteria are an 80 dBA L_{eq-8hr} daytime limit, a 70

dBa nighttime limit, and a 75 dBA L_{dn} 30-day average. Because construction would not occur during nighttime hours, this analysis adopts the 80 dBA L_{eq-8hr} daytime limit to evaluate the significance of the proposed project's construction-related noise impacts at nearby residential uses.

Construction Equipment Operational Noise

Construction of the proposed project would generate noise during the approximately 1-year schedule of demolition, site preparation, grading, building construction, paving, and architectural coatings activities.

Noise from grading activities is typically the foremost concern when evaluating a project's construction noise impact as grading activities often require extensive use of heavy-duty, diesel-powered earthmoving equipment. For the proposed project, grading would have the greatest—and noisiest—construction vehicle requirements, as a fleet of grading vehicles would be required to grade the project site and off-site areas. Other construction phases would have reduced vehicle requirements. For example, building construction could at times require a crane truck, several construction forklifts, and skid steer loaders. These vehicles are much less powerful than the types of heavy-duty excavators, graders, and bulldozers that would be required to grade the project site. Given this consideration, the following analysis assesses noise impacts that may result from the proposed project's grading activities.

Grading and site preparation for the proposed project is estimated to last approximately 9 weeks. The bulk of grading activities would be characterized by extensive use of a grader, which would be utilized across the project site to level the site and establish proper slopes and drainages.

The nearest off-site noise-sensitive receptors to the project site are the residential land uses located west of the project site. The nearest residence would be located approximately 35 feet from the acoustic center of construction activity where multiple pieces of heavy machinery would operate. Again, the acoustic center refers to a point equidistant from multiple pieces of equipment operating simultaneously which would produce the worst-case maximum noise level. At this distance, and assuming minimal shielding from the existing 6-foot high sound wall located along the project's western boundary adjoining the residential land uses, construction noise levels at the exterior façade of the nearest residential home would be expected to result in an 8-hour average of 78 dBA L_{eq-8hr} when multiple pieces of heavy construction equipment operate simultaneously at the nearest construction footprint. These noise levels would be intermittent and would be reduced as equipment moves over the project site further from adjacent sensitive receptors.

Restricting construction activities to daytime hours only would ensure that construction noise would not exceed FTA's nighttime construction noise standards. Therefore, MM NOI-1 should be implemented to ensure adherence to the permissible construction hours and ensure implementation of best management noise reduction techniques and practices. Implementation of MM NOI-1 would ensure that construction noise levels would not result in a substantial temporary increase in ambient noise levels in excess of the FTA's thresholds for construction noise impacts. Therefore, with implementation of MM NOI-1, temporary construction noise impacts would be reduced to less than significant.

Construction-Related Traffic Noise

Haul truck trips, construction worker vehicle trips, and other construction-related trips would occur over the course of the proposed project's construction. Haul truck trips typically have the greatest potential to result in substantial off-site noise increases along nearby roadways. According to the air quality modeling and analysis prepared for the proposed project, construction of the proposed project could require up to approximately 76 haul truck trips per day to transport fill material to the project site—less than 10 trucks per hour over the course of a standard construction workday. Based on the intersection turning volume data contained in the traffic study prepared for the proposed project, the roadway segment of Busch Road from Ironwood Drive to the project site entrance experiences 100 peak-hour trips and approximately 1,000 existing average daily trips. Typically, an approximate doubling of traffic volumes is required to cause a 3 dBA noise increase. Because the proposed project's haul truck trips would represent a small fraction of daily truck traffic, they would not be capable of doubling traffic volumes along surrounding roadways and causing 3 dBA noise increases, much less 5 dBA noise increases that are the basis of the significance criteria. As such, this impact would be less than significant.

Operation

A significant impact would occur if implementation of the proposed project would result in a substantial increase in traffic noise levels compared with traffic noise levels existing without the project. For an increase in traffic noise to be substantial, it would need to be perceptible to the human ear in outdoor environments. A characteristic of noise is that audible increases in noise levels generally refer to a change of 3 dBA or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. A change of 5 dBA is considered the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, a significant impact would occur if the proposed project would cause the CNEL to increase by any of the following:

- 5 dBA or more even if the CNEL would remain below normally acceptable levels for a receiving land use.
- 3 dBA or more, thereby causing the CNEL in the project vicinity to exceed normally acceptable levels and result in noise levels that would be considered conditionally acceptable for a receiving land use.
- 1.5 dBA or more where the CNEL currently exceeds conditionally acceptable levels.

Mobile Source Operational Noise Impacts

Traffic noise levels along selected roadway segments in the project vicinity were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). Site-specific information is entered, such as roadway traffic volumes, roadway active width, source-to-receiver distances, travel speed, noise source and receiver heights, and the percentages of automobiles, medium trucks, and heavy trucks that the traffic is made up of throughout the day, among other variables. The daily traffic volumes were obtained from the traffic analysis prepared for the project by W-Trans.⁷ The traffic volumes described here, which correspond to the traffic scenarios analyzed in the traffic study, include the

⁷ W-Trans. 2022. Traffic Impact Study for the Oak Hill Apartments Project. November 28.

existing, existing plus project, opening year no project, and opening year plus project conditions. The model inputs and outputs—including the 60 dBA, 65 dBA, and 70 dBA CNEL noise contour distances—are provided in Appendix H of this document. Table 3.12-8 shows the traffic noise levels as measured at 50 feet from the centerline of the outermost travel lane.

Table 3.12-8: Traffic Noise Increase Summary

Roadway Segment	Existing (dBA) CNEL	Existing Plus Project (dBA) CNEL	Increase over Existing (dBA)	Future (dBA) CNEL	Future Plus Project (dBA) CNEL	Increase over Future (dBA)
Busch Road–Valley Avenue to Ironwood Drive	56.5	59.5	3.0	64.4	64.9	0.5
Busch Road–Ironwood Drive to Project Site	54.2	59.1	4.9	64.4	65.0	0.6
<p>Notes: dBA = A-weighted decibel CNEL = community noise equivalent level ¹ Modeling results do not take into account mitigating features such as topography, vegetative screening, fencing, building design, or structure screening. Rather, they assume a worst-case scenario of having a direct line of site on flat terrain. Source: FCS. 2023.</p>						

As shown in Table 3.12-8, implementation of the proposed project would result in a 4.9 dBA increase in traffic noise levels on roadway segments adjacent to the project site where the highest concentration of project trips would occur. The resulting noise levels under existing plus project conditions would range up to 59.1 dBA CNEL, which is below the normally acceptable threshold for residential land use development. Therefore, the applicable increase threshold would be a 5 dBA or greater increase.

Because the project would result in a less than 5 dBA increase, implementation of the proposed project would not result in a substantial increase in traffic noise levels compared with traffic noise levels existing without the project, and this impact would be less than significant.

Stationary Source Operational Noise Impacts

A significant impact would occur if operational noise levels generated by stationary noise sources at development projects result in substantial increase in noise in exceedance of the County’s noise performance standards identified in Section 6.60.040 of the Code of Ordinances. If the standard is exceeded, then the proposed project would generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of established standards.

The only new stationary noise source associated with implementation of the proposed project would be new mechanical ventilation system equipment operations. These would be potential point sources of noise that could affect noise-sensitive receptors in the project vicinity.

Mechanical Equipment Operations

At the time of preparation of this analysis, details were not available pertaining to mechanical ventilation systems for the proposed project. Therefore, a reference noise level for typical residential mechanical ventilation systems was used. Noise levels from residential grade mechanical ventilation equipment are sound rated from 60 dBA to 70 dBA L_{eq} as measured at approximately 5 feet from the operating unit.

Mechanical ventilation systems could be located as close as 25 feet from the nearest off-site residential receptor property line. At this distance and assuming minimal shielding from the existing 6-foot-high sound wall, noise generated by mechanical ventilation equipment would attenuate to approximately 44 dBA L_{eq} at the nearest residential property. This analysis represents the reasonable worst-case stationary noise source impacts. Operational noise levels of other project-related stationary noise sources, such as mechanical equipment at the off-site improvement areas, which would be located over 1,000 feet from residential receptors, would, due to distance attenuation, attenuate to below these calculated reasonable worst-case stationary source noise levels.

Since the resulting noise levels would range up to 44 dBA L_{eq} outside of the nearest residential land uses, the resulting noise levels would not exceed the County's most restrictive noise performance standard for even the most sensitive land use category, the nighttime noise performance standard of 45 dBA L_{eq} . Therefore, project mechanical equipment operational noise levels would result in a less than significant impact.

Level of Significance Before Mitigation

Potentially significant construction impacts.

Less than significant operational impacts.

Mitigation Measures

Project construction activity noise impacts, which could result in a temporary increase in ambient noise levels in the project vicinity that could result in annoyance or sleep disturbance of nearby sensitive receptors and exceed the established nighttime noise standard, would be reduced to less than significant with implementation of the following multi-part mitigation measure.

MM NOI-1 Implementation of the following multi-part mitigation measure is required to reduce potential construction-period noise impacts:

Prior to issuance of construction permits, the following language shall be included, verbatim, in the general notes section of all the civil plan construction documents.

- The construction contractor shall ensure that all equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
- The construction contractor shall ensure that unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes) is prohibited.

- The construction contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists.
- At all times during project grading and construction, the construction contractor shall ensure that stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from adjacent residences.
- The construction contractor shall ensure that the construction staging areas shall be located to create the greatest feasible distance between the staging area and noise-sensitive receptors nearest the project site.
- The construction contractor shall ensure that all on-site construction activities, including the operation of any tools or equipment used in construction, drilling, repair, alteration, grading, or demolition work, are limited to between the hours of 7:00 a.m. to 7:00 p.m. on any day except Saturday or Sunday, or 8:00 a.m. to 5:00 p.m. on Saturday or Sunday.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Groundborne Vibration/Noise Levels

Impact NOI-2: The proposed project would not result in generation of excessive groundborne vibration or groundborne noise levels.

This section analyzes both construction and operational groundborne vibration and noise impacts. Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. Groundborne noise is generated when vibrating building components radiate sound, or noise, generated by groundborne vibration. In general, if groundborne vibration levels do not exceed levels considered to be perceptible, then groundborne noise levels would not be perceptible in most interior environments. Therefore, this analysis focuses on determining exceedances of groundborne vibration levels.

Construction

A significant impact would occur if existing structures at the project site or in the project vicinity would be exposed to groundborne vibration levels in excess of the County’s applicable standards or the FTA’s construction vibration damage criteria thresholds. The County Code of Ordinances Section 6.60.050, Prohibited Noise Disturbances, establishes that any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property, or at 150 feet or 46 meters from the source if on a public space or public right-of-way, is prohibited. However, these provisions do not apply to noise sources associated with construction, provided said activities do not take place before 7:00 a.m. or after 7:00 p.m. on any day except Saturday or Sunday, or before 8:00 a.m. or after 5:00 p.m. on Saturday or Sunday. Therefore, since implementation of MM NOI-1 restricts project construction activities to these stated daytime hours, the provisions of Section 6.60.050 regarding vibration thresholds do not apply to construction activities. Therefore, this analysis relies on the criteria identified by the FTA in its 2018

Transit Noise and Vibration Impact Assessment Manual to evaluate the proposed project's construction vibration impacts to surrounding buildings. Those standards are summarized in Table 3.12-7.

Construction of the proposed project would require a variety of large, steel-tracked earthmoving vehicles for site preparation and the use of vibratory rollers for internal street construction. According to the FTA, large bulldozers and similar heavy equipment can generate groundborne vibration levels up to 0.089 in/sec PPV at a reference distance of 25 feet. In other words, these vehicles could expose buildings within 25 feet of their construction activities to groundborne vibration levels up to 0.089 in/sec PPV. Small vibratory rollers produce groundborne vibration levels ranging up to 0.101 in/sec PPV at 25 feet from the operating equipment.

The nearest buildings to the project site are residential uses to the west. These uses are located approximately 25 feet west of the nearest project construction footprint where the heaviest construction equipment would operate. At this distance, groundborne vibration levels from large bulldozers and similar heavy grading vehicles operating near the proposed project's western property line would be approximately 0.089 in/sec PPV at the façade of the dwelling. The construction and condition of these residential buildings indicate that their appropriate FTA damage threshold is 0.2 in/sec PPV, at a minimum. As the proposed project's maximum construction-related groundborne vibration levels at these buildings would be less than 0.2 in/sec PPV, the proposed project would not expose these accessory buildings to potentially damaging levels of groundborne vibration.

Vibratory rollers would be used during construction of the internal streets. The nearest residential buildings would be located approximately 100 feet from where this equipment would operate. At this distance, groundborne vibration levels would range up to 0.013 in/sec PPV. This is well below the FTA's construction vibration damage criteria of 0.2 in/sec PPV for these structures.

Therefore, groundborne vibration impacts from construction activities would be less than significant.

Operation

Implementation of the proposed project would not include any permanent sources of vibration that would expose persons in the project vicinity to groundborne vibration levels that could be perceptible without instruments at any existing sensitive land use in the vicinity of the project site. Additionally, there are no active sources of groundborne vibration in the project vicinity that would produce vibration levels that would be perceptible without instruments within the project site. Therefore, the proposed project would not generate groundborne vibration or groundborne noise levels in excess of established standards and there would be no impact related to operational groundborne vibration. Given these considerations, the proposed project's groundborne vibration impact from operations would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Excessive Noise Levels from Airport Activity

Impact NOI-3: **The proposed project would not expose people residing or working in the project area to excessive noise levels 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.**

A significant impact would occur if the proposed project would expose people residing or working in the project area to excessive noise levels for a project located in the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.

The proposed residential development site is not located in the vicinity of a private airstrip. The nearest public airport, Livermore Municipal Airport, is located 1.6 miles to the northeast of the project site. The proposed project would be subject to the ALUCP for the Livermore Municipal Airport. In addition, the proposed project site is located outside of the 55, 60, and 65 dBA CNEL noise contours of the airport that are shown in Figure 3-2, Noise Compatibility Zones, of the ALUCP.⁸

As such, implementation of the proposed project would not expose persons residing or working in the vicinity to noise levels from airport activity that would be in excess of normally acceptable standards for land use development, and impacts would be less than significant. Development at the project site would not present a land use and noise compatibility issue.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.12.7 - Cumulative Impacts

Construction Noise

The cumulative analysis considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project. The geographic scope of the cumulative noise analysis is the project vicinity, including surrounding sensitive receptors. Noise impacts tend to be localized; therefore, the area near the project (approximately 1,000 feet) would be the area most affected by proposed plan activities. The only cumulative projects that are within 1,000 feet of the project site are Cumulative Project No. 4 (Senior East County Lakes), Cumulative Project No. 5 (Chain of Lakes Conveyance Project), Cumulative Project No. 6 (3300 Busch Road—Square Mile Pleasanton, LLC Property), and Cumulative Project No. 13 (3000 Busch Road—Amazon-

⁸ Alameda County Community Development Agency. 2012. Livermore Executive Airport: Airport Land Use Compatibility Plan. Website: https://www.acgov.org/cda/planning/generalplans/documents/LVK_ALUCP_082012_FULL.pdf. Accessed February 26, 2024.

Owned Property). However, the 3300 Busch Road—Square Mile Pleasanton, LLC Property and 3000 Busch Road—Amazon-Owned Property are located over 1,000 feet from the nearest residential receptors to the proposed project site. Therefore, at this distance, even if construction phases overlapped, combined construction noise levels would not result in any increase compared to noise levels produced by the proposed project's construction noise levels that are identified and mitigated to less than significant as summarized above. Additionally, while the Senior East County Lakes project and the Chain of Lakes Conveyance Project are located adjacent to the project site and are reasonably foreseeable, they are at a preliminary stage and have yet to finalize site plans or submit planning applications. Therefore, they would likely not be constructed at the same time as the proposed project because, at the time this Draft EIR was prepared, the Senior East County Lakes project and Chain of Lakes Conveyance Project construction schedules would be expected to start after construction of the proposed project has already finished and is in operation. Therefore, the proposed project would result in a less than significant cumulative impact related to construction noise.

Operational Traffic Noise

The cumulative significance threshold for traffic noise increases is a 12 dBA increase that the Caltrans Traffic Noise Protocol considers a substantial permanent increase of traffic noise levels. The highest traffic noise level increase under cumulative plus project conditions would occur along Busch Road from Ironwood Drive to the project site. Along this roadway segment, the proposed project would result in an increase of only 10.2 dBA over existing conditions. Therefore, project-related traffic noise levels would not result in a cumulatively considerable contribution to the noise environment in the project vicinity.

Operational Stationary Noise

Implementation of the proposed project would introduce new stationary noise sources to the ambient noise environment in the project vicinity, including new rooftop mechanical ventilation equipment. However, noise levels generated by this equipment would reach approximately 44 dBA L_{eq} , which would not exceed the existing background ambient noise levels. Therefore, implementation of the proposed project would not result in a cumulatively considerable contribution to existing ambient noise conditions in the project vicinity. This impact would be less than significant.

Construction Vibration

With regard to vibration impacts, the geographic scope of cumulative impacts would be 100 feet. Because cumulative development projects would be located more than 100 feet from the project buildings, this would preclude any potential for combined vibration levels that would be perceptible to any receptor within the project vicinity. Therefore, project-related vibration levels would not result in a cumulatively considerable contribution to the environment in the project vicinity. This impact would be less than significant.

Operational Vibration

Implementation of the proposed project would not include any permanent sources of vibration that would expose persons in the project vicinity to groundborne vibration levels that could be

perceptible without instruments at any existing sensitive land use in the vicinity of the project site. Therefore, implementation of the project would not result in a cumulatively considerable contribution to vibration conditions in the project vicinity. This impact would be less than significant.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

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3.13 - Population and Housing

This section addresses potential impacts to population and housing resulting from the proposed project. The purpose of this section is to evaluate current housing needs, growth projections, and project characteristics as a basis for evaluating potential impacts of the proposed project, and to identify any measures necessary to mitigate potential impacts. This section also describes existing population and housing in the region, County of Alameda (County), and project area as well as the relevant regulatory framework. Information included in this section is based on databases and reports maintained by the Metropolitan Transportation Commission (MTC), Association of Bay Area Governments (ABAG), the California Department of Finance (CDF), and the California Employment Development Department (EDD), and the County of Alameda.

The following public comments were received during the Environmental Impact Report (EIR) Notice of Preparation (NOP) scoping period related to population and housing.

- The Draft EIR should discuss how this proposed project meets the need for affordable housing.
- The Draft EIR should describe how the expected number of residents was calculated.
- The Draft EIR should evaluate density and conformance with the Pleasanton Master Plan.
- The Draft EIR should discuss the need for housing in the City of Pleasanton.

3.13.1 - Existing Conditions

Population and Housing

San Francisco Bay Area

ABAG conducts long-term forecasts of population, households, and employment for the nine-county¹ San Francisco Bay Area (Bay Area) to project growth in the region. The Bay Area has experienced population growth over the past several decades, and that growth is expected to continue. In 2020, ABAG estimated that the Bay Area had a population of approximately 7,660,000 residents. ABAG projects that the Bay Area's population will grow by approximately 2,400,000 between 2020 and 2050 and reach approximately 10,330,000 residents by 2050.² Accordingly, ABAG's Plan Bay Area 2050 estimates an equivalent growth of 1,367,000 households from 2015 to 2050, reaching approximately 4,043,000 households by 2050.³

Alameda County

Population and housing characteristics for the County are summarized in Table 3.13-1. The table includes data for the entire County, including cities, towns, and unincorporated areas, as well as data for just unincorporated areas in Alameda County. Unincorporated areas account for approximately 9

¹ The Bay Area is defined as the nine counties that make up the region: Sonoma, Marin, Napa, Solano, Contra Costa, Alameda, Santa Clara, San Mateo, and San Francisco.

² Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2020. Plan Bay Area 2050: Regional Growth Forecast Memorandum. Website: https://www.planbayarea.org/sites/default/files/Plan_Bay_Area_2050_-_Regional_Growth_Forecast_July_2020v2DV.pdf. Accessed February 26, 2024.

³ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. Plan Bay Area 2050 – Growth Pattern. Website: https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf. Accessed February 26, 2024.

percent of the County’s population and have slightly larger household sizes than the Countywide average.

Table 3.13-1: Alameda County Population and Housing Characteristics (2023)

Category	Population	Total Housing Units	Average Persons Per Household	Vacant Housing Units
Alameda County	1,489,188	589,428	2.58	31,117 (5.3%)
Unincorporated Alameda County	147,006	52,381	2.84	1,757 (3.4%)

Source: California Department of Finance (CDF). 2023

As shown above, unincorporated Alameda County has an estimated 2022 population of 147,006 people and 52,381 housing units, with an average household size of 2.84 people.⁴

Table 3.13-2 summarizes the County’s historic population growth between 1990 and 2023. The total County population grew by approximately 17 percent during the 33-year time period, with the unincorporated area of the County experiencing a slightly greater population growth rate of approximately 22 percent.

Table 3.13-2: Alameda County Historic Population Growth (1990-2022)

Year	County (Cities, Towns, and Unincorporated Areas)	Unincorporated Areas
1990	1,276,702	120,020
1995	1,333,031	123,879
2000	1,443,939	135,717
2005	1,462,736	137,447
2010	1,510,271	141,266
2015	1,613,319	147,800
2020	1,682,353	153,348
2022	1,651,979	149,506
2023	1,489,188	147,006
1990-2023 Change	212,486 (17%)	26,986 (22%)

Source: California Department of Finance (CDF). 2023.

⁴ California Department of Finance (CDF). 2023. Population and Housing Estimates for Cities, Counties, and the State – January 1, 2022 and 2023. Available: <https://dof.ca.gov/Forecasting/Demographics/estimates-e1/>. Accessed December 4, 2023.

Growth Projections

In Plan Bay Area 2050, ABAG produced household growth projections from 2015 to 2050 for Alameda County. Based on ABAG projections for households from 2015 to 2050 in Alameda County, the annual growth rate is approximately 1.54 percent.^{5, 6} The growth in housing construction would provide a total of approximately 295,000 housing units by 2050, implying an average rate of increase of approximately 8,500 units per year. According to ABAG, the majority of forecasted new housing units would be to fill the needs of projected household growth within the region.

Project Site

The project site and associated off-site improvement sites are currently vacant and do not contain residential units.

Affordable Housing

Regional Housing Needs Allocations

Every jurisdiction is assigned a set number of housing units to accommodate through the Regional Housing Needs Allocation (RHNA), which projects the housing need for the whole region. ABAG, a regional planning agency, is responsible for distributing the RHNA to each jurisdiction within its nine-county Bay Area region, which includes unincorporated Alameda County. The RHNA is distributed by income category.⁷ ABAG adopted the 2023-2031 Final Regional Housing Needs Allocations 6th Cycle on December 16, 2021.

Alameda County

Unincorporated Alameda County received the following RHNA allocations at various levels of income affordability, as shown in Table 3.13-3 below.⁸ As shown in the table, during the January 31, 2023, to January 31, 2031 planning period, the County must ensure the availability of adequate residential sites to accommodate 4,711 dwelling units across all income levels.⁹

⁵ Plan Bay Area 2050 states that Alameda County will gain 54 percent household growth between 2015 and 2050. There are 35 years within that period. Therefore: 54 percent / 35 years = 1.54 percent per year.

⁶ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. Plan Bay Area 2050 – Growth Pattern. Website:
https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf. Accessed February 26, 2024.

⁷ County of Alameda. 2023. Alameda County Housing Element HCD Review Draft – October 2023. Available:
<https://www.acgov.org/cda/planning/housing-element/documents/Alameda-County-Housing-Element-6th-Cycle-HCD-Draft.pdf>. Accessed December 4, 2023.

⁸ At the time this Draft EIR was prepared, the County’s Updated Housing Element and the Sixth Cycle Regional Housing Needs Assessment (RHNA) are currently under review. Any future changes to the County’s Updated Housing Element and RHNA is expected to be minimal and would not result in significant changes to the analysis.

⁹ County of Alameda. 2023. Alameda County Housing Element HCD Review Draft – October 2023. Available:
<https://www.acgov.org/cda/planning/housing-element/documents/Alameda-County-Housing-Element-6th-Cycle-HCD-Draft.pdf>. Accessed December 4, 2023.

Table 3.13-3: Alameda County 2023-2031 Final RHNA Allocations

Jurisdiction	Housing Allocations				Total
	Very Low Income (Under 50 percent of median income)	Low Income (50-80 percent of median income)	Moderate Income (80-120 percent of median income)	Above Moderate Income (Over 120 percent of median income)	
Unincorporated Alameda County	1,251	721	763	1,976	4,711

Source: Association of Bay Area Governments (ABAG). December 2021.

Project Site

The project site and associated off-site improvement sites do not currently contain affordable housing units.

Employment

San Francisco Bay Area

The Bay Area region has experienced a strong recovery since the 2007–2009 Great Recession, with job growth proceeding at a pace greater than that experienced by the State of California or the United States as a whole. By mid-2013, the Bay Area had regained all of the jobs lost during the Great Recession; however, if 2000 is used as the baseline year, the average rate of growth is much less and closer to zero since the peak of the dot-com boom era.¹⁰ The Plan Bay Area 2050 forecasts that employment in the Bay Area is expected to grow from 4,005,000 to 5,408,000, an increase of 1,403,000 in 2050.¹¹

Alameda County

The EDD estimated that in December of 2022, the County had 808,400 employed persons and 22,700 unemployed persons for an unemployment rate of 2.7 percent within the County.¹² According to the U.S. Bureau of Labor Statistics, in December of 2022, the State of California has an unemployment rate of 4.1 percent.¹³ ABAG Plan Bay Area 2050 projects Alameda County to grow from 867,000 jobs to 1,182,000 jobs between 2015 and 2050, an increase of 315,000 jobs.¹⁴

¹⁰ Association of Bay Area Governments (ABAG). 2015. Executive Summary—State of the Region 2015: Economy, Population and Housing.

¹¹ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. Plan Bay Area 2050 – Growth Pattern. January 21.

¹² California Employment Development Department (EDD). 2022. Labor Force and Unemployment Rate for Cities and Census Designated Places. Website: <https://labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html>. Accessed February 26, 2024.

¹³ United States Bureau of Labor Statistics. 2022. Economy at a Glance. Website: <https://www.bls.gov/eag/eag.ca.htm>. Accessed February 26, 2024.

¹⁴ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. Plan Bay Area 2050 – Growth Pattern. January 21.

Project Site

The project site and associated off-site improvement areas are currently vacant, and have no land uses that offer employment, such as commercial or office space.

3.13.2 - Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to population and housing are applicable to the project.

State

California Housing Element Law

The State Housing Element Law (Government Code § 65580) requires each city and county to adopt a general plan for future growth. This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. The amount of housing that must be accounted for in a local housing element is determined through a process called the RHNA. In the RHNA process, the State gives each region a number representing the amount of housing needed, based on various factors, including existing need and expected population growth.

At the State level, the California Department of Housing and Community Development (HCD) estimates the relative share of the State's anticipated population growth that would occur in each county in the State, based on CDF population projections and historic growth trends. Where there is a regional council of governments, as in the San Francisco Bay Area (in this case, ABAG), the HCD provides the regional housing need to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares provides cities and counties the opportunity to comment on the proposed allocations. The HCD oversees the process to ensure that the council of governments distributes its share of the State's projected housing need.

Each city and county must update its general plan housing element on a regular basis pursuant to the requirements of Government Code Section 65580, *et seq.* Among other things, the housing element must incorporate policies and identify potential sites that would accommodate a city's share of the regional housing need. Before adopting an update to its housing element, a city or county must submit the draft to the HCD for review. The HCD will advise the local jurisdiction whether its housing element complies with the provisions of California Housing Element Law. The regional councils of governments are required to assign regional housing shares to the cities and counties within their region on a similar schedule. At the beginning of each cycle, the HCD provides population projections to the regional councils of governments, who then allocate shares to their cities and counties. The shares of the regional need are allocated before the end of the cycle so that the cities and counties can amend their housing elements by the deadline.

Regional

Plan Bay Area and ABAG Regional Housing Needs Assessment

The Plan Bay Area, published by the MTC and ABAG, is a long-range economic, environmental, integrated transportation, and land use/housing strategy through 2050 for the Bay Area. The Plan Bay Area functions as the sustainable communities' strategy mandated by Senate Bill 375. Plan Bay Area 2050 has been in effect since October 21, 2021.¹⁵ In December 2021, ABAG projected regional housing needs in its Regional Housing Needs Plan for the San Francisco Bay Area: 2013–2031. Acting in coordination with the HCD, ABAG determines the Bay Area's regional housing need based on regional trends, projected job growth, and existing needs. The RHNA determination includes production targets addressing the housing needs of a range of household income categories. A total of about 1,972, or 42 percent of the RHNA target, must be affordable to households making up to 80 percent of the area's median income.¹⁶ The United States Department of Housing and Urban Development (HUD) determines the annual area median income for the Oakland-Fremont Metropolitan Statistical Area, which includes Alameda County. In 2022, the area's median income for a single-person household was \$71,400 and \$106,000 for a household of four people.¹⁷

Local

Alameda County General Plan

Each local government in California is required to adopt a comprehensive, long-term general plan for the physical development of their city or county. The Housing Element is one of seven mandated elements to that general plan.¹⁸ Local government plans must address the existing and project housing needs of all economic segments of the community in their housing elements. The purpose of this housing element is to identify the community's housing needs, state the community's goals regarding housing production, rehabilitation, and conservation to meet needs, and define the policies and programs to be implemented. The Alameda County 2023-2031 Housing Element Update consists of the following major components:

- **Existing Programs Review:** An evaluation of the results of the goals, policies, and programs adopted in the previous Housing Element that compares projected outcomes with actual achieved results.
- **Housing Needs Assessment:** An analysis of the existing and projected housing needs of the community. It provides a profile of socio-demographic information, such as population characteristics, household information, housing stock, tenure, and housing affordability. The assessment also considers local special housing needs, such as seniors, farmworkers, homeless, large households, and female-headed households.

¹⁵ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2021. Final Plan Bay Area 2050.

¹⁶ Association of Bay Area Governments (ABAG). 2021. Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031. December.

¹⁷ United States Department of Housing and Urban Development (HUD). 2022. 2022 Adjusted Home Income Limits. June 15.

¹⁸ At the time this Draft EIR was prepared, the County's Updated Housing Element and the Sixth Cycle Regional Housing Needs Assessment (RHNA) are currently under review. Any future changes to the County's Updated Housing Element and RHNA is expected to be minimal and would not result in significant changes to the analysis.

- **Sites Inventory and Methodology:** An inventory listing adequate sites that are suitably zoned and available within the planning period to meet the County’s fair share of regional housing needs across all income levels.
- **Housing Resources:** An identification of resources to support the development, preservation, and rehabilitation of housing.
- **Housing Constraints:** An assessment of impediments to housing production across all income levels covering both governmental (e.g., zoning, fees, etc.) and nongovernmental (e.g., market, environmental, etc.) constraints.
- **Affirmatively Furthering Fair Housing Assessment:** AB 686 requires cities and counties to take deliberate actions to foster inclusive communities, advance fair and equal housing choice, and address racial and economic disparities through local policies and programs. The goal of AB 686 is to achieve better economic and health outcomes for all Californians through equitable housing policies. The assessment of affirmatively furthering fair housing documents compliance with AB 686.
- **Goals, Policies, and Programs:** A statement of the community’s goals, quantified objectives, and policies to maintain, preserve, improve, and develop housing, as well as a schedule of implementable actions to be taken during the planning period to achieve the goals, objectives, and policies. Quantified objectives for new construction, rehabilitation, and conserved units by income category (i.e., very low, low, moderate, and above moderate) are included to make sure that both the existing and the projected housing needs are met, consistent with the County’s share of the Regional Housing Needs Allocation (RHNA).

The following goals and policies are applicable to the proposed project:

Goals and Policies

- Goal 1** **Accommodate a range of housing for persons of all income levels in accordance with the County’s Regional Housing Needs Allocation (RHNA).**
- Policy 1.5** **Accessory Dwelling Units.** Support the development of Accessory Dwelling Units.
- Goal 2** **Ensure a wide range of housing types to accommodate the housing needs of moderate- and lower-income residents and households.**
- Policy 2.3** **Incentives for Affordable Housing Development.** Promote the use of density bonuses and other incentives to facilitate the development of new housing for extremely low, very low, and low income households.
- Goal 3** **Mitigate constraints to housing development and affordability.**
- Policy 3.4** **Intergovernmental Coordination.** Promote intergovernmental coordination in review and approval of residential development proposals when more than one governmental agency has jurisdiction.

- Goal 5** **Conserve and improve the existing housing stock to enhance quality of life and provide greater housing stability.**
- Policy 5.6** **Capital Improvement Program.** Continue to provide ongoing infrastructure maintenance in existing residential neighborhoods through the Capital Improvement Program (CIP).
- Goal 7** **Minimize the adverse environmental impacts of housing and encourage sustainability measures.**
- Policy 7.1** **Vehicle Miles Traveled and Greenhouse Gas Emission Policies.** Evaluate current policies to ensure consistency and compliance with statewide efforts to reduce vehicle miles traveled and greenhouse gas emissions.
- Policy 7.4** **Development of Infill Housing.** Work with cities, community organizations and neighborhood groups to facilitate infill housing development in conjunction with neighborhood revitalization.
- Policy 7.5** **Review and Revise Development Fees and Assessments.** Review and, as appropriate, revise service-related development fees and assessments to encourage development in areas where minimal improvements to infrastructure would be required.

East County Area Plan

The East County Area Plan (ECAP) is part of the Alameda County General Plan (General Plan), and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to population and housing:

Residential Uses

- Goal** **To provide an adequate supply of housing in a range of densities to meet State requirements, to accommodate projected housing growth consistent with this Plan and to respond to the needs of all income groups.**

County Housing Obligations

- Policy 26** Nothing in the Initiative shall be applied to preclude County compliance with housing obligations under State law. To the maximum extent feasible, the County shall meet State housing obligations for the East County Area within the County Urban Growth Boundary. In providing required housing, the County shall protect environmental values, enhance the quality of life of affected persons, and comply with policies and programs of the Initiative to the maximum extent feasible.

If State-imposed housing obligations make it necessary to go beyond the Urban Growth Boundary, the voters of the County may approve an extension of the Boundary. The Board of Supervisors may approve housing beyond an Urban Growth Boundary only if:

1. It is indisputable that there is no land within the Urban Growth Boundary to meet a State housing requirement either through new development, more intensive development, or redevelopment;
2. No more land is used outside the Urban Growth Boundary than is required by the affordable housing necessary to meet a State obligation;
3. The area is adjacent to the Urban Growth Boundary, or to an existing urban or intensive residential area;
4. The percentage goals for low and very low income housing in Policy 36 will be met in any housing approved;
5. There will be adequate public facilities and services for the housing; and
6. The development shall not be on prime agricultural lands, or lands designated, at least conditionally, for intensive agriculture, unless no other land is available under this policy.

In no case shall required housing be built on or which protrudes over hilltops or ridgelines, on slopes of more than 20% critical wildlife habitat, or within 100 feet of a riparian corridor.

Density

Policy 27

The County shall promote a diversity of housing types and densities within residential areas, including a mix of high-, medium-, and low-densities.

Type of Unit

Policy 31

The County shall require a phasing plan for residential projects that determines when affordable housing units (including very low, low, and moderate income units) will be built in each residential project. The phasing plan shall ensure that the majority of multiple family and affordable housing units are not postponed until the final phases of development. Affordable units shall be reasonably dispersed throughout the project. The County shall work with cities to require the same policies within incorporated areas.

Policy 32

The County shall work with housing developers to provide small, moderately priced single-family homes with expansion potential for sale to first time home buyers.

Income Level

Policy 35

The County shall attempt to meet unincorporated East County regional housing share objectives for all income categories within East County to minimize the need for low- and moderate-income households to seek housing in San Joaquin and Northern Contra Costa Counties. The County shall encourage cities to meet their respective incorporated city regional housing share objectives within East County.

Policy 37

The County shall require each residential and nonresidential project to contribute to meeting the housing needs of very low, low, and moderate income households. All residential developments of 20 or more units, whether for rental or sale, must include and maintain affordable housing units. Developers may choose the

percentage of affordable housing units depending on the degree of affordability provided; either 10 percent very low income, 15 percent low income, or 20 percent moderate income, or a fraction of each of these adding to 1. Affordability must be permanently ensured through deed restrictions.

Policy 38 The County shall require that major residential projects contribute toward the goal of 21 percent very low, 15 percent low and 21 percent moderate income housing units. Contributions toward achieving these goals should be made through financial support together with subsidies from other sources (e.g., federal tax credits). Low- and moderate-income units may be built in the project or elsewhere in East County.

General

Policy 40 The County shall require all new residential development to meet County standards for adequate road access, sewer and water facilities, fire protection, building envelope location, visual compatibility, and public services.

Policy 41 The County shall allow creation of new urban residential building sites only in areas located inside the Urban Growth Boundary which have public water and sewer service.

Implementation Programs

Program 10 The County shall adopt an ordinance establishing a low and very low income housing fee to be applied to all new unincorporated market rate housing and nonresidential development that do not directly provide their fair share of housing under Policy 37. For residential development, the fee shall aim generally at covering the cost of providing a fair share of low and very low income housing not otherwise provided proportionate to the size of the development. Nonresidential development fees should be related to the affordable housing needs that can reasonably be attributed to the development. Payment of the in lieu fee shall be made prior to the issuance of an occupancy certificate.

3.13.3 - Thresholds of Significance

The lead agency utilizes the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether impacts to population and housing are significant environmental effects. Would the project:

- a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

3.13.4 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Population Growth

Impact POP-1: **The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).**

Construction

Impacts related to inducement of population growth are limited to operational impacts. No respective construction impacts would occur.

Operation

Direct population growth is a result of developing residential units. The proposed project would result in the construction of 194 single-family residential units and would also allow up to 49 accessory dwelling units (ADUs), resulting in up to 243 total residential units. According to the 2023-2031 Housing Element Update: Initial Study/Mitigated Negative Declaration (IS/MND), unincorporated Alameda County has an average of 2.84 residents per household.¹⁹ Using this figure as a multiplier, the proposed project could result in up to 691 new residents in unincorporated Alameda County. As discussed in Section 3.13.1, Existing Conditions, the CDF estimates that unincorporated Alameda County's 2023 population was 147,006 persons.²⁰ The proposed project's increase in persons would represent an increase of less than 1 percent relative to the 2023 estimate.

As previously discussed, the 2023-2031 RHNA has planned for unincorporated Alameda County to accommodate 4,711 total residential units by 2031; 1,976 of these residential units would be for above moderate-income level units. The proposed project would result in up to 194 market rate single-family residential units and up to 49 ADUs, which would be credited toward the RHNA numbers for unincorporated Alameda County. The proposed development would account for approximately 5 percent of the total dwelling units expected to be built by 2031 and 12 percent of above moderate income level units. Furthermore, the proposed project is included in the draft Alameda County Housing Element Update as a proposed development that is anticipated to be completed by January 31, 2031.²¹ Thus, implementation of the project would not constitute substantial, unplanned direct population growth within unincorporated Alameda County.

Indirect population growth occurs when a project creates substantial unplanned employment opportunities, provides new infrastructure that can lead to additional growth, and/or removes barriers to growth. For example, a project could create thousands of jobs and attract a substantial

¹⁹ County of Alameda. 2023. 2023-2031 Housing Element Update: Initial Study – Mitigated Negative Declaration. Website: https://www.acgov.org/cda/planning/housing-element/documents/Alameda-County-HEU_Public-Draft-IS-MND.pdf. Accessed December 4, 2023.

²⁰ California Department of Finance (CDF). 2023. E-1 Population and Housing Estimates for Cities, Counties, and the State, 2020-2023. Website: <https://dof.ca.gov/Forecasting/Demographics/estimates-e1/>. Accessed December 4, 2023.

²¹ County of Alameda. 2023. Alameda County Housing Element HCD Review Draft – October 2023. Available: <https://www.acgov.org/cda/planning/housing-element/documents/Alameda-County-Housing-Element-6th-Cycle-HCD-Draft.pdf>. Accessed December 4, 2023.

amount of people to the area. The residential component of the proposed project would not contain any full-time employees. Once operational, the proposed project would be supported by the proposed water storage and booster pump facility and sewer treatment. All other utilities would be provided by existing utility providers in the area.

During routine operations of the water storage and booster pump facility and sewer treatment plant, the facilities are not expected to require any full-time employees; however, less than one full-time equivalent employee would make routine trips to inspect and maintain the facilities. It is expected that the daily trip generation would be less than one vehicle trip to the site each day with occasional delivery trucks and maintenance equipment when required. These improvements are designed and intended to support the proposed project and would not accommodate any other development. Thus, implementation of the project would not induce substantial indirect population growth within unincorporated Alameda County.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Housing Displacement/Replacement Housing

Impact POP-2: **The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.**

Construction

Impacts related to displacement of people or housing necessitating replacement housing are limited to operational impacts. No construction impacts would occur.

Operation

The project site is currently vacant. There are no existing housing units or permanent residents presently on the proposed project site. As such, development of the proposed project would not result in the displacement of existing residents or housing or necessitate the construction of replacement housing elsewhere. Therefore, no impacts would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

3.13.5 - Cumulative Impacts

Cumulative population and housing effects must be considered in relationship to land use, plans, and policy considerations for development facilitated by the General Plan. The relevant cumulative

geographic context is the unincorporated area of the County that includes projects identified in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects.

Population Growth

The geographic scope of the cumulative population and housing analysis is Alameda County. As of 2023, the County was estimated to have a population of 1,489,188, with unincorporated areas having a population of 147,006. Cumulative projects listed in Table 3-1 in conjunction with the project would add population consistent with planning projections. The County is expected to expand at an annual rate of 0.3 percent between 2022 and 2027.²² This represents an increase of approximately 495,594 persons. The proposed project would add approximately 691 persons to the County's population, which would represent growth of less than 0.05 percent of the County's population and less than 1 percent of the unincorporated population. Additionally, this project would account for 0.14 percent of the expected population growth by 2027. The other residential projects listed in Table 3-1, as well as other relevant cumulative projects as required by CEQA, would account for a small percentage of the planned for 2027 population. As such, the proposed project, in conjunction with other cumulative projects, would result in a less than significant cumulative impact associated with unplanned direct population growth. The project would not employ full-time employees, and therefore, would not generate significant indirect population growth. According to the U.S. Census Bureau, the employment rate in the County is approximately 4.1 percent, which is approximately 45,290 persons based on the County's 2022 census estimates.²³ Cumulative projects listed in Table 3-1, as well as other relevant cumulative projects as required by CEQA, are expected to generate employment opportunities, such as retail and commercial projects. However, employment opportunities generated by the projects in Table 3-1 are not expected to exceed 45,290 persons; therefore, it is expected that the cumulative projects would draw employees primarily from the local labor force. As such, the proposed project, in conjunction with other cumulative projects, would result in a less than significant cumulative impact associated with indirect population growth. Therefore, cumulative impacts related to population growth, both direct and indirect, would be considered less than significant. Moreover, the proposed project's incremental contribution to the less than significant impact would not be cumulatively considerable.

Population/Housing Displacement

Cumulative projects listed in Table 3-1 in conjunction with the proposed project would add residential units to the County. The proposed project, in conjunction with the listed projects, would not displace the housing units or people within the County. In fact, implementation of the cumulative projects would result in a net increase of housing in the County. Therefore, cumulative impacts associated with population and housing displacement would be less than significant. Moreover, as explained above, the proposed project would have no impact relative to housing

²² California Department of Transportation (Caltrans). 2022. Alameda County Economic Forecast. Website: <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/data-analytics-services/transportation-economics/socioeconomic-forecasts/2022/alameda-2022-a11y.pdf>. Accessed February 26, 2024.

²³ United States Census. 2023. American Community Survey. 2022: ACS 5-Year Estimates Data Profiles, Selected Economics Characteristics. Website: https://data.census.gov/table/ACSDP5Y2022.DP03?g=040XX00US06_050XX00US06001. Accessed December 7, 2023.

displacement because the project site is vacant. Therefore, the proposed project would have no contribution to the less than significant impact.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.14 - Public Services

3.14.1 - Introductions

This section describes the existing conditions related to public services in the County and project area, as well as the relevant regulatory framework. This section also evaluates the possible impacts related to public services that could result from project implementation. Descriptions and analysis in this section are based, in part, on information provided by the East County Area Plan (ECAP) as well as communications with representatives from the Alameda County Fire Department (ACFD), Livermore-Pleasanton Fire Department (LFPD), Alameda County Sheriff's Office (County Sheriff), Pleasanton Police Department (Pleasanton PD), Pleasanton Unified School District (PUSD), East Bay Regional Park District (EBRPD), Alameda County Library, and the Pleasanton Public Library.

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to environmental issues concerning public services. The Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should evaluate public services and related hazards, including access for emergency vehicles and response times.
- The Draft EIR should include an LFPD truck exhibit if the project needs to be served by LFPD.
- The Draft EIR should evaluate impacts and cumulative impacts to PUSD's already impacted schools.
- The Draft EIR should demonstrate compliance with Alameda County General Plan and ECAP policies relevant to hazards, emergency access, and public services.
- The Draft EIR should address the need for police, fire, and emergency services to the proposed project and surrounding neighborhoods.
- The Draft EIR should discuss the possibility of developing a long-term plan to accommodate growth in the area for emergency services.
- The Draft EIR should discuss and analyze the proposed elimination of the Zone 7 Water Agency (Zone 7) easement road available to the LFPD, the County Sheriff, and the Pleasanton PD.
- The Draft EIR should evaluate an extension of El Charro Road for emergency access and public services.
- The Draft EIR should analyze the lack of cohesive planning in Alameda County (County) and the City of Pleasanton (City), which could impact public services.
- The Draft EIR should evaluate whether the proposed project would require additional infrastructure for public services.

One public comment requests a truck exhibit that illustrates how LPPD would serve the proposed project. This has been included as Exhibit 2-9, Emergency Access Routes, in Chapter 2, Project Description, of this Draft EIR.

3.14.2 - Environmental Setting

Fire Protection and Emergency Medical Services

Alameda County

ACFD serves approximately 508 square miles with a daytime population of 394,000 people.¹ It consists of four battalions, 26 fire stations, 26 engine companies, seven ladder truck companies, and one heavy rescue vehicle. Additionally, it includes an air/light support unit, three zodiac boats, an approximately 2,500 gallon water tender, a dozer, and a hazardous material response vehicle. The ACFD has 475 authorized positions and 50 reserve firefighters as of 2017.

The ACFD is divided into four branches: Operations, Special Operations, Fire Prevention, and Administrative Support Services.² Additionally, the services they provide are: advanced life support, fire suppression, hazardous materials response, urban search and rescue, water rescue, community outreach and education, disaster preparedness, fire prevention and code compliance, and regional dispatch.³

Response and activity statistics in unincorporated Alameda County for the fiscal year 2019-2020 are detailed in Table 3.14-1.

Table 3.14-1: Response and Activity Statistics in Unincorporated Alameda County

Category	Number of Instances
Structure Fires	203
Other Fires	315
EMS/Rescue	11,697
Hazardous Conditions	286
Service Calls	1,082
Good Intent	949
False Call	636
Canceled Enroute	1,525
Total Calls	16,693
Source: Alameda County Fire Department (ACFD). 2024.	

¹ Alameda County Fire Department. 2024. About Us. Website: <https://fire.acgov.org/about-us/>. Accessed February 28, 2024.

² Alameda County Fire Department. 2024. FAQs. Website: <https://fire.acgov.org/faqs/>. Accessed February 28, 2024.

³ Alameda County Fire Department. 2024. About Us. Website: <https://fire.acgov.org/about-us/>. Accessed February 28, 2024.

City of Pleasanton

The LPFD is jointly operated by the cities of Livermore and Pleasanton and firefighters and paramedics are dispatched to a variety of incidents, including structure fires, hazardous materials, medical calls, and traffic accidents. The LPFD has a daily staffing level of 36 personnel, which occupy 10 fire stations and provide emergency response to the cities of Livermore and Pleasanton.⁴

Based on available information, LPFD consists of eight engine companies and two truck companies with 121 full-time employees.⁵ The response area includes approximately 49.45 square miles and serves a population of 171,385 persons. The LPFD service to the City of Pleasanton consists of a response area of 24 square miles and a population of 82,270 persons as of 2020. The total incidents in 2020 were 5,308. Of the total number of incidents, 3,396 of them were emergency medical incidents. They responded to 159 fires and 87 hazardous materials/hazardous condition incidents. Additionally, 1,666 of the total incidents were other, including service requests, false alarms, good intent responses, and canceled in route incidents. In the City of Pleasanton, LPFD had an average total reflex time of six minutes, 39 seconds in 2020.

Project Site

The project site would be served by LPFD, which has an automatic mutual aid agreement with the ACFD to provide voluntary fire protection, rescue, and emergency medical services, without supplanting day-to-day services of the ACFD service area. The nearest fire station to the project site is LPFD Fire Station 1 at 3560 Nevada Street, approximately 0.64 mile to the south of the project site. Fire Station 1 is normally staffed with one 3-person advanced life support engine company and one Battalion Chief.⁶ The personnel at the Fire Station 1 also cross-staffs one Type 6 Engine, one rescue boat, and one utility terrain vehicle (UTV) special response vehicle. LPFD responds with the closest resources to all emergency and non-emergency calls for service. The next closest fire station is LPFD Fire Station 3, located approximately 1.4 miles northwest of the project site. LPFD's average response time for the project site and surrounding area is approximately 6 minutes and 3 seconds. The nearest ACFD fire station is ACFD Station 18, located approximately 2.36 miles north of the project site. There are currently no residents or uses on the project site generating fire protection and emergency response needs.

Police Protection

Alameda County

The County Sheriff provides service to the unincorporated areas of Alameda County including Castro Valley, Hayward, Cherryland, Ashland, San Lorenzo, San Leandro, Sunol, Pleasanton, and Livermore.⁷ Additionally, they provide dispatch services for AC Transit police services, animal services, camp parks police service, Alameda Health Systems, police services, Oakland Airport Police Services, social services agency police services, Cal State University East Bay Police, and Alameda County probation.

⁴ Solak, Jason. Deputy Fire Chief: Operations. Livermore-Pleasanton Fire Department. Personal communication: email. April 22, 2022.

⁵ Livermore-Pleasanton Fire Department. 2020. Year End Report – 2020.

⁶ Solak, Jason. Deputy Fire Chief. Livermore-Pleasanton Fire Department (LPFD). Personal communication: email. May 24, 2023.

⁷ Alameda County Sheriff's Office. 2024. Emergency Services Dispatch. Website: <https://www.alamedacountysheriff.org/about-us/emergency-services-dispatch>. Accessed February 28, 2024.

In the year 2021, the County Sheriff dispatched over 150,500 calls for service, answered 81,878 emergency 9-1-1 calls and 144,505 seven-digit business calls, and made 76,115 outgoing calls. Additionally, the County Sheriff is organized into six divisions: Countywide Services Division, Detention and Corrections Division, Management Services Division, Airport Police Services, Law Enforcement Services Division, and Dublin Police Services.⁸

City of Pleasanton

The Pleasanton PD is currently headquartered at 4833 Bernal Avenue. Pleasanton PD contains an Investigations and Services Division as well as a Patrol Operations Division. The Investigations and Services Division is divided into four areas: the Criminal Investigations Unit, Youth and Community Services, the Professional Standards Unit, and Support Services. The division is currently staffed with 22 sworn officers and 27 civilian personnel.

The Patrol Operations Division is responsible for several duties, including Patrol, Traffic, SWAT, Special Enforcement, K-9, Animal Services, Bicycle Patrol, and Special Events. The Patrol Operations Division is currently staffed with 58 sworn officers, six civilian personnel, and is managed by Captain Larry Cox. Pleasanton PD has organized patrol responsibilities into three districts, and patrol officers have districtwide responsibility for detecting, preventing, and investigating criminal activity in progress, handling calls for service, enforcing traffic laws, and investigating traffic collisions.

Pleasanton PD responded to a total of 59,473 total incidents in 2021.⁹ Additionally, the Pleasanton PD responded to 107,165 support service team calls, approximately 8.3 percent more than the amount handled in 2020. Additionally, the Pleasanton PD fulfilled 58,473 incidents in 2021, of which 26,901 were initiated by officers and 32,572 were called in by the community. Table 3.14-2 provides a summary of incoming call trends for 2021, 2020, and 2019. According to the 2021 Annual Report, Pleasanton PD’s response time for emergencies was four minutes, 19 seconds and 20 minutes, 15 seconds for non-emergencies.

Table 3.14-2: Incoming Calls to the Communications Unit (2019, 2020, and 2021)

Category	2019 Calls	2020 Calls	2021 Calls
Total Incidents	65,565	54,679	59,473
Officer Initiated	26,571	23,283	26,901
Calls for Service	38,994	31,396	32,572
Support Services Team Calls	–	98,288	107,165

Source: Pleasanton Police Department. 2020 and 2021.

⁸ Alameda County Sheriff’s Office. 2024. Organizational Chart. Website: <https://www.alamedacountysheriff.org/about-us/organizational-chart>. Accessed February 28, 2024.

⁹ Pleasanton Police Department. 2021. Annual Report 2021.

Project Site

There are no police or sheriff facilities currently located on the project site. The project site is within the jurisdiction of the County Sheriff. The Tri-Valley Substation of the Sheriff's Office is responsible for police services at the project site and is located approximately 14.72 miles west of the project site. The Tri-Valley Substation is staffed with a total of one sergeant, 14 deputies and one professional staff member who are required to cover 24 hours per day, 7 days per week.

Schools

Alameda County

Alameda County is served by five school districts: the Livermore Valley Joint Unified School District (LVJUSD), PUSD, the Dublin Unified School District (DUSD), the Sunol Glen School District (SGSD), and the Mountain House Elementary School District (MHESD).¹⁰ Both SGSD and MHESD operate primary schools only and rely on other school districts to provide secondary education.

City of Pleasanton

PUSD provides preschool to grade 12 education to the residents of the City and surrounding unincorporated areas. It consists of 16 schools and three early education programs serving the City.¹¹ They serve 14,066 students with 1,421 employees. Additionally, PUSD has a 96 percent graduation rate. PUSD comprises one preschool, nine elementary schools, three middle schools, three high schools, one adult and career education school, and one virtual academy.

Project Site

There are no schools currently located on the project site. The project site is within the service area of the PUSD. The project site would be served by Alisal Elementary School, which is located approximately 0.81 mile west of the project site. The nearest middle school to the project site is Harvest Park Middle School, which is located approximately 1.43 miles west of the project site. The nearest high school to the project site is Amador Valley High School, which is located approximately 1.12 miles southwest of the project site. There are no residences currently on-site that may house school-aged children.

Parks

Alameda County

EBRPD operates 73 parks covering 125,496 acres in Alameda County and Contra Costa County.¹² The combined population of Contra Costa County and Alameda County is approximately 2,785,963 people.¹³ Therefore, there is a ratio of approximately 45 acres of park per 1,000 residents. The County's Code of Ordinances establishes the standard of five acres of parkland per 1,000 residents,

¹⁰ Alameda County. 1993. East County Area Plan Draft Environmental Impact Report. June.

¹¹ Pleasanton Unified School District. At a Glance. Website: <https://www.pleasantonusd.net/>. Accessed February 28, 2024.

¹² East Bay Regional Park District (EBRPD). 2024. Welcome. Website: <https://www.ebparks.org/>. Accessed February 28, 2024.

¹³ United States Census Bureau. 2022. QuickFacts. Website: <https://www.census.gov/quickfacts/fact/table/contracostacountycalifornia,alamedacountycalifornia/PST045222>. Accessed February 26, 2024.

and, thus, the County is providing more than the required number of acres of parkland per 1,000 residents.

City of Pleasanton

The City's park system includes 46 community and neighborhood parks that total 385 acres of parkland and 1,016 acres of open spaces, which also contain trails for recreational uses.¹⁴ The City has an estimated population of 78,271 as of 2021. Therefore, the City is providing approximately 17.9 acres of parkland and other recreational uses per 1,000 residents. The City of Pleasanton General Plan, Program 10.18 establishes a standard of five acres of neighborhood or community parks per 1,000 residents.

Project Site

There are no parks or recreational facilities currently located on the project site. The nearest park to the project site is Orloff Park, which is located approximately 0.76 mile directly west of the proposed project site. It consists of basketball courts, an exercise course, picnic tables, a softball field, a Tot Play Area, and a youth play area.

Libraries

Alameda County

Alameda County Library provides library services from 10 libraries in the cities of Albany, Dublin, Fremont, Newark, and Union City and the unincorporated communities of Castro Valley and San Lorenzo.

City of Pleasanton

The Pleasanton Public Library is located at 400 Old Bernal Avenue and provides library services to the City of Pleasanton.¹⁵ As of July 2019, there were 43,523 active library cardholders, and there were 10,396 new registered library cardholders in 2018.¹⁶ Additionally, there were 1.1 million total library materials checked out in 2018.

Project Site

The nearest library to the proposed project site is the Pleasanton Public Library, located approximately 1.87 miles southwest of the project site. However, the project site would be served by the Alameda County Library. The nearest Alameda County Library is Dublin Library, located approximately 3.64 miles northwest of the proposed project site. There are currently no residents on the project site generating library service needs.

¹⁴ City of Pleasanton. 2023. City of Pleasanton 2023-2031 (6th Cycle) Housing Element Update Program Environmental Impact Report (Housing Element Update EIR). January.

¹⁵ City of Pleasanton. 2024. Library. Website: <https://www.cityofpleasantonca.gov/gov/depts/lib/default.asp>. Accessed February 28, 2024.

¹⁶ City of Pleasanton. 2019. Library and Recreation Department Strategic Plan 2019-2024. July.

3.14.3 - Regulatory Framework

State

California Fire Code and California Building Code

The International Fire Code and the International Building Code, established by the International Code Council (ICC) and amended by the State of California, prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection.

California Health and Safety Code

California Health and Safety Code, Sections 13100–13135, establish the following policies related to fire protection:

- **Section 13100.1:** The functions of the office of the State Fire Marshall, including the California Department of Forestry and Fire Protection (CAL FIRE), shall be to foster, promote, and develop strategies to protect life and property against fire and panic.
- **Section 13104.6:** The Fire Marshall has the authority to require fire hazards to be removed in accordance with the law relating to removal or public nuisances on tax-deeded property.

California Senate Bill 50

Senate Bill (SB) 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development, and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and percentage of movable classrooms in use.

California Government Code, Section 65995(b) and Education Code, Section 17620

SB 50 amended Section 65995 of the California Government Code, which contains limitations on Section 17620 of the Education Code, the statute that authorizes school districts to assess development fees within school district boundaries. Section 65995(b)(3) of the Government Code requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. On January 22, 2014, the State approved increasing the allowable amount of statutory school facilities fees (Level I School Fees) from \$3.20 to \$3.36 per square-foot of assessable space for residential development of 500 square feet or more, and from \$0.51 to \$0.54 per square-foot of chargeable covered and enclosed space for commercial/industrial development. School districts may levy higher fees if they apply to the State and meet certain conditions.

Local

County of Alameda

The County of Alameda General Plan contains the following relevant policy in its Safety Element.

Safety Element

Policy 13 The County shall work cooperatively with public agencies with responsibility for fire protection and refer development applications to the Alameda County Fire Department, or the local Fire District for review and recommendation. (Government Code Section 65302 (g)(3)(C)) and East County Area Plan, pg. 76)

East County Area Plan

The ECAP is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to public services:

Infrastructure and Services

Goal To provide infrastructure and services necessary to accommodate East County holding capacities in a logical, cost-effective, and timely manner.

Policy 219 Basic urban services should normally be provided by cities and other existing public service agencies.

Parks and Recreational Facilities

Goal To ensure the development of plentiful and well-designed local and regional parks throughout the planning area.

Policy 224 The County shall require new developments to provide trails consistent with EBRPD and LARPD regional trail plans.

Schools

Goal To ensure the development of adequate school facilities to meet the needs of East County residents.

Policy 231 The County shall work with school districts and developers to ensure that adequate school capacity exists or is planned prior to approving new residential development. The County shall condition the approval of residential development plans on the availability of adequate school facilities to meet the needs of future residents to the extent permitted by law. The adequacy of school facilities shall be based upon reasonable standards for housing students.

Policy 232 The County shall require all new residential developments to pay their fair share of the costs of school sites and facilities. The County shall work with school districts in the planning area to identify, establish, and implement additional measures that may be necessary to adequately finance school facilities.

Child Care

Goal To encourage the provision of accessible, well designed, and affordable child care services.

Policy 239 The County shall consider the effects of major development projects on the supply of child care through the environmental review process, and shall require mitigation if a significant impact is identified. Mitigation may take the form of providing on-site or off-site facilities; in lieu fees to provide facilities and/or supplement child care provider training, salaries, or information and referral services; or other measures to address supply, affordability or quality of child care.

Police, Fire, and Emergency Medical Services

Goal To ensure the prompt and efficient provision of police, fire, and emergency medical facility and service needs.

Policy 243 The County shall require new developments to pay their fair share of the costs for providing police, fire, and emergency medical services and facilities.

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 246 The County shall limit development to very low densities in areas where police, fire, and emergency medical response times will average more than 15 minutes.

3.14.4 - Methodology

FirstCarbon Solutions (FCS) evaluated potential impacts on public services, in part, through review of the relevant positions of the ECAP and consultation with ACFD and the County Sheriff's Office. FCS sent Public Service Questionnaires to the ACFD, the Sheriff's Office, LPFD, the Pleasanton PD, the Alameda County Library, the Pleasanton Public Library, the PUSD, and the EBRPD.

3.14.5 - Thresholds of Significance

The lead agency utilizes the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether impacts to public services and utilities resulting from the implementation of the proposed project would be considered significant if the project 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 any of the public services:

- a) Fire protection
- b) Police protection
- c) Schools
- d) Parks
- e) Libraries

Under CEQA, a potential physical impact exists to the extent that a project causes a need for additional services that may result in the construction of new facilities or additions to existing facilities and considers the impact from the construction and operation of those new facilities or additions to existing facilities. The need for, or deficiency in, adequate police, fire, or other services in and of itself, is not a physical impact on the environment contemplated by CEQA but a social and economic impact. (*City of Hayward v Board of Trustees of Cal. State University* (2015) 242 CA4th 833, 843—need for additional fire protection services that project would generate is not environmental impact that must be mitigated under CEQA.) Therefore, this analysis would result in a potential environmental impact if there is an identified need for new or expanded facilities to serve the project site and such new or expanded facilities are reasonably foreseeable and described.

3.14.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Fire Protection

Impact PUB-1: **The proposed project would not 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.**

Impact Analysis

The proposed project, through current automatic aid agreements with ACFD, would be served primarily by fire resources from the City of Pleasanton (LPCD), which has five fire stations and a daily staffing level of 18 personnel. There are four Type 1 Engine Companies with a mix of three and four personnel, one ladder truck with four personnel, and one Battalion Chief on-duty each day. Minimum paramedic staffing each day is five, with each company having at least one assigned paramedic. The remaining personnel are either paramedic or Emergency Medical Technician (EMT) qualified. The proposed project would be provided initial emergency response from LPCD's Fire Station 1, located approximately 0.64 mile south of the project site. The LPCD responds the closest resources to all emergency and non-emergency calls for service. The next closest station is LPCD's Fire Station 3, located approximately 1.4 miles northwest of the project site. The Sheriff's Office does not maintain a development fee schedule. Thus, the project applicant would not be able to pay development or capital improvement fees to provide funding to the County Sheriff's for additional staffing or resources.

Construction

As part of project construction, the proposed project would be required to comply with applicable provisions of the California Building Standards Code (CBC) and the California Fire Code. In compliance with the California Fire Code, Part 9 of the CBC, during construction, the proposed project would be required to follow fire safety standards related to provision of fire apparatus access and acquisition of building permits. Specifically, CBC Section 501.3 requires plans be submitted to

the Fire Department for review and approval for proposed fire apparatus access, location of fire lanes, security gates, and fire hydrant systems for which Fire Department access is required by the Fire Code; this would ensure adequate driveway/entry turning radius, height clearance, and fire hydrant access for fire trucks and engines at the project site during construction. In addition, this would ensure that construction would not obstruct the LPPD from delivering adequate levels of fire protection services and otherwise help to ensure that all applicable standards and requirements are satisfied. Given the forgoing, project construction would not create the need for new or altered fire protection facilities to maintain acceptable service ratios, response times, or other performance objectives for fire protection.

Construction activities have the potential to affect emergency services by potentially requiring partial lane closures during street improvements and utility installation. The proposed project construction would not include any road closures or roadwork that would impair or interfere with an adopted emergency response plan. Adherence to applicable County regulations in place to regulate traffic control would ensure the proposed project would not impair or interfere with emergency response times or otherwise impact performance objectives related to the provision of fire protection services, and the impact would be less than significant. Therefore, construction impacts related to fire protection would be less than significant.

Operation

The development of 194 single-family homes and up to 49 Accessory Dwelling Units (ADUs) under the proposed project would be expected to result in an increase in calls for fire protection and emergency medical services. The principal metric for the LPPD's performance is its turnout time and travel time. The LPPD currently utilizes a total reflex time standard response of 7 minutes from call intake to the arrival of the first responder on scene, 90 percent of the time. The average response time for the LPPD is approximately six minutes and 27 seconds.

The proposed project would result in approximately 691 new residents, and therefore, could incrementally contribute to the LPPD's ability to provide an acceptable level of service. These impacts include an increased number of emergency and public service calls due to the increased presence of structures, traffic, and population. The project applicant would be subject to fees charged by the County and ACFD according to the fee schedule adopted in County Ordinance O-93-17. Payment of these fees would contribute funding for increased staffing and resources, and, therefore, impacts would be less than significant. The LPPD did not identify a need for new or expanded facilities as a result of the proposed project. With payment of required development fees, impacts would be less than significant.

Furthermore, consistent with County General Plan Policy 13, the project applicant would prepare and submit response procedures for the residential project site as well as the off-site improvements associated with the project to LPPD, including the water storage and booster pump facility, the sewer treatment plant, and recycled water storage facility. Finally, there is no identified need for new or expanded facilities to serve the project site. Thus, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Police Protection

Impact PUB-2: **The proposed project could 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 police protection.**

Impact Analysis

Construction

The County Sheriff provides primary law enforcement protection services for the project site and unincorporated areas of the County near the project site. The Tri-Valley Substation of the Sheriff's Office would be responsible for police services at the proposed project. While the County Sheriff does not have a mutual aid agreement with Pleasanton PD, they do work collaboratively with them during emergency operations. The Tri-Valley Substation is staffed with a total of one sergeant, 14 deputies and one professional staff member who are required to cover 24 hours per day, seven days per week. These are the only staff who would be available on a regular basis to provide service to the proposed project.

Construction

Similar to fire protection services, the need for police protection services could increase during construction of the proposed project. Construction activities may temporarily increase traffic volumes; however, as discussed above, proposed project construction would not include any road closures or roadwork that would impair or interfere with an adopted emergency response plan. Adherence to applicable County regulations in place to regulate traffic control would ensure the proposed project would not impair or interfere with an adopted emergency response, and the physical environment impact, if any, would be less than significant.

Operation

The service area of the Tri-Valley Substation is active and sometimes requires many of the deputies assigned to handle calls for service. The existing average response time for priority emergency calls at the Tri-Valley Substation is approximately 18 minutes; however, some of these calls require over 35 minutes for response. The County Sheriff uses a deputy per resident ratio as a performance objective for police protection. The target ratio is one deputy per 1,000 residents in the unincorporated County. However, the County Sheriff has not met this performance objective in the last 30 years. However, if there is a life-threatening emergency, the County Sheriff can request Pleasanton PD to help address the emergency until the County Sheriff's Office can arrive on the scene. The nearest Pleasanton PD station, which is located approximately 1.8 miles southwest of the project site, would provide service to the project site.

The County's Sheriff's Office does not maintain a development fee schedule or a capital improvement plan. To the extent additional police resources would be needed to accommodate

emergency response calls from the proposed project, it is reasonably foreseeable those would take the form of additional first responder employees (and not physical improvements). Furthermore, as explained above, the need for, or deficiency in, adequate police protection services in and of itself does not constitute a physical impact on the environment but is a social and economic impact. Absent an identified need for new or expanded facilities to serve the project site, impacts of the proposed project on police services would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required. Schools

Impact PUB-3: **The proposed project would not 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 schools.**

Impact Analysis

Construction

Impacts related to the provision of or need for construction of new or expanded school facilities are limited to operational impacts. No construction impacts would occur.

Operation

The proposed project is located within the jurisdiction of the PUSD and would be served by Alisal Elementary School, Harvest Park Middle School, and Amador Valley High School. The proposed project would increase the number of residential units, thereby increasing the need for school services for the proposed project site and its residents. The proposed project would be expected to include approximately 148 students with approximately 79 students attending Alisal Elementary School, approximately 34 students attending Harvest Park Middle School, and approximately 36 students attending Amador Valley High School. According to consultation with the PUSD, Harvest Park Middle School and Amador Valley High School would be able to accommodate the increase in students from the proposed project. However, the PUSD indicated that Alisal Elementary School would potentially be impacted by the increased number of students as a result of the proposed project. Alisal Elementary School has a maximum capacity of approximately 717 students and has a current enrollment of approximately 650 students.^{17,18} Additionally, the planned development in the area under the City's Housing Element Plan would increase the number of students attending Alisal Elementary School.¹⁹ Furthermore, PUSD indicated that an increase in students could require

¹⁷ Sheikholeslami, Ahmad. Assistant Superintendent of Business Services. Pleasanton Unified School District. Personal communication: email. May 16, 2023.

¹⁸ Alisal Elementary School. 2024. Performance Data: School Profile. Website: <https://alisal.pleasantonusd.net/about-us/performance-data>. Accessed February 28, 2024.

¹⁹ At the time this Draft EIR was prepared, the County's Updated Housing Element and the Sixth Cycle Regional Housing Needs Assessment (RHNA) are currently under review. Any future changes to the County's Updated Housing Element and RHNA is expected to be minimal and would not result in significant changes to the analysis.

enhancements to the pick-up and drop-off area at the school. Therefore, there would be a potentially significant impact to Alisal Elementary School.

However, the project applicant would be required to pay developer fees to the PUSD pursuant to Government Code Section 65996, as a condition of approval for the proposed project. The provisions in Government Code Section 65996 are deemed to provide full and complete school facilities mitigation related to the school district's ability to accommodate enrollment. With payment of applicable developer fees, impacts on school facilities related to the proposed project would be mitigated to less than significant levels.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Parks

Impact PUB-4: The proposed project would not 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 parks.

Impact Analysis

Construction

Impacts related to provision of and need for construction of new or expanded park facilities are limited to operational impacts. No construction impacts would occur.

Operation

County of Alameda

The proposed project includes the development of 21 open space and park parcels, ranging from approximately 1,117 square feet to 30,423 square feet in area. As identified above, the County's Code of Ordinances requires a park ratio of at least five acres of parkland per 1,000 residents. The EBRPD currently consists of 73 parks across 125,496 acres with a ratio of approximately 45 acres per 1,000 residents, based on the 2022 Contra Costa County and Alameda County population estimates.^{20,21} Therefore, the County is providing more than the required number of acres of parkland per 1,000 residents.

²⁰ East Bay Regional Park District (EBRPD). 2024. About Us. Website: <https://www.ebparks.org/about-us>. Accessed February 28, 2024.

²¹ United States Census Bureau. 2024. QuickFacts. United States Census Bureau. 2022. QuickFacts. Website: <https://www.census.gov/quickfacts/fact/table/contracostacountycalifornia,alamedacountycalifornia/PST045222>. Accessed February 26, 2024.

The proposed project would result in approximately 691 residents.^{22,23} Conservatively, this analysis assumes all new residents would come from outside of the County, and that the 691 residents would be new residents to the ECAP service area. As mentioned previously, the development proposes to include a 0.7-acre private park and approximately 0.5 mile of designated walking trails. As a result, the proposed project alone would not provide five acres of parkland per 1,000 residents pursuant to the County's Code of Ordinances, as described in Chapter 12.20. However, the Ordinance establishes Countywide standards for parkland. Accordingly, with the increase of 691 residents and the addition of 1.2 acres of parkland and walking trails, the ratio of parklands per 1,000 residents remains approximately 45 acres per 1,000 residents, well above the County's established standard. Additionally, all new developments would be required to dedicate or acquire land for open space and/or pay equivalent in lieu fees under Policy 56 of the ECAP. As such, the proposed project would not require the construction of new or expanded park facilities.

City of Pleasanton

Although located in unincorporated Alameda County, future residents of the proposed project would use the open space and recreational facilities located in the City. According to the City's 2023-2031 (6th Cycle) Housing Element Update Program EIR, the City maintains 46 developed park sites that total 385 acres of parkland and 1,016 acres of open spaces, which also contain trails for recreational uses, totaling approximately 1,401 acres of parks and other recreational facilities, which is approximately 17.9 acres per 1,000 residents.^{24,25} Therefore, the City maintains a park service standard of over five acres of park and recreational uses per 1,000 residents, consistent with Program 10.18.

Accordingly, with the increase of 691 residents and the inclusion of an approximately 0.7-acre private park and approximately 0.5 mile of designated public walking trails, the ratio of parklands per 1,000 residents remains approximately 17.8 and would, therefore, not significantly change the amount of parkland per 1,000 residents in the City or adversely impact the ability of either the City or the County to provide adequate services. The City has determined that since the proposed project is not located within the City's boundary, the project applicant would not be required to pay the City of Pleasanton's Capital Facilities Fee to develop or maintain recreational facilities. Therefore, operational impacts related to the need for new or altered park facilities would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

²² County of Alameda. 2023. 2023-2031 Housing Element Update: Initial Study – Mitigated Negative Declaration. November.

²³ 194 single-family dwelling units plus 49 ADUs equals 243 total dwelling units. The County's average number of persons per household is 2.84. 243 multiplied by 2.84 equals approximately 691 residents.

²⁴ City of Pleasanton. 2022. City of Pleasanton 2023-2031 (6th Cycle) Housing Element Update Program Environmental Impact Report (Housing Element Update EIR). January.

²⁵ Based on a population of 78,271 persons as of January 1, 2021.

Libraries

Impact PUB-5: The proposed project would not 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 other public facilities.

Impact Analysis

Construction

Impacts related to provision of and need for construction of new or expanded public facilities, including library facilities, are limited to operational impacts. No construction impacts would occur.

Operation

The proposed project would increase the number of residential units, thereby increasing the need for library services for the proposed project site and its residents. According to consultation with the Alameda County Library, the increased demand on Alameda County Library facilities would be low, and the Dublin Library would be able to accommodate the demand created by the proposed project. Additionally, according to consultation with the Pleasanton Public Library, the impact of the proposed project on library services would not be significant. The City currently maintains a 30,178-square-foot library facility, which equates to 0.36 square feet of library space per capita. This is below standards for public library buildings. However, for 194 single-family homes with 49 ADU's, the impact would not be substantial. Therefore, the proposed project would not create a need to construct new or expand existing library facilities, and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.14.7 - Cumulative Impacts

The geographic scope of the cumulative public services analysis for this Draft EIR includes the service areas of each of the providers serving the project, including the LPPD, the Pleasanton PD, PUSD, EBRPD, the Alameda County Library and the Pleasanton Public Library. Because of the differences in the nature of the public service topical areas, they are discussed separately below. The analysis also considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project.

Fire Protection Facilities

The geographic scope of cumulative fire protection and emergency medical services analysis is the LPPD service area. A significant cumulative environmental impact would result if cumulative growth exceeded the ability of LPPD to adequately serve their service areas, thereby requiring construction

of new facilities or modification of existing facilities. Development projects within the LFPD service area would be required to comply with City and County requirements that address fire protection and emergency medical services, including the payment of impact fees designed to ensure adequate facilities. LFPD is currently in compliance with their target response time, which is the primary performance objective used by LFPD. Therefore, cumulative impacts would be less than significant.

The proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As discussed under Impact PUB-1, implementation of the project would not create a need for new or physically altered facilities. The proposed project would contribute to an increased number of emergency and public service calls due to the increased presence of structures, traffic, and population. These impacts would be mitigated by mandatory County impact fees. Therefore, the proposed project's incremental contribution to fire protection and emergency medical services would not be cumulatively considerable. The proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to fire protection and emergency medical services.

Police Protection Facilities

The geographic scope of the cumulative police protection analysis is the service areas of the Alameda County Sheriff's Office and the Pleasanton Police Department. The proposed project is located within the jurisdiction of the Sheriff's Office; however, the Sheriff's Office has identified an existing cumulative significant impact related to its ability to provide police services. As discussed above, the existing average response time for priority emergency calls at the Tri-Valley Substation is approximately 18 minutes, however some of these calls require over 35 minutes for response. The County Sheriff uses a deputy per resident ratio at a performance objective for police protection. The target ratio is one deputy per 1,000 residents in the unincorporated County. The County Sheriff's has not met this performance objective in the last 30 years. However, if there is a life-threatening emergency, the County Sheriff's can request Pleasanton PD to help address the emergency until the County Sheriff's Office can arrive on the scene.

The proposed project's incremental contribution to the potentially significant cumulative impact would not be significant. While the County has not established a development fee schedule to provide funding to address staffing and resource issues identified by the County Sheriff's Office, the Sheriff's Office has not identified a need for expanded physical facilities, and therefore, does not result in a significant impact under CEQA. While there is an existing cumulative impact related to the County Sheriff's ability to provide police services to its service area, the proposed project would not result in a significant incremental contribution and would not have an adverse physical environmental impact. Both must be significant in order to result in an overall significant cumulative impact related to police services creating an adverse physical environmental impact. Therefore, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to police protection.

School Facilities

The geographic scope of the cumulative school facilities analysis includes the service area of PUSD. Planned projects including those listed in Table 3-1 would result in residential development, though none include any educational facilities.

As previously discussed, the PUSD indicated that Alisal Elementary School would potentially be impacted by the increased number of students as a result of the proposed project. Alisal Elementary School has a maximum capacity of approximately 717 students and has a current enrollment of approximately 650 students.^{26,27} However, all approved developments, including the proposed project and the projects discussed in Table 3-1 and development within school service areas, would be required to pay applicable development impact fees toward school district facilities. Pursuant to Government Code Section 65996, payment of adopted development fees is considered “full and complete mitigation” for impacts to school facilities, and local governments are prohibited from assessing additional fees or exactions for school impacts. As part of the project entitlement processes, cumulative project applicants would be responsible for paying their fair share of school facility fees. With payment of school impact development fees, cumulative projects would not result in additional need for new or altered school facilities not already analyzed within the applicable General Plan, and impacts would be less than significant.

Although the proposed project would develop 194 residences and 49 ADUs, the proposed project would be required to pay applicable school impact fees, and therefore, the proposed project would not contribute significantly to cumulative impacts associated with schools.

Park Facilities

The geographic scope of the cumulative park facilities analysis is the EBRPD service area. An increase in population from the proposed project and cumulative development projects would result in an increased demand for park facilities. To help offset this increase, cumulative residential projects would be required to provide parkland or pay applicable development fees. With payment of applicable park impact fees and/or otherwise satisfying park dedication obligations by cumulative projects, there would be a less than significant cumulative impact related to additional increased use and physical deterioration of existing parks and recreational facilities not already analyzed within the applicable General Plan. Accordingly, cumulative impacts are less than significant.

Additionally, the proposed project would be required to dedicate parkland and/or pay applicable development fees. Therefore, the proposed project’s incremental contribution would not be cumulatively considerable and cumulative impacts would be less than significant with respect to parks.

²⁶ Sheikholeslami, Ahmad. Assistant Superintendent of Business Services. Pleasanton Unified School District. Personal communication: email. May 16, 2023.

²⁷ Alisal Elementary School. 2024. Performance Data: School Profile. Website: <https://alisal.pleasantonUSD.net/about-us/performance-data>. Accessed February 28, 2024.

Library Facilities

The geographic scope of the cumulative library and other public facilities analysis is the Pleasanton Public Library service area and the Alameda County Library service area. An increase in population from the proposed project and cumulative development projects would result in an increased demand for library facilities. To help offset this increase, cumulative developments would be required to pay development impact fees. Accordingly, there would be a less than significant cumulative impact regarding the additional need for new or altered library facilities not already analyzed within the applicable General Plan.

Although the proposed project would develop 194 residences and 49 ADUs, the proposed project would be required to pay applicable development impact fees. Therefore, the proposed project would not contribute significantly to cumulative impacts associated with libraries.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

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3.15 - Recreation

3.15.1 - Introduction

This section describes existing parks and recreational facilities in the region and project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to parks and recreational facilities that could result from the implementation of the proposed project. Information in this section is based, in part, on information obtained from the City of Pleasanton website, California Department of Parks and Recreation, East Bay Regional Park District (EBRPD), P Town Life website, Alameda County General Plan (General Plan), the East County Area Plan (ECAP), City of Pleasanton General Plan, and personal communications with the City of Pleasanton.

The following public comment was received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to recreation. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should analyze open space and recreational facilities.

3.15.2 - Environmental Setting

Existing Parks and Recreational Facilities

State Parks

There are no California State Parks located within the City of Pleasanton (City). However, there are six state parks located within Alameda County: Albany State Marine Reserve, Bethany Reservoir State Recreation Area, Emeryville Crescent State Marine Reserve, Lake Del Valle State Recreation Area, McLaughlin Eastshore State Park State Seashore, and Robert W. Crown Memorial State Beach.¹ Additionally, there are state parks located within adjacent counties that may also be accessed by the proposed project.

Lake Del Valle State Recreation Area

Lake Del Valle State Recreation Area is located approximately 1.78 miles southeast of the proposed project site about five miles south of the City of Livermore and is used for picnicking, horseback riding, boating, fishing, and swimming.²

Bethany Reservoir State Recreation Area

Bethany Reservoir State Recreation Area is located approximately 14.83 miles northeast of the proposed project site in Byron, a census designated place, and is used for water-oriented recreation, such as fishing and windsurfing. It also includes a bike trail and many windmills.³

¹ California Department of Parks and Recreation (DPR). 2024. Find a California State Park. Website: <https://www.parks.ca.gov/parkindex>. Accessed February 26, 2024.

² California Department of Parks and Recreation (DPR). 2024. Lake Del Valle State Recreation Area. Website: https://www.parks.ca.gov/?page_id=537. Accessed February 26, 2024.

³ California Department of Parks and Recreation (DPR). 2024. Bethany Reservoir State Recreation Area. Website: https://www.parks.ca.gov/?page_id=562. Accessed February 26, 2024.

Mount Diablo State Park

Mount Diablo State Park is located approximately 14.15 miles north of the proposed project site. It is primarily utilized for hiking, biking, and horseback riding. It also includes picnic areas, a learning/visitor center, guided tours, museums, and interpretive exhibits.⁴

Regional Parks

There are three EBRPD parks located within the City: Ohlone Wilderness Regional Park, Pleasanton Ridge Regional Park, and Shadow Cliffs Regional Recreation Area.⁵ The EBRPD is a system of parklands in Alameda County and Contra Costa County to the east of San Francisco. It consists of 73 parks across 125,496 acres.⁶

Ohlone Wilderness Regional Park

The Ohlone Wilderness Regional Park consists of 9,737 acres of parkland, and it is only accessible by the Ohlone Wilderness Trail.⁷ Its centerpiece is 3,817-foot Rose Peak, which is surrounded by grassy ridges. It contains abundant wildlife, including bald eagles, mountain lions, bobcats, deer, and Tule Elk. It is often used for hiking, horseback riding, and camping. It is located approximately 13.12 miles southeast of the proposed project site.

Pleasanton Ridge Regional Park

Pleasanton Ridge Regional Park is located approximately 3.26 miles southwest of the proposed project site.⁸ It consists of 9,090 acres of parkland on an oak-covered ridge overlooking Pleasanton and the Livermore Valley from the west. It includes a multi-purpose trail system, which accommodates hikers, equestrians, and bicyclists.

Shadow Cliffs Regional Recreation Area

Shadow Cliffs Regional Recreation Area is located approximately 0.88 miles southeast of the proposed project site.⁹ It consists of 266 acres with an 80-acre lake, ample parking, and picnic grounds. The park contains a swimming beach, bathhouse, and refreshment stand. It is often used for fishing, boating, picnicking, hiking, and birdwatching.

Local Community Parks

The City's park system includes 46 community and neighborhood parks, as well as 1,016 acres of open spaces containing trails for recreational uses, which total 1,401 acres of parks and other recreational facilities.¹⁰

⁴ California Department of Parks and Recreation. 2024. Mount Diablo State Park. Website: https://www.parks.ca.gov/?page_id=517. Accessed January 12, 2024.

⁵ East Bay Regional Park District (EBRPD). 2024. Parks. Website: https://www.ebparks.org/parks?field_park_activities=All&city=492. Accessed February 26, 2024.

⁶ East Bay Regional Park District (EBRPD). 2024. About Us. Website: <https://www.ebparks.org/about-us>. Accessed February 26, 2024.

⁷ East Bay Regional Park District (EBRPD). 2024. Ohlone Wilderness Regional Preserve. Website: <https://www.ebparks.org/parks/ohlone>. Accessed February 26, 2024.

⁸ East Bay Regional Park District (EBRPD). 2024. Pleasanton Ridge Regional Park. Website: <https://www.ebparks.org/parks/pleasanton-ridge>. Accessed February 26, 2024.

⁹ East Bay Regional Park District (EBRPD). 2024. Shadow Cliffs Regional Recreation Area. Website: <https://www.ebparks.org/parks/shadow-cliffs>. Accessed February 26, 2024.

¹⁰ City of Pleasanton. 2022. City of Pleasanton 2023-2031 (6th Cycle) Housing Element Update Program Environmental Impact Report

Community parks are intended for community-wide use and feature various amenities. The community parks range in size from one-third of an acre to 104 acres.

Neighborhood parks are intended to serve the immediate neighborhood and have limited amenities. However, they are open for use by the general public. Many neighborhood parks are located within a half mile of residential neighborhoods.

Orloff Park

Orloff Park is located approximately 0.76 mile directly west of the proposed project site.¹¹ It consists of basketball courts, an exercise course, picnic tables, a softball field, a tot play area, and a youth play area.

Amaral Park

Amaral Park is located approximately 0.78 mile north of the proposed project site.¹² It consists of a barbeque pit, baseball field, basketball courts, picnic tables, a tot play area, and a youth play area.

Tawny Park

Tawny Park is located approximately 0.86 mile south of the proposed project site.¹³ It consists of basketball courts, picnic tables, a softball field, a tot play area, and a youth play area.

3.15.3 - Regulatory Framework

State

Quimby Act

The Quimby Act (California Government Code § 66477) was established by the California Legislature in 1965 to preserve open space and parkland in rapidly urbanizing areas of the State. The Quimby Act allows cities and counties to establish requirements for new development to dedicate land for parks, pay an in lieu fee, or provide a combination of the two.

The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is greater than three acres per 1,000 residents, then the community may require dedication based on a standard of up to five acres per 1,000 persons residing in the subdivision based on the current ratio of parkland per 1,000 residents. If the existing amount of parkland in a community is less than three acres per 1,000 residents, then the community may require dedication based on a standard of only three acres per 1,000 persons residing in the subdivision.

The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan to adopt a parkland dedication or fee ordinance. The General Plan includes criteria and standards for

(Housing Element Update EIR). Website: <https://www.cityofpleasantonca.gov/assets/our-government/community-development/pleasanton-heu-draft%20program-eir-oct-2022.pdf?t=1702486881>. Accessed January 12, 2024.

¹¹ P Town Life. Orloff Park. Website: <https://www.ptownlife.org/parks/united-states/california/pleasanton/basketbal-courts/orloff-park/>. Accessed February 26, 2024.

¹² P Town Life. Amaral Park. Website: <https://www.ptownlife.org/parks/united-states/california/pleasanton/barbeque-pit/amaral-park/>. Accessed February 26, 2024.

¹³ P Town Life. Tawny Park. Website: <https://www.ptownlife.org/parks/united-states/california/pleasanton/basketbal-courts/tawny-park/>. Accessed February 26, 2024.

County parks,¹⁴ and therefore can require the payment of development fees and/or dedication of land pursuant to Chapter 12.20 of the Alameda County Ordinance Code.

It should be noted that the Quimby Act applies only to the acquisition of new parkland; it does not apply to the physical development of new park facilities or associated operations and maintenance costs. Therefore, the Quimby Act effectively preserves open space needed to develop park and recreation facilities, but it does not ensure the development of the land or the provision of park and recreation services to residents. In addition, the Quimby Act applies only to residential subdivisions. Nonresidential projects could contribute to the demand for park and recreation facilities without providing land or funding for such facilities. Quimby Act fees are collected by the local agency (park district, city, or county) in which the new residential development is located.

Local

County of Alameda

East County Area Plan

The ECAP is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to recreation:

Land Use: Sensitive Lands and Regionally Significant Open Space

Goal **To protect regionally significant open space and agricultural land from development.**

Policy 56 The County shall require all new developments to dedicate or acquire land for open space and/or pay equivalent in lieu fees which shall be committed to open space land acquisition and management and shall encourage the cities to impose similar open space requirements on development in incorporated areas.

Policy 62 The County shall require that open space provided as part of a development project be designed to achieve open space objectives (e.g., recreation, viewshed, community separation, riparian protection, public safety).

Policy 63 The County shall require that open space within developed areas be designed and maintained to minimize fire hazards and ensure compatibility between development and any significant biological resources.

Policy 20 The County shall adopt an open space dedication and/or in lieu fee requirement applicable to all residential and industrial, commercial, and office developments within unincorporated areas to fund the purchase of land within the continuous open space system and provide an endowment for ongoing management of open space lands. The County shall work with cities to develop and adopt an open space dedication and in lieu fee requirement consistent with the County requirement.

¹⁴ Alameda County. 1994. East County Area Plan, Public Services and Facilities. May 5.

Public Services and Facilities: Specific Services and Facilities

Goal **To ensure the development of plentiful and well-designed local and regional parks throughout the planning area.**

Policy 224 The County shall require new developments to provide trails consistent with EBRPD and LARPD regional trail plans.

County Code of Ordinances

Chapter 12.20 Park Dedication Requirements

Chapter 12.20.12, Standards, of the County Code of Ordinances states that the park dedication requirement is five acres of park and recreation land per 1,000 persons or 218 square feet per person, except for instances where credits are provided to the applicant/developer for completing other improvements. The requirement consists of dedication or improvement of land, payment of fees in lieu of dedication of land or improvement of facilities or a combination thereof. Where a developer improves land as part of the requirement, such improvements shall be done to the standards of the appropriate local park agency.

City of Pleasanton

General Plan

The City of Pleasanton General Plan sets forth the following goals, objectives, and actions that are relevant to parks and recreation:

Community Character Element

Goal 7 **Preserve the open space character at the edges of the City.**

Conservation and Open Space Element

Goal 6 **Achieve an extensive open space system featuring a wide variety of opportunities to serve the diverse needs of the public.**

Policy 7 Preserve and expand open space opportunities, including open space access to the public.

Land Use Element

Goal 2 **Achieve and maintain a complete well-rounded community of desirable neighborhoods, a strong employment base, and a variety of community facilities.**

Policy 19 Preserve designated open space areas for the protection of public health and safety, the provision of recreational opportunities, agriculture and grazing, the production of natural resources, the preservation of wildlands, water management and recreation, and the physical separation of Pleasanton from neighboring communities.

Program 19.1 Preserve open space by way of fee purchase, developer dedications, conservation and scenic easements, transfer of development rights, Williamson Act contracts, open space zoning categories, and other means which may become available.

Parks and Recreation

Goal 6 Achieve a complete park and recreation system featuring a wide variety of opportunities to serve the public need.

Policy 10 Provide sufficient parkland and recreational activities to accommodate existing and future needs of residents, workers, and visitors.

Program 10.2 Encourage developers to dedicate public park acreage in areas designated for park use on the General Plan Map rather than contribute in lieu fees.

Program 10.5 Develop neighborhood, community, and regional parks in accordance with the General Plan goals and the land use diagram.

Program 10.7 Provide community parks with adequate parking facilities to the greatest extent possible.

Program 10.8 Locate parks within one-half mile of the residential area they serve. To the greatest extent possible, such parks should not be separated from the neighborhood they serve by major arterials, commercial centers, and topographical or other features which create a direct or perceived physical barrier to the park.

Program 10.18 Maintain at least the standard of 5 acres of neighborhood or community parks per 1,000 people.

Program 10.22 Provide trails, bike routes or pedestrian walkways to connect the parks and recreational facilities throughout Pleasanton.

3.15.4 - Methodology

FirstCarbon Solutions (FCS) reviewed information about parks and recreation providers within Alameda County and the City of Pleasanton. The ECAP, City of Pleasanton General Plan, and City and County websites were reviewed for relevant information.

3.15.5 - Thresholds of Significance

Recreation

The lead agency utilizes the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether impacts to recreation are significant environmental effects. Would the project:

- a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

3.15.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Increased Use of Parks

Impact REC-1: **The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.**

Impact Analysis

As discussed in the Project Description, the addition of approximately 194 new residential units and 49 accessory dwelling units (ADUs) could accommodate approximately 691 residents. This increase in population will require dedication of new parks and recreational facilities.

County of Alameda

The proposed project includes the development of 21 open space and park parcels, ranging from approximately 1,117 square feet to 30,423 square feet in area. As identified in Section 3.15.3, Regulatory Framework, the County's Code of Ordinances requires a park ratio of at least five acre of parkland per 1,000 residents. The EBRPD currently consists of 73 parks across 125,496 acres with a ratio of approximately 45 acres per 1,000 residents, based on the 2022 Contra Costa County and Alameda County population estimates.^{15,16} Therefore, the County is providing beyond the required number of acres of parkland per 1,000 residents.

As described in the Project Description, the proposed project would include a 0.7-acre private park, including accent paving, an entry plaza, bermed lawn, a center picnic plaza with shade structure, a garden with a decomposed granite path, and a natural play tot lot.

The proposed project would result in approximately 691 residents, which are conservatively assumed to all come from outside the ECAP service area, resulting in the need to dedicate 3.46 acres of parkland to achieve compliance with the five acres per 1,000 residents ratio.¹⁷ As mentioned previously, the development proposes to include a 0.7-acre private park and approximately 0.5 miles of designated walking trails, for a total of 1.2 acres of parkland, which would not provide the equivalent of five acres of parkland per 1,000 residents as described in the County's Code of Ordinances, Chapter 12.20. However, the Ordinance establishes a County-wide standard for parkland, and as noted, the County already provides 45 acres of parklands per 1,000 residents, based on 2022 population estimates. Accordingly, with the increase of 691 residents and the addition of 1.2 acres of parkland and walking trails, the ratio of parklands per 1,000 residents remains approximately 45 acres per 1,000 residents, well above the County's established standard. Additionally, all new developments would be required to dedicate or acquire land for open space

¹⁵ East Bay Regional Park District (EBRPD). 2023. About Us. Website: <https://www.ebparks.org/about-us>. Accessed February 26, 2024.

¹⁶ United States Census Bureau. 2023. QuickFacts. United States Census Bureau. 2022. QuickFacts. Website: <https://www.census.gov/quickfacts/fact/table/contracostacountycalifornia,alamedacountycalifornia/PST045222>. Accessed February 26, 2024.

¹⁷ 194 single-family dwelling units plus 49 ADUs equals 243 total dwelling units. The County's average number of persons per household is 2.84. 243 multiplied by 2.84 equals approximately 691 residents.

and/or pay equivalent in lieu fees under Policy 56 of the ECAP. Therefore, impacts would be less than significant.

City of Pleasanton

Although located in unincorporated Alameda County, future residents of the proposed project could use the open space and recreational facilities located in the City, as the western boundary of the project site is contiguous to the City limit line. As mentioned in the Environmental Setting, existing off-site parks near the project site include Orloff Park, Amaral Park, and Tawny Park.¹⁸

According to the City's 2023-2031 (6th Cycle) Housing Element Update Program EIR, the City maintains 46 developed park sites that total 385 acres of parkland and 1,016 acres of open spaces, which include trails for recreational uses, totaling approximately 1,401 acres of parks and other recreational facilities, which is approximately 17.9 acres per 1,000 residents.^{19, 20} Therefore, the City maintains a park service standard of over five acres combined of park and recreational uses per 1,000 residents, consistent with Program 10.18, which establishes a standard of 5 acres of neighborhood or community parks per 1,000 residents.

Accordingly, with the increase of 691 County residents and the inclusion of an approximately 0.7-acre private park and approximately 0.5 mile of designated public walking trails, the proposed project would not, therefore, significantly change the amount of parkland per 1,000 residents in the City. Additionally, the City has determined that since the proposed project is not located within the City's boundary, the project applicant would not be required to pay the City of Pleasanton's Capital Facilities Fee to develop or maintain recreational facilities.²¹ Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Physical Effect of Recreational Facilities on Environment

Impact REC-2: The proposed project would include recreational facilities but would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact Analysis

County of Alameda

As discussed in Impact REC-1, the ECAP establishes a standard of five acres of parkland per 1,000 residents. The County currently provides a ratio of approximately 45 acres of parkland per 1,000

¹⁸ P Town Life. All Parks. Website: <https://www.ptownlife.org/parks/>. Accessed March 27, 2023.

¹⁹ City of Pleasanton. 2022. City of Pleasanton 2023-2031 (6th Cycle) Housing Element Update Program Environmental Impact Report (Housing Element Update EIR). Website: <https://www.cityofpleasantonca.gov/assets/our-government/community-development/pleasanton-heu-draft%20program-eir-oct-2022.pdf?t=1702486881>. Accessed January 12, 2024.

²⁰ Based on a population of 78,271 persons as of January 1, 2021.

²¹ Sodergren, Dan. City Attorney, City of Pleasanton. Personal Communication: email. December 6, 2023.

residents. Although the project could increase the population by 691, the County would still have a ratio of approximately 45 acres of parkland per 1,000 residents. Therefore, the proposed project would not require the construction or expansion of recreational facilities. Additionally, as discussed in Impact REC-1, all new developments would be required to dedicate or acquire land for open space and/or pay equivalent in lieu fees under Policy 56 of the ECAP. Therefore, impacts would be less than significant.

City of Pleasanton

As discussed in Impact REC-1, the City establishes a standard of five acres of parkland per 1,000 residents. The City is currently providing approximately 17.9 acres of parks and other recreational uses per 1,000 residents.²² As a result, the City maintains a park service standard of over five acres of all park and recreational uses per 1,000 residents.

Accordingly, with the increase of 691 residents and the inclusion of an approximately 0.7-acre private park and approximately 0.5 mile of designated public walking trails, the ratio of parklands per 1,000 residents remains approximately the same and would, therefore, not significantly change the amount of parkland per 1,000 residents in the City. The City has determined that since the proposed project is not located within the City's boundary, the project applicant would not be required to pay the City of Pleasanton's Capital Facilities Fee to develop or maintain recreational facilities.²³ Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.15.7 - Cumulative Impacts

The cumulative recreation analysis for this Draft EIR (DEIR) uses the project list approach because recreation impacts are project specific. The geographic scope of the cumulative analysis for recreation is the local and regional parks in the project vicinity. These include parks and recreational facilities managed by the EBRPD. The analysis also considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project.

The 194 residential units and 49 ADUs proposed by the project would, conservatively, be expected to result in an increased population of approximately 691 persons, resulting in increased demand for park and recreational facilities. However, the EBRPD's park and recreational facilities are anticipated to be able to accommodate the increased demand, without triggering the need to construct or expand any park or recreational facilities. The County's population of 1,628,997 persons is served by 125,496 acres of regional parks and recreational facilities. Additionally, the EBRPD serves the County

²² City of Pleasanton. 2022. Housing Element Update EIR. Website: <https://www.cityofpleasantonca.gov/assets/our-government/community-development/pleasanton-heu-draft%20program-eir-oct-2022.pdf?t=1702486881>. Accessed January 12, 2024.

²³ Sodergren, Dan. City Attorney, City of Pleasanton. Personal Communication: email. December 6, 2023.

of Contra Costa, which has an estimated population of 1,156,996. Thus, the County currently provides approximately 45 acres of parkland per 1,000 residents, which is more than the 5 acres per 1,000 residents standard established by the Quimby Act. The applicant would be required to dedicate or acquire land for open space and/or pay equivalent in lieu fees under Policy 56 of the ECAP as applicable. Other projects listed in Table 3-1 that are within Alameda County in the project vicinity, as well as other relevant cumulative projects as required by CEQA, would similarly be required to provide parkland or pay applicable development fees, and otherwise mitigate any such impacts. Therefore, the project's contribution to parkland impacts would not be cumulatively considerable. Projects in the City in the project vicinity would also be required to pay park mitigation fees and comply with any applicable Quimby and non-Quimby requirements. Therefore, the cumulative projects would not result in the off-site construction of new or expanded existing park facilities and would not result in a significant cumulative impact on the environment.

Given the above information, the project, in conjunction with other existing, planned, and probable future projects, would have a less than significant cumulative impact related to the need for new or altered recreational facilities.

Level of Cumulative Significance Before Mitigation

Less than significant cumulative impact.

Mitigation Measures

None required.

3.16 - Transportation

3.16.1 - Introduction

This section describes existing conditions related to transportation in the project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to transportation that could result from implementation of the project. Information in this section is based on the project-specific Transportation Impact Study for the Arroyo Lago Residential Project (TIS) and Traffic Operations Study for the Arroyo Lago Residential Project (TOS) (both included in Appendix J of the Draft EIR) and on a review of applicable transportation policies and regulation, including the East County Area Plan (ECAP), and the City of Pleasanton General Plan.

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to transportation. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should analyze traffic impacts on the proposed project site and surrounding area, including Busch Road, El Charro Road, and Valley Avenue.
- The Draft EIR should evaluate traffic safety impacts.
- The Draft EIR should analyze Vehicle Miles Traveled (VMT) and relevant thresholds.
- The Draft EIR should prepare a Traffic Impact Study, which must be approved by the City of Pleasanton.
- The Draft EIR should evaluate encroachment of project features on Busch Road.
- The Draft EIR should discuss proposed Busch Road improvements, which would be required to conform to adopted City standards.
- The Draft EIR should include a mixed-use path and all existing rights of way for Busch Road on project plans.
- The Draft EIR should demonstrate compliance with the applicant providing their fair share of future maintenance costs on Busch Road.
- The Draft EIR should provide a supplemental analysis for potential delay-based impacts.
- The Draft EIR should evaluate traffic impacts to the intersections of Bernal Avenue, First Street, and Sunol Boulevard.
- The Draft EIR should analyze vehicular access to nearby industrial businesses and residences.
- The Draft EIR should consider an additional vehicular access route off Mohr Avenue.
- The Draft EIR should evaluate traffic along Busch Road with regard to the Pleasanton Garbage Service Facility and Recycling Center.
- The Draft EIR should consider building out El Charro Road and Boulder Street fully.
- The Draft EIR should consider developing a through-way off El Charro Road to prevent increased traffic flow.

- The Draft EIR should consider developing a long-term plan to accommodate growth in the area for road infrastructure.
- The Draft EIR should consider a Conditional Use that road infrastructure improvements be included in any subsequent proposal by this company or subsequent owners.
- The Draft EIR should address traffic impacts, emergency access, and an extension of El Charro Road.
- The Draft EIR should develop a comprehensive plan to establish entry and exit points for the area.
- The Draft EIR should use current non-summer traffic data.
- The Draft EIR should evaluate the intersections of Santa Rita Road and Valley Avenue, Busch Road and Valley Avenue, and Boulder Road and Valley Avenue, including vehicle collisions.
- The Draft EIR should analyze whether there will be a need for additional infrastructure.
- The Draft EIR should analyze traffic related to Accessory Dwelling Units.
- The Draft EIR should discuss potential road improvements.
- The Draft EIR should evaluate pedestrian traffic and sidewalk availability.
- The Draft EIR should evaluate availability of public transportation.
- The Draft EIR should consider a master plan, which includes all access roads.

3.16.2 - Environmental Setting

Project Vicinity

The project site is located directly east of the City of Pleasanton city limits between Lake I of the Zone 7 Chain of Lakes north of the project site and Cope Lake to east of the project site (Exhibit 2-2a). The project site does not currently have a street address but can be accessed north of the eastern end of Busch Road. The site is within unincorporated Alameda County (County) but is also within the City of Pleasanton's Sphere of Influence (SOI). Presently, the project site is vacant and graded with no structures or existing development. An informal access road travels from the southeast corner of the project site, across the site, and to the northwest corner along the western boundary of the site.

Major roadway networks including State Route (SR) 84, Interstate 580 (I-580), and I-680 provide regional access to the project area. The portion of SR-84 closest to the project site is a north-south highway that begins at SR-12 in the City of Rio Vista, passes the City of Pleasanton to the east, and terminates in the City of West Sacramento. I-580 is an east-west highway that is the main point of access connecting cities in the western portion of the County to cities in the eastern portion of the County. I-680 is a north-south highway that travels through the western portion of the City of Pleasanton.

Study Area

The study area varies depending on the topic. For pedestrian trips it consists of all streets within a half-mile of the project site that would lie along primary routes of pedestrian travel, or those leading to nearby generators or attractors. For bicycle trips, it consists of all streets within one mile of the project site that would lie along primary routes of bicycle travel. For public transit facilities, the study area includes transit stops accessible by future residents of the proposed project. VMT is calculated using a travel demand model based on countywide vehicle travel.

Study Intersections

For the safety analyses, the study area consists of the following intersections:

1. **Santa Rita Road/Valley Avenue:** This intersection is a four-legged signalized intersection with protected left-turn phasing on all four approaches. There are crosswalks with pedestrian phasing on all legs, and there is a Class II bike lane on Santa Rita Road in the southbound direction, northbound, southbound, and westbound right-turn lanes are channelized, and pedestrian refuge islands are located at the northeast, northwest, and southeast corners of the intersection.
2. **Valley Avenue/Busch Road:** This intersection is a signalized tee intersection with protected left-turn phasing on the eastbound Valley Avenue approach. One crosswalk with pedestrian phasing exists on the north leg of the intersection as well as Class II bike lanes on all approaches to the intersection.
3. **Busch Road/Ironwood Drive:** This intersection is a three-legged signalized intersection. There is one crosswalk with pedestrian phasing on the north leg of the intersection, and Class II bike lanes on all approaches to the intersection, and Class II bike lanes are striped on all approaches.
4. **Valley Avenue/Boulder Street:** This intersection is a four-legged signalized intersection with protected left-turn phasing on Valley Avenue and a shared green phase for Boulder Street approaches. “Triple-four” crosswalks exist on the south and west legs of the intersection. A standard striped crosswalk exists on the north leg. Where crosswalks exist, there are pedestrian phases.
5. **Stanley Boulevard/Valley Avenue-Bernal Avenue:** This intersection is a signalized intersection with four legs and protected left-turn phasing on all approaches. Class II bicycle lanes are available on all but the westbound approach. There are crosswalks with pedestrian phasing available on the west and south legs, and bicycle crossings are striped parallel to the crosswalk.

Queueing Analysis

For the queueing analysis, the projected 95th percentile queues in turn pockets at study intersections were determined using the SIMTRAFFIC application of Synchro and averaging the 95th percentiles projected queue for each of 10 runs. The predicted queue lengths at the study intersections are summarized in Table 3.16-1. Copies of the SIMTRAFFIC projections are contained in Appendix J.

Table 3.16-1: 95th Percentile Queues in Dedicated Turn Lanes (Existing)

Study Intersection Movement	Available Storage	95th Percentile Queues (2019)		95th Percentile Queues (2023)	
		AM Peak-hour	PM Peak-hour	AM Peak-hour	PM Peak-hour
1. Santa Rita Road/Valley Avenue					
<i>Northbound Left Turn</i>	250	251	397	174	317
<i>Southbound Right Turn</i>	220	266	97	158	37
<i>Eastbound Right Turn</i>	100	108	124	105	94
<i>Westbound Left Turn</i>	150	223	186	205	140
<i>Westbound Right Turn</i>	100	83	49	39	62
2. Valley Avenue/Busch Road					
<i>Southbound Left Turn</i>	170	57	66	60	66
<i>Eastbound (Valley Avenue) Left Turn</i>	220	80	71	85	63
3. Busch Road/Ironwood Drive					
<i>Southbound Left Turn</i>	110	0	0	0	0
4. Valley Avenue/Boulder Street					
<i>Eastbound (Valley Avenue) Left Turn</i>	170	12	7	8	23
<i>Westbound (Valley Avenue) Left Turn</i>	225	115	89	78	80
5. Stanley Boulevard/Valley Avenue-Bernal Avenue					
<i>Northbound Left Turn</i>	210	252	132	152	119
<i>Northbound Right Turn</i>	180	172	227	63	230
<i>Southbound Left Turn</i>	300	116	364	109	202
<i>Eastbound Left Turn</i>	280	173	178	137	149
<i>Westbound Left Turn</i>	290	132	91	131	108
<i>Westbound Right Turn</i>	525	218	66	163	62
Notes:					
95th Percentile Queue based on the average of the output from 10 SIMTRAFFIC runs; all distances are measured in feet;					
Bold text = queue length exceeds available storage					
Source: W-Trans. 2023. Transportation Impact Study (TIS).					

With existing 2019 and 2023 volumes, 95th percentile queues are projected to exceed the available storage space in dedicated turn lanes at Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue during both the AM and PM peak-hours.

VMT Analysis

The Alameda County Transportation Commission (CTC) travel demand model includes thousands of traffic analysis zones (TAZs) within nine Bay Area counties that contain information for the years 2010, 2020, and 2040. The project site is located within TAZ 1080. TAZ 1080 is currently modeled to have no residents under conditions without the proposed project.

Project Site

The proposed project would construct 194 single-family residential units, of which 49 would have Junior Accessory Dwelling Units (JADUs), to be located on the north side of Busch Road in Alameda

County. The proposed project would also include off-site infrastructure to support the proposed development, including a sewer treatment plant, a water storage and booster pump facility, a recycled water storage facility, an agricultural irrigation recycled water spray field, and two bioretention areas located off-site.

The water storage and booster pump facility and a small bioretention area would be located northeast of the project site between Lake I and Cope Lake. The sewer treatment plant and recycled water storage facility would be located east of the project site, adjacent to the west side of El Charro Road. The agricultural spray field would be located east of the project site and east of El Charro Road. The primary bioretention area is being considered under two design options: Design Option A would be located west of El Charro Road, clustered with the sewer treatment plant and recycled water storage facility, and Design Option B would be located east of El Charro Road, south of the agricultural spray field. The water storage and booster pump facility and sewer treatment plant are expected to result in less than one vehicle trip per day for routine maintenance and are, therefore, infrastructure-generated trips that are not expected to contribute a substantial increase to the following analysis.

3.16.3 - Existing Conditions

Roadway Facilities

Arterials

El Charro Road

El Charro Road is a north–south arterial roadway that connects Busch Road with I-580. It contains one lane of travel in each direction in the project area. El Charro Road will remain a private road and will not be available for future resident use.

Valley Avenue

Valley Avenue is an arterial roadway that travels east–west from Stanley Boulevard to Hopyard Road, travels north–south from Hopyard Road to Bernal Avenue, and travels east–west from Bernal Avenue to Sunol Boulevard. In the project area, the roadway has two lanes of travel in each direction and has a posted speed limit ranging between 35 and 40 miles per hour (mph).

Stanley Boulevard

Stanley Boulevard is an east–west arterial roadway that connects Bernal Avenue to SR-84. It has two lanes of travel in each direction and has a posted speed limit ranging between 40 and 50 mph in the project area.

Santa Rita Road

Santa Rita Road is a north–south arterial roadway that intersects with Valley Avenue and connects to I-580 in the north. The roadway typically has three lanes in each direction and a posted speed limit of 35 mph.

Collectors

Busch Road

Busch Road is an east–west collector roadway running between Valley Avenue and El Charro Road. The roadway has one lane of travel in each direction, and it has a posted speed limit of 35 mph.

Local Roads

Ironwood Drive

Ironwood Drive is a local, north–south roadway running north of Busch Road that serves residential land uses.

Boulder Street

Boulder Street is a local, east–west roadway running west from Valley Avenue. The roadway has one lane of travel in each direction and has a posted speed limit of 25 mph.

Public Transit Service and Facilities

The Livermore Amador Valley Transit Authority (LAVTA) Tri-Valley Wheels bus service provides fixed route bus service in Dublin, Pleasanton, and Livermore. As no transit stops are within a 0.5 mile walk of the project site, the proposed project is not easily accessed by transit.

Wheels Dial-A-Ride provides paratransit services to eligible people with disabilities who live in Livermore, Pleasanton, or Dublin. Additionally, Bay Area Rapid Transit (BART) provides paratransit services through lift vans to people with disabilities who cannot ride BART trains, and the City of Pleasanton offers the Pleasanton Paratransit Service (PPS) for transportation within Pleasanton and Sunol. Paratransit services are provided through reservations only.

On-demand private vehicle services, such as Uber and Lyft, are available in the project area 24 hours a day. These private vehicle services can be used for trips both within the local area and to further destinations, including transit stops/stations and local airports.

Bicycle Facilities

The California Department of Transportation (Caltrans) Highway Design Manual¹ classifies bikeways into four categories:

- Class I Bikeway (Bike Path) – Provides a completely separate facility for the exclusive use of bicycles and pedestrians with crossflow by vehicles minimized.
- Class II Bikeway (Bike Lane) – Provides a striped lane for one-way bike travel on a street or highway.
- Class III Bikeway (Bike Route) – Provides for shared use with pedestrian or motor vehicle traffic.

¹ California Department of Transportation (Caltrans). 2020. Highway Design Manual (HDM). Chapter 1000: Bicycle Transportation Design. Website: <https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp1000-a11y.pdf>. Accessed March 6, 2024.

- Class IV Bikeway (Separated Bikeway) – Provides for the exclusive use of bicycles and includes a separation (e.g., grade separation, flexible posts, inflexible physical barrier, or on-street parking) required between the separated bikeway and the through vehicular traffic.

In the study area, there are Class II bike lanes on nearby roads including Busch Road, Ironwood Drive, Stanley Boulevard, Santa Rita Road, and Valley Avenue. The Iron Horse Trail Class I Multiuse Path begins approximately 0.4 mile west of the project site and continues north. Bicyclists ride on the roadway and/or on sidewalks along all other streets within the project study area. Table 3.16-2 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the City of Pleasanton Bicycle and Pedestrian Master Plan and East Pleasanton Specific Plan (EPSP).

Table 3.16-2: Bicycle Facility Summary

Status Facility	Class	Length (miles)	Begin Point	End Point
Existing				
Iron Horse Trail	I	1.03	Santa Rita Road	Valley Avenue
Busch Road	II	0.12	Valley Avenue	Ironwood Drive
Ironwood Drive	II	0.15	Bradford Way	Busch Road
Stanley Boulevard	II	3.85	Main Street	Isabel Avenue
Santa Rita Road	II	2.44	Pimlico Drive	Railroad Tracks
Valley Avenue	II	2.89	Koli Center Parkway	Quarry Lane
Valley Avenue	III	0.17	Quarry Lane	Busch Road
Proposed				
Iron Horse Trail	I	0.47	Valley Avenue	Stanley Boulevard
Busch Road	I	0.69	Valley Avenue	El Charro Road
El Charro Road	I	1.80	Stoneridge Drive	Stanley Boulevard
Busch Road	II	0.57	Ironwood Drive	El Charro Road
El Charro Road	II	1.80	Stoneridge Drive	Stanley Boulevard
Valley Avenue	IV	4.54	Sunol Boulevard	Boulder Street
Source: W-Trans. 2023. Transportation Impact Study (TIS).				

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, there is an existing but discontinuous network of sidewalks, crosswalks, pedestrian signals, and curb ramps providing access for pedestrians in the vicinity of the proposed project site. In the study area, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps generally provides access for

pedestrians in the vicinity of existing residential developments; however, there are no or limited pedestrian facilities fronting the existing industrial land uses in the study area.

- **Busch Road:** There are sidewalks on the north side of Busch Road between Valley Avenue and Ironwood Drive; otherwise, there are no existing sidewalks on the street. Lighting is provided by overhead streetlights in front of and west of the City’s Operations Service Center at 3333 Busch Road. Busch Road is the lone access point for pedestrians entering and exiting the project site. According to the EPSP, a multiuse trail along Busch Road east of Valley Avenue and sidewalks along Busch Road east of Ironwood are planned.
- **Valley Avenue:** Continuous sidewalks are provided on both sides of Valley Avenue. Streetlights provide nighttime illumination throughout the street. There are no pedestrian phases to cross Valley Avenue at Busch Road, though alternate crossing locations with pedestrian phases are located at Quarry Lane and Boulder Street.

3.16.4 - Regulatory Framework

Federal

No federal plans, policies, regulations, or laws related to transportation are applicable to the proposed project.

State

California Department of Transportation

Caltrans builds, operates, and maintains the State highway system, including the interstate highway system. Caltrans’s mission is to improve mobility Statewide. Caltrans operates under strategic goals to provide a safe transportation system, optimize throughput and ensure reliable travel times, improve the delivery of State highway projects, provide transportation choices, and improve and enhance the State’s investments and resources. Caltrans controls the planning of the State highway system and accessibility to the system. Caltrans does not have a standard of significance relative to traffic operation as this is no longer a California Environmental Quality Act (CEQA) issue. The new Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG), published in May 2020, replaced the Guide for the Preparation of Traffic Impact Studies, 2002. As indicated in the TISG, Caltrans is transitioning away from requesting Level of Service (LOS) or other vehicle operations analyses of land use projects and will instead focus on VMT. Caltrans requires encroachment permits from agencies or new development before any construction work may be undertaken within the State’s right-of-way.

Senate Bill 743

In November 2017, the California Governor’s Office of Planning and Research (OPR) released a technical advisory containing recommendations regarding the assessment of VMT, proposed thresholds of significance, and potential mitigation measures for lead agencies to use while implementing the required changes contained in Senate Bill (SB) 743. Also in November 2017, OPR released the proposed text for Section 15064.3, “Determining the Significance of Transportation Impacts,” which summarized the criteria for analyzing transportation impacts for land use projects and transportation projects and directs lead agencies to “choose the most appropriate methodology to evaluate a project’s VMT, including whether to express the change in absolute terms, per capita,

per household or in any other measure.” OPR recommends that for most instances a per service population threshold should be adopted and that a 15 percent reduction below that of existing development would be a reasonable threshold.

As noted in the OPR Guidelines, agencies are directed to choose metrics that are appropriate for their jurisdiction to evaluate the potential impacts of a project in terms of VMT. The deadline for adopting policies to implement SB 743 was July 2020; the change to VMT was formally adopted as part of updates to the CEQA Guidelines in December 2018. Alameda County has not yet established specific local VMT thresholds. Absent of codified guidelines, the County utilizes OPR’s VMT thresholds as a matter of practice in EIRs.

The updated guidelines eliminate the use of automobile delay metrics, such as LOS, from determining significant environmental impacts from vehicle travel. VMT has been identified as the most appropriate metric to evaluate a project’s transportation impacts, as projects that result in lower-than-average VMT support goals of reducing greenhouse gas (GHG) emissions, while projects that result in higher-than-average levels of vehicle travel contribute to an increasing rate of GHG emissions.

Projects that are within 0.5 mile of an existing major transit stop, which is define as a rail transit station, ferry terminal served by bus or rail transit, or at the intersection of two or more major bus routes with service frequencies of 15 minutes or less during the morning and afternoon peak commute periods, are presumed to be less than significant if the project has the following characteristics:

- Floor area ratio (FAR) greater than 0.75.
- Does not include more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking).
- Consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization [MPO]).
- Does not replace affordable residential units with a smaller number of moderate or high-income residential units.

If a project meets the screening requirements, it is presumed to have a less than significant impact related to VMT. Since there are no standards in effect on VMT analysis, a preliminary assessment of the VMT generated by the proposed project was prepared for informational and disclosure purposes only. No determination on the significance of VMT impacts is made in this document since none is legally required.

Regional Regulations

Metropolitan Transportation Commission

The regional transportation planning agency and MPO for the nine-county Bay Area is the Metropolitan Transportation Commission (MTC). MTC is the authorized clearinghouse for State and federal transportation improvement funds. Each county’s Congestion Management Agency (CMA) sends a capital improvement project list to MTC. MTC reviews the list submitted by all nine Bay Area counties and submits a regional priority list to the CTC and/or Federal Highway Administration

(FHWA) for selection of projects to receive funding. Funded projects are then included in the Regional Transportation Plan (RTP) prepared by MTC.

Plan Bay Area 2050: A Vision for the Future

Plan Bay Area 2050: A Vision for the Future (Plan Bay Area) is the Bay Area’s Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Plan Bay Area, adopted jointly by the Association of Bay Area Governments (ABAG) and MTC on October 21, 2021, is the current version of the plan. Defined by 35 strategies for housing, transportation, economic vitality, and the environment, Plan Bay Area lays out a \$1.4 trillion vision for policies and investments to make the nine-county region more affordable, connected, diverse, healthy, and economically vibrant for all its residents through 2050 and beyond. The transportation strategies in Plan Bay Area fall into three categories:

1. Maintain and optimize the existing system.
2. Create healthy and safe streets.
3. Build a next-generation transit system.

California Department of General Services

Project Management and Development Branch

The Project Management and Development Branch (PMDB) provides architectural and engineering services; space planning and interior design; construction and construction inspection services; and energy and environmental services. PMDB would review the proposed project for compliance with the California Building Standards Code (CBC).

Local Regulations

County of Alameda

East County Area Plan

ECAP is part of the Alameda County General Plan and establishes goals, policies, and programs within the East County area. The ECAP establishes the following goals and policies related to transportation:

Goal **To reduce East County traffic congestion.**

Policy 190 The County shall require new nonresidential developments in unincorporated areas to incorporate Transportation Demand Management (TDM) measures and shall require new residential developments to include site plan features that reduce traffic trips such as mixed-use development and transit-oriented development projects.

Goal **To complete County-planned street and highway improvements which are attractively designed to integrate pedestrian and vehicle use.**

Policy 193 The County shall ensure that new development pays for roadway improvements necessary to mitigate the exceedance of traffic Level of Service standards caused directly by the development. The County shall further ensure that new development

is phased to coincide with roadway improvements so that (1) traffic volumes on intercity arterials significantly affected by the project do not exceed Level of Service D on major arterial segments within unincorporated areas, and (2) that traffic volumes on Congestion Management Program (CMP) designated roadways (e.g., Interstate Highways 580 and 680 and State Highway 84) significantly affected by the project do not exceed Level of Service E within unincorporated areas. If LOS E is exceeded, Deficiency Plans for affected roadways shall be prepared in conjunction with the Congestion Management Agency. LOS shall be determined according to Congestion Management Agency adopted methodology. The County shall encourage cities to ensure that these Levels of Service standards are also met within unincorporated areas.

Policy 197 The County shall condition development approvals to require setbacks, landscaping, soundwalls, and other methods to protect adjacent land uses from traffic noise on East County arterials.

Goal **To increase investment in and use of transit.**

Policy 207 The County shall require all new development to pay its fair share of the costs of meeting East County transit needs.

Goal **To include a comprehensive network of bicycle and pedestrian paths in the local and subregional transportation network.**

Policy 211 The County shall create and maintain a safe, convenient, and effective bicycle system that maximizes bicycle use.

Policy 212 The County shall create and maintain a safe and convenient pedestrian system that links residential, commercial, and recreational uses and encourages walking as an alternative to driving.

Policy 214 The County shall require that circulation and site plans for individual developments minimize barriers to access by pedestrians, the disabled, and bicycles (e.g., collectors or arterials separating schools or parks from residential neighborhoods).

City of Pleasanton

General Plan

The City of Pleasanton General Plan sets forth the following goals, objectives, and actions that are relevant to transportation:

Goal 2 **Develop and manage a local and regional street and highway system which accommodates future growth while maintain acceptable levels of service.**

Policy 1 Complete the City's street and highway system in accordance with the General Plan Map, Figures 3-7 and 3-10, and Table 3-8.

- Program 1.1** Require new developments to pay for their fair share of planned roadway improvement costs.
- Policy 2** Phase development and roadway improvements so that levels of service at adjacent major intersections do not exceed LOS D at major intersections outside Downtown and gateway intersections, except as noted in the General Plan.
- Program 2.2** Require site-specific traffic studies for all major developments, which have the potential to cause the level of service at one or major intersections to exceed LOS D, and require developers to implement the mitigation measures identified in these studies. In general, require development to improve congested intersections adjacent to such development or to pay its pro rata share of the cost of such improvements, and to pay traffic development fees for use in mitigating traffic impacts in other areas of the City.
- Program 2.7** Require feasible mitigation measures to keep intersections impacted by development to acceptable service levels, in the event that LOS D is exceeded. If there are no feasible mitigation measures and if the intersections are otherwise not exempt from the LOS D standard, withhold development approvals, including building permits, until the intersections exceeding LOS D are at an acceptable level of service.
- Policy 7** Adhere to City design standards for streets in new developments.
- Program 7.1** Incorporate City design standards for arterials, collectors, neighborhood collectors, and local public and private streets as part of the City's review of new developments.
- Program 7.2** Provide more than one access road for emergency vehicle routes to new developments, whenever feasible.
- Program 7.3** Design complete streets serving pedestrians, bicyclists, motorists, and transit riders of all ages and abilities, except where infeasible. Complete streets may include: alternative intersection control where appropriate; requiring bicycle and pedestrian connections from cul-de-sacs to adjacent streets, trails, bicycle paths, and neighborhoods; and incorporating appropriate traffic calming measures.
- Program 7.5** Consider issues such as level of traffic, safety, vehicular noise, visual quality, and related environmental issues when reviewing new development adjacent to arterials.
- Program 7.6** Design new streets and alterations of existing streets to preserve the character and safety of existing residential neighborhoods.
- Policy 10** Require adequate on- and off-street parking.

Program 10.1 Enforce the parking provisions of the City’s Zoning Ordinance. For Planned Unit Developments with the potential for shared parking or where located proximate to transit, consider modifications to Zoning Ordinance parking standards, when necessary and if appropriate.

Goal 4 **Provide a multimodal transportation system which creates alternatives to the single-occupancy automobile.**

Policy 22 Create and maintain a safe, convenient, and effective bicycle system which encourages increased bicycle use.

Program 22.4 Require design measures and facilities to accommodate access by pedestrians, bicycles, and transit in new developments, including bus shelters and turnabouts, bicycle parking facilities, bicycle and pedestrian trails, and transit-friendly designs for the site perimeter and internal circulation patterns.

Program 22.5 Require appropriate bicycle-related improvements (i.e., work-place provision for showers, bicycle storage, bicycle lanes, etc.) with new development.

Policy 23 Create and maintain a safe and convenient pedestrian system which encourages walking as an alternative to driving.

Program 23.1 Require developers to finance and install sidewalks and pedestrian and bicycle pathways, where appropriate, in future developments.

3.16.5 - Methodology

The project’s potential impacts to transportation have been evaluated using the analysis includes in the TIS attached as Appendix J of this Draft EIR and a variety of published resources publicly available online.

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in Trip Generation Manual, 11th Edition, 2021. Rates for “Single-Family Detached Housing” (ITE LU No. 210) were used for the 194 single-family residential units, including those that would have JADUs attached. “Multi-family Housing (Low-Rise)” (ITE No. 220) rates were applied to the 49 JADUs.² As shown in Table 3.16-3, the proposed project is expected to generate an average of 2,159 trips per day, including 156 trips during the AM peak-hour and 207 during the PM peak-hour.

² Since the Institute of Transportation Engineers (ITE) Trip Generational Manual, 11th Edition, does not have a category for Junior Accessory Dwelling Units (JADUs), the “Multi-family Housing (Low Rise) (ITE No. 220) rates were applied to the JADUs as a conservative estimate.

Table 3.16-3: Trip Generation Summary

Land Use	Units	Daily		AM Peak-hour				PM Peak-hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Single-Family Houses	194 du	9.43	1,829	0.70	136	34	102	0.94	182	115	67
ADUs	49 du	6.74	330	0.40	20	5	15	0.51	25	16	9
Total			2,159		156	39	117		207	131	76

Notes:
du = dwelling unit
Source: W-Trans. 2023. Transportation Impact Study (TIS).

Trip Distribution

The pattern used to allocate new project trips to the street network is based on the distribution percentages used in the EPSP Transportation Impact, Analysis, Fehr & Peers, 2015, and consideration of where jobs, services, and schools are located. Table 3.16-4 shows the distribution assumptions.

Table 3.16-4: Trip Distribution Assumptions

Route	Percent
Santa Rita Road north of Valley Avenue	40
Valley Avenue west of Santa Rita Road	15
Santa Rita Road south of Valley Avenue	15
Stanley Boulevard east of Valley Avenue-Bernal Avenue	10
Bernal Avenue south of Stanley Boulevard	5
Stanley Boulevard West of Valley Avenue-Bernal Avenue	15
Total	100

Source: W-Trans. 2023. Transportation Impact Study (TIS).

Effects to Circulation System

The collision history for the study area was reviewed to determine any trends or patterns that may indicate safety issues. Collision rates were calculated based on records available from the California Highway Patrol (CHP) as published in their Statewide Integrated Traffic Records System (SWITRS) reports and were reviewed for the most current 5-year period available, which was January 1, 2018, through December 31, 2022, at the time of the analysis.

As shown in Table 3.16-5, the calculated collision rates for the study intersections were compared to average collision rates for similar facilities Statewide. These average rates Statewide are for intersections in the same environment (urban, suburban, and or rural), with the same number of approaches (three or four), and the same controls (all-way stop, two-way stop, or traffic signal). The

intersections of Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue have a higher calculated collision rate than the Statewide average, so collisions are analyzed further.

Table 3.16-5: Collision Rates for the Study Intersections

Study Intersection	Number of Collisions (2018-2022)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
Santa Rita Road/Valley Avenue	31	0.34	0.24
Valley Avenue/Busch Road	8	0.19	0.20
Busch Road/Ironwood Drive	0	0.00	0.20
Valley Avenue/Boulder Street	2	0.03	0.24
Stanley Boulevard/Valley Avenue-Bernal Avenue	33	0.45	0.24

Notes:
c/mve = collisions per million vehicles entering. **Bold text** = rates above Statewide average.
Source: W-Trans. 2023. Transportation Impact Study (TIS).

Vehicle Miles Traveled

SB 743, which was signed into law by former Governor Brown in 2013 and was codified in Public Resources Code Section 21099, tasked OPR with establishing new criteria for determining the significance of transportation impacts under CEQA. SB 743 requires the new criteria to “promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses.” SB 743 changes the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (see Public Resources Code [PRC] § 21099(b)(2)). In December 2018, OPR circulated its most recent Technical Advisory on Evaluating Transportation Impacts in CEQA, which provides recommendations and describes various options for assessing VMT for transportation analysis purposes. VMT 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 or non-motorized travel. The VMT analysis options described by OPR are primarily tailored toward single-use development residential or office projects, not mixed-use projects, and not athletic facility projects. OPR recommends the following methodology and criteria for specific land uses:

- For residential projects, OPR recommends that VMT impacts be considered potentially significant if a residential project is expected to generate VMT per capita (i.e., VMT per resident) at a rate that exceeds 85 percent of a regional average.

As previously stated, the TIS utilized the CTC travel demand model to model TAZ 1080 under no project and with project conditions.

Design Feature Hazards

Sight Distance

Sight distances along Busch Road at the project access points were evaluated based on sight distance criteria contained in the HDM published by Caltrans.³ The recommended sight distance for the intersection of public streets is based on corner sight distances, with more sight distance needed for a left turn versus a right turn.

Field measurements were obtained at the locations of the proposed street connections to Busch Road and the corner sight distance criterion for public street intersections was applied for evaluation purposes. The HDM recommends an equation of $D = 1.47 * V * T$ for corner sight distance, where “D” is corner sight distance, “V” is vehicle speed, and “T” is a time gap dependent on turning movement and design vehicles, which for a single-unit truck correlates to a “T” of 9.5 seconds for left turns and 8.5 seconds for right turns.

Left-Turn Lane Warrants

The need for a left-turn lane on Busch Road was evaluated based on criteria contained in the Intersection Channelization Design Guide, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as an update of the methodology developed by the Washington State Department of Transportation (WSDOT) and published in the Method for Prioritizing Intersection Improvements, January 1997. The NCHRP report references a methodology developed by M.D. Harmelink that includes equations that can be applied to expected or actual traffic volumes in order to determine the need for a left-turn pocket based on safety issues.

Traffic Signal Warrants

A signal warrant analysis was performed to determine potential need for a traffic signal at each proposed street connection to Busch Road. Although under Future conditions, it was presumed that Busch Road would be widened to four lanes, the analysis was done as the existing alignment of two lanes as a more conservative approach. Additionally, the analysis includes the expectation that El Charro Road would be extended in the future and its associated traffic would increase volumes at the proposed project intersections.

Chapter 4C of the California Manual on Uniform Traffic Control Devices (CA-MUTCD) provides guidance on when a traffic signal should be considered. There are nine different warrants, or criteria, presented, as follows:

- Warrant 1, 8-hour Vehicular Volume
- Warrant 2, 4-hour Vehicular Volume
- Warrant 3, Peak-hour Volume
- Warrant 4, Pedestrian Volume
- Warrant 5, School Crossing
- Warrant 6, Coordinated Signal System
- Warrant 7, Crash Experience

³ California Department of Transportation (Caltrans). 2020. Highway Design Manual (HDM). Chapter 1000: Bicycle Transportation Design. Website: <https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp1000-a11y.pdf>. Accessed March 6, 2024.

- Warrant 8, Roadway Network
- Warrant 9, Intersection Near a Grade Crossing

For the purposes of this analysis, Warrant 3, the Peak-hour Volume Warrant was used. Under the Peak-hour Volume Warrant the need for a traffic control signal may be indicated if an engineering study finds that the criteria in either of the following two categories are met:

- A. If all three of the following conditions exist for the same one hour (any four consecutive 15-minute periods) of an average day:
 1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: four vehicle-hours for a one-lane approach; or five vehicle-hours for a two-lane approach, and
 2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and
 3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.
- B. The plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 in Chapter 4C of the CA-MUTCD for the existing combination of approach lanes

Queueing

The City of Pleasanton and County of Alameda do not prescribe thresholds of significance regarding queue lengths. However, an increase in queue length due to project traffic was considered a potentially significant impact if the increase would cause the queue to extend out of a dedicated turn lane into a through traffic lane, or the back of queue into a visually restricted area, such as a blind corner. If queues would already be expected to extend past a dedicated turn lane or into a visually restricted area without project traffic, the addition of project traffic was considered to constitute a potentially adverse effect only if it would cause a new unacceptable condition; in other words, if the queue were already beyond the turn lane and the project would cause it to stack into an adjacent intersection or a visually restricted area, and that would not occur without the project, that would be considered an impact.

Under each scenario, the projected 95th percentile queues in turn pockets at the study intersections were determined using the SIMTRAFFIC application of Synchro and averaging the 95th percentile projected queue for each of 10 runs. Summarized in Table 3.16-6 are the predicted queue lengths at the study intersections. Copies of the SIMTRAFFIC projections are contained in Appendix J.

Table 3.16-6: 95th Percentile Queues in Dedicated Turn Lanes (Plus Project)

Study Intersection Movement	Available Storage	95th Percentile Queues									
		AM Peak-hour					PM Peak-hour				
		E+P	B	B+P	F	F+P	E+P	B	B+P	F	F+P
1. Santa Rita Road/Valley Avenue <i>Northbound Left Turn</i>	250	248	339	363	204	206	407	453	452	419	412
<i>Southbound Right Turn</i>	220	259	337	346	335	341	130	209	148	77	91
<i>Eastbound Right Turn</i>	100	101	118	115	150	154	118	147	146	144	140
<i>Westbound Left Turn</i>	150	229	206	208	179	189	186	206	234	227	283
<i>Westbound Right Turn</i>	100	115	178	157	181	181	49	104	126	255	254
2. Valley Avenue/Busch Road <i>Southbound Left Turn</i>	170	75	54	72	96	166	81	61	74	144	165
<i>Eastbound (Valley Avenue) Left Turn</i>	220	91	80	102	259	266	101	77	101	270	298
3. Busch Road/Ironwood Drive <i>Southbound Left Turn</i>	110	0	0	0	0	0	0	0	0	0	0
4. Valley Avenue/Boulder Street <i>Eastbound (Valley Avenue) Left Turn</i>	170	12	40	26	49	39	10	34	64	84	71
<i>Westbound (Valley Avenue) Left Turn</i>	225	122	134	168	193	208	101	90	104	122	131
5. Stanley Boulevard/Valley Avenue-Bernal Avenue <i>Northbound Left Turn</i>	210	267	101	117	256	273	160	87	95	108	85
<i>Northbound Right Turn</i>	180	187	227	246	246	243	245	223	232	292	292
<i>Southbound Left Turn</i>	300	123	103	122	102	114	337	357	323	482	467
<i>Eastbound Left Turn</i>	280	193	274	282	312	323	182	450	443	507	495
<i>Westbound Left Turn</i>	290	131	273	298	259	239	95	103	101	453	448
<i>Westbound Right Turn</i>	525	225	363	391	41	40	69	55	54	0	0

Notes:
95th Percentile Queue based on the average of the output from 10 SIMTRAFFIC runs; all distances are measured in feet;
E+P = Existing 2019 Plus Project conditions; B = Baseline conditions; B+P = Baseline Plus Project conditions; F = Future Conditions; F+P = Future Plus Project conditions; Bold text = queue length exceeds available storage
Source: W-Trans. 2023. Transportation Impact Study (TIS).

Emergency Access

The TIS evaluated traffic conditions at five study intersections during the AM and PM peak-hours and daily conditions for a typical weekday. Additionally, collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the CHP as published in their SWITRS reports. The most current 5-year period available is January 1, 2018, through December 31, 2022. The calculated collision rates for the study intersections were compared to average collision rates for similar facilities Statewide, as indicated in 2019 Collision Data on California State Highways published by Caltrans.

3.16.6 - Thresholds of Significance

The lead agency utilizes the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether transportation and traffic impacts are significant environmental effects. Would the project:

- a) Conflict with a program plan, ordinance or policy of the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- d) Result in inadequate emergency access?

3.16.7 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Affect to Circulation System

Impact TRANS-1: **The proposed project would not conflict with a program plan, ordinance or policy of the circulation system, including transit, roadway, bicycle and pedestrian facilities.**

Impact Analysis

This analysis addresses the potential for the project to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, pedestrian, and bicycle facilities.

Pedestrian Facilities

The existing pedestrian facilities are described in 3.16.3, Existing Conditions. As described above, the project's study area includes an existing network of sidewalks, crosswalks, pedestrian signals, and curb ramps that generally provides access for pedestrians in the vicinity of existing residential development. According to the EPSP, a multiuse trail along Busch Road east of Valley Avenue and sidewalks along Busch Road east of Ironwood are planned.

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue for pedestrians. During the 5-year study period, there were three reported pedestrian collisions in the study area. Two of these collisions occurred at Santa Rita Road/Valley Avenue, and one of the collisions occurred at Stanley Boulevard/Valley Avenue-Bernal Avenue. Additional information on these collisions is provided in Appendix J of the Draft EIR. The three pedestrian collisions involved different primary factors and details; therefore, a discernible trend could not be determined. Additionally, all three pedestrian collisions occurred at walking distance greater than 0.5 mile from the project site, which reduces the likelihood of pedestrian trips generated by the project using these facilities.

The proposed project would include the installation of Americans with Disabilities Act (ADA)-compliant sidewalks along all project streets and along the project frontage on Busch Road. ADA-compliant curb ramps and crosswalks would be provided at all intersections within the project site as a design feature as well. Additionally, the proposed project would include ADA-compliant curb ramps at the two new street connections to Busch Road. The proposed project would also include crosswalks across the northern legs of the new intersections of the proposed project streets and Busch Road would provide additional visibility for pedestrians crossing these streets.

Furthermore, as the project site is located within 0.5 mile of the multiuse Iron Horse Trail and is within a feasible walking distance of other uses, it is reasonable to expect that some residents may want to walk between the project site and these destinations. Currently, there is no sidewalk on Busch Road east of Ironwood Drive, and project residents would have to walk in the unpaved shoulder to access the project site as a pedestrian. However, as part of the project's design, the proposed project would construct approximately 1,000 feet of sidewalk and bicycle facilities improvements to fill in the sidewalk gaps on the north side of Busch Road between the project site and the existing sidewalk at Ironwood Drive. Therefore, the proposed project would have adequate on-site and off-site pedestrian facilities, and impacts related to pedestrian facilities would be less than significant.

Bicycle Facilities

The existing bicycle facilities are described in 3.16.3, Existing Conditions. As described above, existing bicycle facilities together with shared use of minor streets currently provide adequate access for bicyclists to the project site. The Class I Iron Horse Regional Trail would offer residents a low-stress bicycle route from the nearby intersection of Valley Avenue/Busch Road to destinations including the Dublin/Pleasanton BART station. The proposed project would install 6-foot bicycle lanes along the project frontage on Busch Road, which is consistent with the cross section shown in the EPSP. Bicycle facilities would further improve with the completion of the on-street and off-street facilities from the EPSP, including bicycle lanes and multiuse paths along both Busch Road and the planned extension of El Charro Road.

Collision history for bicyclist-involved crashes was reviewed during the same period as pedestrian-involved crashes. During the 5-year period between January 1, 2018 through December 31, 2022, there were six collisions involving bicyclists. Five of the six collisions occurred at the Santa Rita Road/Valley Avenue intersection, and the remaining collision occurred at the Valley Avenue/Busch Road intersection. Additional information on these collisions is provided in Appendix J of the Draft EIR. While there were several collisions within the study area, including five at one intersection, each collision involved different circumstances such as different primary attributed factors, travel in different directions, or driveway movements at separate locations.

All single-family homes within the proposed project would have private garages with restricted access. Therefore, separate bicycle parking would not be required for those residents. While neither the County nor the City maintain bicycle parking requirements, the proposed project would include bicycle racks at the central park as a design feature of the proposed project, which is consistent with the recommendations included in the TIS. Therefore, impacts related to bicycle facilities would be less than significant.

Public Transit Facilities

The existing public transit facilities are described in 3.16.3, Existing Conditions. There are no transit stops within a 0.5 mile walk of the project site, and therefore, the proposed project would not be easily accessed by transit. Thus, the proposed project's residences would have a minimal impact on the surrounding transit network. Wheels Route 10R is approximately 1 mile from the project site while the Dublin/Pleasanton BART station is 3 miles from the project site via the Iron Horse Regional Trail. Project residents could bike from the project site to these transit stops and board with their bikes. Therefore, the proposed project would have a less than significant impact on the surrounding transit network.

In summary, the proposed project would not conflict with any plans or policies for transportation facilities and would provide adequate on-site pedestrian and bicycle facilities. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Conflict with CEQA Guidelines Section 15064.3, Subdivision (b)

Impact TRANS-2: The proposed project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

Impact Analysis

The VMT associated with a project is the basis for determining traffic impacts under CEQA. Because the County has not yet adopted a standard of significance for evaluating VMT, guidance provided by the OPR in the publication Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory, 2018, was used. This document indicates that a residential project generating vehicle travel that is 15 or more percent below the existing regional or citywide residential VMT per capita may indicate a less than significant transportation impact.

According to the Alameda CTC model, the proposed project would be expected to have a daily VMT of 29.9 miles per capita under existing 2020 conditions. In contrast, the average daily VMT for residents of the East Planning Area of Alameda County (which includes Dublin, Pleasanton, Livermore, and surrounding unincorporated areas) is 30.5 miles per capita. As the proposed project would be expected to have a VMT per capita above the threshold of 25.9 miles per capita which is 15 percent less than the regional average, the proposed project would have a potentially significant impact on VMT based on the OPR's guidance. Transportation Demand Management (TDM) measures resulting in a reduction in VMT of 13.4 percent or greater would be required in order to result in a less than significant impact with mitigation incorporated. This information is summarized in Table 3.16-7.

Table 3.16-7: Vehicle Miles Traveled Analysis Summary

VMT Metric	East Planning Area 2020 VMT Rate	Significance Threshold	TAZ 1080 VMT Rate	Resulting Significance	Percent Reduction Required
Total VMT per Capita	30.5	25.9	29.9	Potentially Significant	13.4%

Notes:
VMT = Vehicle Miles Traveled
VMT rate is measured in total VMT per capita for the number of daily miles driven per resident.
Source: W-Trans. 2023. Transportation Impact Study (TIS).

Several potential TDM measures from the Alameda County Vehicle Miles Traveled Reduction Estimator Tool, Alameda CTC, were identified in the TIS prepared for the proposed project and which, if implemented, could reduce the proposed project’s overall VMT. The Alameda CTC tool includes a variety of employer-based or transit-based countermeasures which generally do not apply to the proposed project as the proposed project would have no full-time, on-site employees and the project site is located more than a 0.5-mile walking distance to the nearest transit stop.

Residential Density and Affordable Housing TDMs

According to the Alameda CTC, a residential development with density higher than the national average could result in a reduction in VMT up to 30 percent; however, the proposed project would have a density of 9.1 dwelling units per acre which is equal to the national average. Integrating affordable housing into the project would be expected to result in a minor reduction in VMT per capita. For example, converting 10 percent of the units to deed-restricted below market rate (BMR) housing would result in an approximately 0.4 percent reduction in VMT while assigning 30 percent of the units to deed-restricted BMR housing would correlate to a reduction of approximately 1.2 percent. The proposed project would incorporate approximately 49 homes (25 percent) designed with deed-restricted JADUs to contribute to this reduction in VMT.

Vehicle and Bicycle Parking TDMs

Limiting parking or unbundling parking costs from property costs was not considered as a potential TDM measure because the proposed project would consist of single-family homes with parking incorporated into the project design. Alternatively, incorporating carshare spaces into the proposed project (such as through Zipcar) could result in a reduction in VMT up to 0.7 percent by reducing vehicle ownership. Bikeshare space are not anticipated to result in a project-specific decrease in VMT.

Traffic Calming TDM

While the Alameda CTC tool suggests that increasing the density of intersections would result in a reduction in VMT, this strategy refers to Citywide or regional improvements in street connectivity that would not apply on the scale of the proposed project. According to the Alameda CTC tool, traffic calming improvements could result in a reduction in VMT between 0.25 and 1 percent based on the proportion of project streets and intersections with traffic calming, with a 1 percent reduction

corresponding to all project streets and intersections being designed with traffic calming features. Implementation of MM TRANS-2a would require all project streets to be designed with traffic calming features, and therefore, a 1 percent reduction in VMT would occur.

Sidewalk Improvements TDM

As previously discussed, through the implementation of MM TRANS-2b, the proposed project would construct approximately 1,000 feet of off-site sidewalk improvements and bicycle lane improvements along Busch Road, which would connect to existing facilities on Busch Road and Ironwood Drive. These proposed improvements required by MM TRANS-2b would improve connectivity to nearby commercial facilities, reducing the VMT per capita by 0.5 percent.

Community-Based Transportation Plan TDM

The Alameda CTC tool indicates that establishing a Community-Based Transportation Plan (CBTP) program could reduce VMT by 2.3 percent with 100 percent of households targeted by the program. The CBTP program could provide residents with information, incentives, and support to encourage alternatives to single-occupancy vehicles; for example, the CBTP program could create a website for residents organizing carpools or offer informational materials on the local bicycle network. According to the Alameda CTC, a CBTP program would be carried out by a team of trained travel advisors reaching out to and communicating with each household individually.

All of the TDMs described above are summarized in Table 3.16-8, below.

Table 3.16-8: VMT Mitigation Measures and Associated Reductions

VMT Mitigation Measure	VMT Reduction (%)		Description of Measure	Implementation
	Minimum	Maximum		
Affordable Housing	0.4	1.2	10 to 30 percent of units would be made deed-restricted BMR housing	The proposed project would include incorporate approximately 49 homes (25 percent) designed with deed-restricted JADUs to contribute to reduction in VMT.
Carshare Spaces	0.7	0.7	Carshare space(s) would be provided	This VMT mitigation measure is not applicable to the proposed project.
Traffic Calming	0.25	1	25 to 100 percent of project streets and intersections would have traffic calming elements	The proposed project would implement traffic calming elements on project streets through implementation of MM TRANS-2a.
Sidewalk Improvements	0.5	0.5	Sidewalk would be added along Busch Road between Ironwood Drive and the east edge of the project site	The proposed project would implement sidewalk improvements through implementation of MM TRANS-2b.

VMT Mitigation Measure	VMT Reduction (%)		Description of Measure	Implementation
	Minimum	Maximum		
Community-Based Transportation Plan	2.3	2.3	The CBTP program would reach out to households and offer information, incentives, and support for alternatives to single-occupancy vehicles	This VMT mitigation measure is not applicable to the proposed project.
Total Reduction	4.2	5.7	-	-
Required Reduction	13.4	13.4	-	-
Notes: BMR = below market rate VMT = Vehicle Miles Traveled Source: W-Trans. 2023. Transportation Impact Study (TIS).				

As shown in Table 3.16-8 above, even if the proposed project implemented all of the potential TDMs proposed, the proposed project’s VMT per capita would be reduced by 4.2 to 5.7 percent below the baseline value for the TAZ. This would translate to a project-specific rate of 28.6 to 28.2 VMT per capita, which would still be greater than the applied significance threshold of 25.9 for the East Planning Area of Alameda County. As previously stated, the proposed project’s overall daily VMT of 29.9 per capita would need to be reduced by 13.4 percent to avoid significant impacts. Therefore, implementation of MM TRANS-2a and MM TRANS-2b would help to reduce the proposed project’s VMT but would not reduce impacts to a less than significant level. Thus ,the proposed project would result in significant and unavoidable impact.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM TRANS-2a Prior to project operation, the proposed project would implement traffic calming elements on all of the street improvements included in the proposed project.

MM TRANS-2b Prior to project operation, the proposed project would construct approximately 1,000 feet of off-site sidewalk improvements and bicycle lane improvements along Busch Road, which would connect to existing facilities on Busch Road and Ironwood Drive.

Level of Significance After Mitigation

Significant and unavoidable impact.

Hazards

Impact TRANS-3: The proposed 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).

Impact Analysis

The potential for the proposed project to impact safety was evaluated in terms of the adequacy of sight distance and need for turn lanes at the project accesses as well as the adequacy of stacking space in dedicated turn lanes at the study intersections to accommodate additional queuing due to adding project-generated trips and need for additional right-of-way controls.

The project site would be accessed via two new street connections to Busch Road east of Ironwood Drive. All residences would be accessible from either street connection to Busch Road. Within the project site, internal circulation would include a roundabout on the east side of the project site and a roadway encompassing the park at the center of the proposed development. Additionally, Busch Road would be widened along the proposed project's frontage in accordance with the EPSP to include an 8-foot sidewalk, 6-foot bike lane, 7-foot landscaped buffer between the sidewalk and bike lane, and space for a 12-foot median. Design of the roadways would conform to Alameda County's Subdivision Guidelines and would be in compliance with applicable Alameda County ordinances and permit requirements. The proposed roadways included in the proposed project are intended to be public roadways; therefore, the proposed project would install and relocate all necessary utilities, traffic safety and other roadway improvements, so that it can be accepted into the Alameda County system of roads once the construction is completed.

Sight Distance

The methodology used to calculate sight distance is described in 3.16.5, Methodology. Given the posted speed limit of 35 mph, the minimum corner sight distances per the HDM is 489 feet for left turns and 437 feet for right turns. During the field visit, sight lines in excess of 500 feet were measured in each direction, satisfying the minimum corner sight distance recommendations for the posted speed limit. To preserve existing sight lines, any new landscaping, signage, or other structures placed near the project entrances would be positioned outside of the vision triangle of a driver waiting on the minor street approach. Thus, there is adequate corner sight distance at the project access points on Busch Road for the posted speed limit of 35 mph.

Access Analysis

Left-Turn Lane Warrants

The methodology used to calculate left-turn lane warrants is described in 3.16.5, Methodology. The need for left-turn channelization in the form of a left-turn pocket on Busch Road was evaluated based on peak-hour volumes as well as safety criteria. Based on the proposed distribution of residential units and on-site street layout, it is assumed that 60 percent of drivers entering the project site would turn left into the western project street and 40 percent would turn left into the eastern project street. Two separate analyses were conducted to review Existing and Future conditions. The Existing conditions scenario reflects Busch Road as a two-lane road with a posted speed limit of 25 mph, whereas the Future conditions scenario represents the planned capacity

enhancements to Busch Road as a 45 mph four-lane roadway; both assessed conditions include the traffic associated with the future extension of El Charro Road.

Under Existing Plus Project conditions, a left-turn lane is warranted on Busch Road at both project streets during the PM peak period. Similarly, under Future Plus Project conditions, a left-turn lane is warranted during both the AM and the PM peak periods for the western project street and during the PM peak period for the eastern project street. Copies of the warrant spreadsheets are provided in Appendix J. Therefore, under both Existing and Future conditions, left-turn lanes are warranted at both proposed street connections to Busch Road upon the addition of project traffic, as well as traffic associated with the planned future extension of El Charro Road. The proposed project would include channelized left-turn lanes to accommodate the eastbound drivers turning left into the western project street and eastern project street out of the way of through traffic as design features. This represents a beneficial impact to safety, as left-turn lanes would enable turning vehicles to wait out of the way of through traffic, reducing congestion and the likelihood of rearend collisions, and result in less in a less than significant impact.

Traffic Signal Warrants

The methodology used to calculate traffic signal warrants is described in 3.16.5, Methodology. A peak-hour study was conducted for the worst-case scenario, with all project-generated trips using one access point during both the AM and PM peak periods. The worst-case scenario would also include all project-generated trips turning left into the project site and all trips turning left out of the project site. In the AM peak-hour, the total delays for drivers leaving the project site would not meet the delay threshold, so a traffic signal would not be warranted in this case. In the PM peak-hour, although the increase in pass-by trips in the future would satisfy some criteria, the total generated volumes leaving the project site would not exceed 100 vehicles. Therefore, the future PM peak period also does not warrant a traffic signal at either project street connection to Busch Road. Copies of the Peak-hour Warrant worksheets are included in Appendix J. Therefore, in both the AM and PM peak periods, the Peak-hour Warrant for a traffic signal is not met even under the assumption that all project-generated trips would utilize a single access point and turn left into or out of the site, which generates higher delays than right turns. No Impact would occur.

Queueing

The methodology used to calculate queueing is described in 3.16.5, Methodology. With existing 2019 and 2023 volumes, 95th percentile queues are projected to exceed the available storage space in dedicated turn lanes at Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue during both the AM and PM peak-hours. Adding project traffic to the existing 2019 volumes, which results in a conservative analysis as the 2019 volumes are generally higher than 2023 volumes, would increase the 95th percentile queue length in the 100-foot westbound right-turn lane at Santa Rita Road/Valley Avenue during the AM peak-hour from 83 feet to 115 feet; however, if the signal was retimed to accommodate project traffic, would be expected to reduce the westbound right-turn queue from 115 feet to 98 feet which would not exceed the available storage space. However, this signal is located within the City of Pleasanton. The proposed project has considered the implementation of a mitigation measure that would require the City of Pleasanton to retime this signal to accommodate proposed project traffic; however, because the City of Pleasanton is not the

lead agency of this proposed project, the mitigation measure has been deemed unenforceable and, therefore, cannot be implemented as part of the proposed project.

Similarly, the addition of project traffic to existing 2019 volumes would increase the northbound right-turn queue at Stanley Boulevard/Valley Avenue-Bernal Avenue during the AM peak-hour from 172 feet to 187 feet, exceeding the 180-foot pocket length. Retiming this signal to accommodate project traffic would be expected to reduce the northbound right-turn queue to 127 feet. However, this signal is located within the City of Pleasanton. The proposed project has considered the implementation of a mitigation measure that would require the City of Pleasanton to retime this signal to accommodate proposed project traffic; however, because the City of Pleasanton is not the lead agency of this project, the mitigation measure has been deemed unenforceable and, therefore, cannot be implemented as part of the proposed project.

Under Baseline and Future conditions, 95th percentile queues would continue to exceed the storage space in dedicated turn lanes at Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley-Bernal Avenue during the AM and PM peak-hours, with and without project traffic. Additionally, the available storage space in the eastbound left-turn lane at Valley Avenue/Busch Road would be exceeded under Future and Future Plus Project conditions during the AM and PM peak-hours. Upon the addition of project traffic to Baseline volumes during the AM peak-hour, the queues in the 280-foot-long eastbound left-turn lane and 290-foot-long westbound left-turn lane at Stanley Boulevard/Valley Avenue-Bernal Avenue would exceed the available storage by 2 and 8 feet respectively. Retiming the signal at Stanley Boulevard/Valley Avenue-Bernal Avenue under Baseline conditions to account for project traffic would decrease queues in the eastbound and westbound left-turn lanes to 272 feet and 239 feet respectively which would remain within the available storage space. However, this signal is located within the City of Pleasanton. The proposed project has considered the implementation of a mitigation measure that would require the City of Pleasanton to retime this signal to accommodate proposed project traffic; however, because the City of Pleasanton is not the lead agency of this project, the mitigation measure has been deemed unenforceable and therefore, cannot be implemented as part of the proposed project.

In summary, with existing volumes, the addition of project traffic would create a potentially significant impact on queues in the westbound right-turn lane at Santa Rita Road/Valley Avenue and northbound right-turn lane at Stanley Boulevard/Valley Avenue-Bernal Avenue during the AM peak-hour. Traffic associated with the proposed project would also create a potentially significant impact under Baseline conditions in the eastbound and westbound left-turn lanes at Stanley Boulevard/Valley Avenue-Bernal Avenue during the AM peak-hour. However, because these signal are located within the City of Pleasanton and the City is not the lead agency for the proposed project, implementation of mitigation measures that would retime these the traffic signals at Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue to accommodate queues associated with trips anticipated to be generated by the proposed project has been deemed unenforceable, and therefore cannot be implemented as part of the proposed project. Therefore, impacts would be significant and unavoidable.

The proposed project would have potentially significant impacts on-site access as well as potentially significant impacts on queueing at the intersections of Santa Rita Road/Valley Avenue and Stanley

Boulevard/Valley Avenue-Bernal Avenue. Installing channelized eastbound left-turn lanes at both project street connections to Busch Road has been included as part of the project design and would address significant impacts related to on-site access. However, there is no enforceable mitigation that can be applied to address significant impacts related to queueing. Therefore, impacts would be significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

None available.

Level of Significance After Mitigation

Significant and unavoidable impact.

Emergency Access

Impact TRANS-4: The proposed project would not result in inadequate emergency access.

Impact Analysis

Adequacy of Site Access

The proposed project’s driveways and internal circulation network would be designed to meet current City and County standards and can therefore be expected to accommodate the access requirements for passenger vehicles. California Fire Code, Section 503.2.1, states that roads shall have an unobstructed width of not less than 20 feet to accommodate fire apparatus access, and vehicle access throughout the project site would be provided via a network of connected 20- to 36-foot-wide roadways. Additionally, California Fire Code Section 503.2.5 requires a turnaround for a fire apparatus at the end of dead-end roads longer than 150 feet; as the private drive aisles on the site plan would be less than 150 feet in length, these aisles would be exempt from the Fire Code requirement for turnarounds. The widths and curves appear to be appropriate for fire access and review and approval from the fire code official would be required as part of the entitlement process.

As detailed in the TIS prepared for the proposed project and included in Appendix J of the Draft EIR, the addition of project traffic to Existing, Baseline, and Future volumes would cause minor increases in delay and/or continued acceptable operation of the signalized study intersections, except for at the intersection of Santa Rita Road/Valley Avenue under Baseline Plus Project conditions. At this location, under Baseline PM peak-hour volumes, the addition of project traffic would increase delay by approximately 5.4 seconds. As emergency vehicles have lights and sirens to bypass queued traffic and minimize the effects of intersection delay, and since drivers are required to pull over to the side of the road to let emergency vehicles pass, the proposed project can be presumed to have a nominal to no effect on emergency response times. The proposed project would also be required to comply with the California Fire Code regarding emergency access and types of building materials.

The proposed project would result in less than significant impacts to emergency access and would not impair implementation of or physically interfere with an adopted emergency response plan.

Furthermore, the proposed project would comply with the County EOP, which would ensure efficient response to emergency incidents associated with emergencies affecting the County. In addition, construction traffic for the proposed project and off-site improvements would primarily occur through I-580 onto El Charro Road. The connection of El Charro Road onto the project site and off-site improvement areas would be mostly private and inaccessible to public traffic and would therefore not result in any road closures. Furthermore, off-site improvements to Busch Road would be conducted such as not to block road access. Therefore, access to Busch Road, the evacuation route from the project site, would not be impeded.

Additionally, according to CAL FIRE, neither the project site, nor the off-site improvements, are located in a State Responsibility Area (SRA) or a Local Responsibility Area (LRA) Fire Hazard Severity Zone (FHSZ). The nearest FHSZ is approximately 1.55 miles north of the project site, north of I-580, and is designated as a Moderate FHSZ in an SRA. The nearest Very High Fire Hazard Severity Zone (VHFHSZ) is located in an LRA approximately 3.06 miles southwest of the project site. Given that the project site is generally flat, is not located on or near steep terrain surrounded by natural vegetation, is mostly surrounded by urban uses, and does not consistently experience high winds, the project site would not be prone to wildfires. Therefore, it is not likely that emergency services will need to service the site for wildfires.

Furthermore, risk of impacts related to wildfire on the project site would be further reduced by the proposed project through compliance with applicable State and local plans and regulations. Specifically, the ECAP contains Policy 299, which requires that Alameda County Fire Department (ACFD) review and approve the proposed project's site plan. Furthermore, the County EOP and LHMP incorporate further requirements into project design and address response to emergency incidents affecting the County.

In summary, the proposed project would be designed to accommodate emergency response vehicles and would not impede emergency access. Additionally, the site plan would be required to be reviewed and approved by a fire code official as part of the entitlements process ensuring adequacy for fire vehicle. Therefore, the proposed project would have a less than significant impact on emergency access.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.16.8 - Cumulative Impacts

Impacts of the proposed project would be considered cumulatively considerable if they would have the potential to combine with other past, present, or reasonably foreseeable projects to become significant. The potential for cumulative construction impacts exists where there are multiple projects proposed in an area that have overlapping construction schedules that could affect similar

resources. Cumulative operational impacts exist where multiple projects result in significant and unavoidable impacts to the same surrounding intersections and roadways.

The geographic context for the cumulative analysis is the nine Bay Area counties (Marin, Sonoma, Napa, Solano, San Mateo, San Francisco, Santa Clara, Alameda, and Contra Costa) that fall under the purview of the MPO, the Bay Area MTC. The analysis also considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project. The nearest cumulative project from that table is adjacent the project site (Cumulative Projects No. 4 and No. 5).

Vehicle Miles Traveled

Cumulative projects in the nine-county MTC may generate new VMT, which would be added to the roadway network within the geographic context. All cumulative projects would be required to comply with County and local ordinances, General Plan policies that address VMT, as well as mitigate their fair share of impacts related to VMT. Nonetheless, cumulative projects would have a potentially significant impact related to VMT.

As discussed above, VMT, by definition, is cumulative. The proposed project would contribute to an increase in VMT, and that increase would be considered significant and unavoidable. Therefore, the proposed project would have a cumulatively considerable contribution to VMT. As such, the proposed project, in conjunction with other planned and approved projects, would result in a significant and unavoidable cumulative impact with respect to VMT.

Transit, Bicycle, and Pedestrian Circulation and Facilities

Cumulative projects in the nine-county MTC would generate alternative transportation users but would be required to provide adequate bicycle and pedestrian facilities and comply with the programs and policies supporting alternative transportation in planning level documents. More specifically, ECAP Policy 189 requires major projects to include features that promote the use of transit, bicycle, and pedestrian systems. Accordingly, there would be a less than significant cumulative impact to the bicycle, pedestrian, and transit system.

As described under Impact TRANS-1, the proposed project would generate bicycle, pedestrian, and transit trips. The proposed project would include a sidewalk along the project's frontage connecting Busch Road to Ironwood Drive. The project would also provide internal pedestrian pathways, as well as short- and long-term bicycle storage. Therefore, the proposed project's contribution to alternative transportation impacts would not be cumulatively considerable. As such, the proposed project, in conjunction with other planned and approved projects, would result in a less than significant cumulative impact with respect to transit, bicycle, and pedestrian circulation and facilities.

Roadway Hazards

Impacts related to roadway safety and traffic hazards due to design features are generally site-specific. For example, the potential roadway safety issues or traffic hazards related to the design of an intersection are specific to that particular intersection. Cumulative projects would be required to

mitigate their impacts, as well as ensure that roadway safety is maintained, and comply with applicable policies in local and regional planning documents. Cumulative Project No. 4, which also proposes its driveway off of Busch Road and would create a substantial number of additional trips in addition to the proposed project, would also be located within the County and there would be no available to address vehicle queue space. Accordingly, cumulative impacts related to geometric design features would be potentially significant.

As discussed under Impact TRANS-3, the proposed project would have sufficient available sight distance and no hazardous geometric roadway design features. However, there is no available mitigation that could address significant impacts related to sufficient vehicle queue space. Therefore, the proposed project's contribution to roadway hazard related impacts would be cumulatively considerable. As such, the proposed project, in conjunction with other planned and approved projects, would result in a significant and unavoidable cumulative impact with respect to roadway hazards.

Emergency Access

Cumulative projects would be required to ensure that sufficient emergency access is provided and/or maintained in accordance with applicable federal, State, and local regulations. Accordingly, there is a less than significant cumulative impact. Site plans must be review and approved by fire code officials before project approval.

As described in Impact TRANS-4, the proposed project would not result in inadequate emergency access. Therefore, the proposed project's contribution to related impacts would not be cumulatively considerable. As such, the proposed project, in conjunction with other planned and approved projects, would result in a less than significant cumulative impact with respect to emergency access.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

None available.

Level of Cumulative Significance After Mitigation

Significant and unavoidable impact.

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3.17 - Utilities and Service Systems

Introduction

This section describes the existing conditions related to utilities and service systems (water, wastewater, stormwater, and solid waste) in Alameda County (County) and the project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to such utilities and service systems that could result from implementation of the proposed project. Information in this section is based, in part, on information provided by the project-specific Water Supply Evaluation (WSE), project-specific Recycled Water Balance Technical Memorandum, County of Alameda (County) General Plan, East County Area Plan (ECAP), California Water Services (Cal Water) Livermore District Urban Water Management Plan (UWMP), City of Livermore Sewer Master Plan, and the Municipal Code.

The following public comments were received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period regarding utilities and service systems. This Draft EIR considered these comments in preparing this analysis. The comments are summarized as follows:

- The Draft EIR should include details related to planned wastewater treatment, including the responsible party to maintain the facility and the plan for meeting regulatory requirements.
- The Draft EIR should evaluate the water supply and water quality, including polyfluoroalkyl substances (PFAS) contamination.
- The Draft EIR should evaluate whether the wastewater treatment system would be adequate to serve the proposed project.
- The Draft EIR should discuss and analyze the stormwater treatment and retention facilities, as well as potential impacts from stormwater runoff.
- The Draft EIR should provide the plans for water and sanitary services to the proposed project, as well as plans for stormwater runoff.
- The Draft EIR should analyze the expected water flow and pressure available at fire hydrants.
- The Draft EIR should clarify the intended water supply, turnouts, and associated infrastructure proposed.
- The Draft EIR should evaluate whether the Zone 7 Water Agency has accounted for the increased demand, as they should be considered a Required Ministerial Approval.
- The Draft EIR should address potential stormwater impacts to nearby lakes and potential mitigation.
- The Draft EIR should fully evaluate the sewer treatment plant and how the effluent will be addressed in relation to Alameda Creek.
- The Draft EIR should discuss how the water storage site would be filled.
- The Draft EIR should evaluate sorting trash according to 2020 SB1383.

- The Draft EIR should describe the estimations of the amount of trash predicted to be produced and how it will be disposed of.
- The Draft EIR should demonstrate compliance with the County General Plan and ECAP policies, relevant to sewers.
- The Draft EIR should consider the development of a long-term plan to accommodate growth in the area for clean water capacity.
- The Draft EIR should describe the sizing and operation of proposed sewer treatment plant and agricultural fields.
- The Draft EIR should explore piping generated wastewater to the sewer treatment plant in the City as mitigation.
- The Draft EIR should study whether the elimination of the Zone 7 easement road would impact water use.
- The Draft EIR should evaluate whether additional infrastructure for utilities would be required to serve the proposed project.
- The Draft EIR should consider creating a 6- to 8-foot setback as a flood control area.
- The Draft EIR should evaluate whether the proposed sewer treatment plant would have the capacity to serve the anticipated needs of the proposed project.
- The Draft EIR should analyze water supply from the City wells and potential PFAS contamination in both the wells and the Zone 7 water.
- The Draft EIR should evaluate water and wastewater impacts during construction, including disposal of trash and potential contaminants.
- The Draft EIR should evaluate impacts on landfills.
- The Draft EIR should analyze the knowledge and appropriate technical, managerial, and financial capacity to operate the proposed water system long-term.
- The Draft EIR should demonstrate compliance with regulatory requirements for the proposed water and wastewater facilities.
- The Draft EIR should evaluate the potable water distribution system with regard to operation, maintenance, and monitoring.
- The Draft EIR should consider that a connection to the City could provide a sustainable water supply more efficiently than Zone 7 could.
- The Draft EIR should consider implementing a Conditional Use for the proposed project, ensuring eastbound runoff.
- The Draft EIR should ensure that the County review the EIR to ensure that stormwater drainage from the proposed project would be mitigated.

3.17.1 - Environmental Setting

Water

Water would be supplied to the project site by Cal Water. Cal Water provides potable water service to approximately 1.8 million residents across 25 districts (63 communities) in California.¹ Cal Water's service area includes communities from across the State, including, but not limited to the Cities of Livermore, Santa Rosa, and Los Angeles.² The Cal Water Livermore District (Livermore District), which currently serves a population of approximately 59,800 residents, would serve the project site.³ The Livermore District obtains its water supply through a combination of locally produced groundwater and surface water purchased from Zone 7 Water Agency (Zone 7). The Livermore District's service area is located in the Livermore-Amador Valley, which is part of the Livermore sub-area of the San Francisco Bay Hydrologic Region. The Livermore District encompasses approximately 48 percent of the area incorporated by the City of Livermore and accounts for approximately 69 percent of its population.

Approximately 70 percent of the Livermore District's water supply originates from water purchased from Zone 7.⁴ Zone 7's water supply consists of water from the State Water Project (SWP)⁵ and water originating from groundwater and surface water obtained from the local Arroyo Valle watershed.⁶ Zone 7 provides further water supply from the Del Valle Reservoir and groundwater from the aquifer that lies below the Livermore-Amador Valley. Water purchased from Zone 7 is supplied to the Livermore District through nine service connections in Zone 7's distribution feeder network.⁷ Both the imported supplied and the local surface water supplies are treated in Zone 7's treatment facilities before being delivered to Cal Water. Water is purchased by the Livermore District under the terms of a contract for municipal and industrial water supply with Zone 7. This contract will expire in 2024 but is anticipated by the Livermore District to be renewed with similar terms for another 30 years.

Approximately 30 percent of the Livermore District's water supply is supplied by groundwater from the Livermore Valley Groundwater Basin.⁸ The Livermore District service area contains 12 wells and 22 surface storage structures, which allow the groundwater wells to pump to storage during non-peak demand periods and provide peak day demand.^{9,10}

The population served by the Livermore District is expected to grow by 14 percent between 2020 and 2045, as shown in Table 3.17-1.

¹ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

² California Water Service (Cal Water). 2024. City, Community, and Water System List. Website: <https://www.calwater.com/customercare/city/>. Accessed February 13, 2024.

³ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

⁴ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

⁵ Water from Lake Oroville that is delivered to Zone 7 via reservoirs, rivers, aqueducts, and pipelines that make up the State Water Project (SWP).

⁶ Zone 7 Water Agency. 2021. 2020 Urban Water Management Plan. June.

⁷ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

⁸ Ibid.

⁹ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

¹⁰ California Water Service (Cal Water). 2022. Water Quality Report 2021 – Livermore District.

Table 3.17-1: Water Service Population—Current and Projected (2020-2045)

2020	2025	2030	2035	2040	2045
59,814	60,886	62,970	65,347	66,739	68,176

Source: California Water Service (Cal Water). 2021.

Water Source and Supply

Purchased Surface Water

Approximately 70 percent of the Livermore District’s water supply is purchased from Zone 7. Zone 7 currently derives approximately 80 percent of its water supply from the SWP, with water from the South Bay Aqueduct, surface runoff collected in the Del Valle Reservoir, with local groundwater representing the remaining supply (20 percent).¹¹ The Livermore District 2020 UWMP concluded that Zone 7 could meet all its obligations to provide adequate water supplies for the Livermore District on average in normal year, single dry year, and multiple dry years, as shown in Table 3.17-2.¹²

Table 3.17-2: Livermore District Projected Water Supply in Normal Year (2020-2045)

Projected Water Supply (AFY)						
Water Supply	Water Supply Description	2025	2030	2035	2040	2045
Purchased Water	Zone 7	6,264	6,292	6,446	6,486	6,563
Groundwater	Livermore Valley Groundwater Basin	3,069	3,069	3,069	3,069	3,069
Total		9,333	9,361	9,515	9,555	9,632

Notes:
AFY = acre-feet per year
Source: California Water Services (Cal Water). 2021.

Groundwater

The maximum annual groundwater pumping quota for the Livermore District is 3,069 acre-feet/per year (AFY), limited by Zone 7.¹³ As stated above, groundwater supplies approximately 30 percent of the total water supply to the Livermore District. Water is extracted from the Livermore Valley Groundwater Basin, which has an estimated total storage capacity of about 500,000 acre-feet.¹⁴ From 2016 to 2020, the Livermore District pumped between 979 and 2,422 AFY, well below the maximum pumping quota.¹⁵

¹¹ Zone 7 Water Agency. 2021. 2020 Urban Water Management Plan. June.

¹² California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

¹³ Ibid.

¹⁴ California Department of Water Resources (DWR). 2006. California’s Groundwater Bulletin 118 - Livermore Valley Groundwater Basin Description. January 20.

¹⁵ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

Per- and Polyfluoroalkyl Substances

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of chemicals used since the 1940s to make commercial products including carpets, clothing, food packaging, and cookware because they are waterproof, stain-resistant, and non-stick; they also have been used in fire-retarding foam and various industrial processes.¹⁶ They can be introduced into the body through ingestion of contaminated food or liquid and inhaling or touching products with packaging treated with the substance. They can contaminate drinking water supplies when products containing PFAS are used or spilled on the ground and they migrate into groundwater, and, once in groundwater, PFAS can travel large distances and contaminate drinking water wells. Major sources of PFAS contamination include fire training/fire response sites, military bases, industrial sites, and landfills.

In March 2019, the California State Water Resources Control Board (State Water Board) initiated a Statewide PFAS phased investigation for hundreds of drinking water sources, including Zone 7 and the Livermore District. The Livermore District has 12 groundwater wells within its service area.

In March 2023, the United States Environmental Protection Agency (EPA) issued a proposed national primary drinking water regulation for certain PFAS. The proposed regulation calls for a maximum containment level for PFOS and PFOA of 4 parts per trillion (ppt) each. Four additional PFAS—PFNA, PFHxS, PFBS, and GenX—would have a combined hazard index limit of 1.0; the hazard index calculation would determine if the levels of these PFAS as a mixture pose a potential risk.¹⁷

According to the Cal Water 2022 Water Quality Report for the Livermore District System, prior to issuance of this regulation, Cal Water had already proactively tested active sources in their systems for all six PFAS and took the affected sources out of service until treatment was installed. Thus, none of their active water sources have levels of the six PFAS compounds over current California response levels. The response level, which is the level at which a water system should make operational changes to reduce the concentration of a compound, is set with a margin of protection for all people (including sensitive populations) over a lifetime of exposure.¹⁸

On April 10, 2024, the EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS, including individual Maximum Contaminant Levels (MCLs) for PFOA and PFOS at 4 parts ppt, individual MCLs for PFHxS, PFNA, and GenX Chemicals at 10 ppt, and an MCL for a mixture of four PFAS (PFHxS, PFNA, GenX Chemicals, and PFBS) at no greater than a hazard index of 1.0.¹⁹

The EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS. Public water systems must monitor for these PFAS and have 3 years to complete

¹⁶ United States Environmental Protection Agency (EPA). 2023. Our Current Understanding of the Human Health and Environmental Risks of PFAS. Website: <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>. Accessed February 13, 2024.

¹⁷ California Water Service (Cal Water). 2022. Water Quality Report for Livermore District, Livermore System. Website: <https://www.calwater.com/docs/ccr/2022/liv-liv-2022.pdf>. Accessed May 7, 2024.

¹⁸ California Water Service (Cal Water). 2022. Water Quality Report for Livermore District, Livermore System. Website: <https://www.calwater.com/docs/ccr/2022/liv-liv-2022.pdf>. Accessed May 7, 2024.

¹⁹ Zone 7 Water Agency. 2024. PFAS Information. Website: <https://www.zone7water.com/pfas#:~:text=On%20April%2010%2C%202024%2C%20the%20U.S.%20Environmental%20Protection,Zone%207%20has%20been%20doing%20voluntarily%20since%202019>. Accessed July 2, 2024.

initial monitoring (by 2027), followed by ongoing compliance monitoring. Public water systems will have 5 years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs. Primary agencies, such as the State, will have up to 2 years to adopt standards that are no less stringent than the federal standards.²⁰

Zone 7 has already begun implementing voluntary changes to meet the MCLGs, including the following actions:

- Reduced the production of the Mocho wellfield by nearly two-thirds.
- Increased the use of surface water.
- Started a conceptual design for a Mocho PFAS treatment facility with the goal of having the facility online in 2 to 3 years, which will be Zone 7's third PFAS treatment facility.
- Installed Ion Exchange PFAS Treatment at the Stoneridge Well facility, which is online now.
- Began installing Ion Exchange PFAS Treatment at the Chain of Lakes Facility which will be online by the end of 2024.²¹

Project Site

The project site is not currently served with water and does not belong to a water service area. The proposed project would connect to the Livermore District. Water supply throughout the project site would be provided through 8-inch diameter water lines constructed under the proposed internal circulation. Water supply would be provided to the project site by Cal Water through proposed off-site 8-inch diameter water lines, connecting to the northeast corner of the project site. This line would extend eastward toward El Charro Road, and then follow El Charro Road north until reaching a proposed water storage and booster pump facility between Lake I and Cope Lake of the Zone 7 Water Agency's Chain of Lakes.

The proposed water storage and booster pump facility would be located northeast of the project site between Lake I and Cope Lake, along El Charro Road, and would have an approximately 400,000-gallon storage capacity.

Recycled Water

California Water Service—Livermore District

The Livermore District of Cal Water relies on, and coordinates with, the City of Livermore, the East Bay Dischargers Authority (EBDA), and Livermore-Amador Valley Water Management Agency (LAVWMA) to conduct wastewater collection, treatment, and discharge.²² Cal Water does not use or bring in recycled water to its operational area.

²⁰ Zone 7 Water Agency. 2024. PFAS Information. Website: <https://www.zone7water.com/pfas#:~:text=On%20April%2010%2C%202024%2C%20the%20U.S.%20Environmental%20Protection,Zone%207%20has%20been%20doing%20voluntarily%20since%202019>. Accessed July 2, 2024.

²¹ Ibid.

²² California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

Project Site

The project site is currently vacant and does not utilize or produce recycled water. The proposed project would include a recycled water storage facility located on approximately 2.5 acres, located west of El Charro Road in the northern portion of APN 946-4634-2, and would remain the same under both Design Option A and Design Option B, as shown on Exhibit 2-6a and Exhibit 2-6b. In addition, the recycled water storage facility would include lined storage ponds, and treated water would be disposed of through irrigation of the agricultural irrigation recycled water spray fields. According to the project-specific Recycled Water Balance Memorandum, prepared by EKI Environment & Water, Inc. (EKI) on January 5, 2024, the proposed project would generate 30,300 gallons per capita per day (gpcd) of wastewater. As such, the lined storage ponds (recycled water storage facility) would be between 10 and 15 feet deep. In addition, the agricultural irrigation fields would be approximately 8.5 acres, with a storage capacity of between 15.7 and 17.1 acre-feet. A recycled water distribution efficiency of 95 percent is assumed.

Water Demand and Use

Cal Water–Livermore District

The Cal Water 2020 UWMP for the Livermore District summarizes the 2025 to 2045 water demands during Normal, Single-Dry Year, and Multiple-Dry Years extending to 5 years as shown in Table 3.17-3. The projections indicate that Cal Water would have adequate water supply under all of the calculated average, single-dry, and multi-dry year scenarios.

Table 3.17-3: California Water Service Projected Potable Water Supply and Demand

Year Type	Livermore District Demand (AF)	Livermore District Supply (AF)	Short-term Demand Management	
			Acre-feet	Percent of Demand
2025				
Normal	9,333	9,333	–	0%
Single-Dry	9,635	9,635	–	0%
Multi-Dry Year 1	9,822	9,822	–	0%
Multi-Dry Year 2	9,822	9,822	–	0%
Multi-Dry Year 3	9,822	9,822	–	0%
Multi-Dry Year 4	9,822	9,822	–	0%
Multi-Dry Year 5	9,822	9,822	–	0%
2030				
Normal	9,361	9,361	–	0%
Single-Dry	9,660	9,660	–	0%
Multi-Dry Year 1	9,846	9,846	–	0%
Multi-Dry Year 2	9,846	9,846	–	0%
Multi-Dry Year 3	9,846	9,846	–	0%

Year Type	Livermore District Demand (AF)	Livermore District Supply (AF)	Short-term Demand Management	
			Acre-feet	Percent of Demand
Multi-Dry Year 4	9,846	9,846	–	0%
Multi-Dry Year 5	9,846	9,846	–	0%
2035				
Normal	9,515	9,515	–	0%
Single-Dry	9,818	9,818	–	0%
Multi-Dry Year 1	10,006	10,006	–	0%
Multi-Dry Year 2	10,006	10,006	–	0%
Multi-Dry Year 3	10,006	10,006	–	0%
Multi-Dry Year 4	10,006	10,006	–	0%
Multi-Dry Year 5	10,006	10,006	–	0%
2040				
Normal	9,555	9,555	–	0%
Single-Dry	9,859	9,859	–	0%
Multi-Dry Year 1	10,047	10,047	–	0%
Multi-Dry Year 2	10,047	10,047	–	0%
Multi-Dry Year 3	10,047	10,047	–	0%
Multi-Dry Year 4	10,047	10,047	–	0%
Multi-Dry Year 5	10,047	10,047	–	0%
2045				
Normal	9,632	9,632	–	0%
Single-Dry	9,938	9,938	–	0%
Multi-Dry Year 1	10,128	10,128	–	0%
Multi-Dry Year 2	10,128	10,128	–	0%
Multi-Dry Year 3	10,128	10,128	–	0%
Multi-Dry Year 4	10,128	10,128	–	0%
Multi-Dry Year 5	10,128	10,128	–	0%
Notes: AF = acre-feet Source: California Water Service (Cal Water). 2021.				

Project Site

There is no existing water service on the project site. However, the proposed project would connect to the Livermore District via off-site utility improvements to receive water. The project site would therefore be subject to the Livermore District 2021 UWMP. According to the project-specific Water

Supply Evaluation, prepared by EKI in Appendix J, the proposed project is estimated to have an annual water demand of 47 acre-feet/year (AFY).²³

Water Distribution

California Water Service—Livermore District

As described above, 70 percent of water supply for the Livermore District is purchased by Cal Water from Zone 7, and 30 percent of water supply is sourced from groundwater from the Livermore Valley Groundwater Basin.²⁴ Between 2016 and 2020, Cal Water's water distribution system lost between 179 and 822 AFY.

Project Site

The project site does not currently contain any water distribution infrastructure. The proposed project would construct water distribution infrastructure on-site and off-site.

Wastewater

California Water Service—Livermore District

Cal Water collects wastewater within the Livermore District service area and transfers the wastewater to the City of Livermore.²⁵ Wastewater is collected via gravity sewers and pumping stations and approximately 300 miles of collection lines ranging in size from 6 to 48 inches in diameter. Wastewater is collected at the Livermore Water Reclamation Plant (LWRP) for treatment, where it undergoes primary, secondary, and tertiary treatment.²⁶ The City of Livermore treats approximately 2.3 billion gallons of water per year through the LWRP, which has a design capacity of 8.5 million gallons per day (mgd). It is currently treating between 4.0 and 7.0 mgd of wastewater.²⁷

The LWRP tertiary treatment facilities produce 2.0 mgd of treated recycled water for customers to use for applications such as firefighting and irrigation of landscaping at golf courses, airports, and wineries.²⁸ Wastewater treated by the LWRP that is not recycled is transported via a 27-inch gravity pipeline owned and operated by the LAVWMA for ultimate discharge into the San Francisco Bay Area.

Project Site

There are no wastewater services provided to the project site currently. In addition, there is no wastewater infrastructure on the project site. As part of its planned off-site improvements, the proposed project would construct an approximately one-acre membrane bioreactor sewer treatment plant with a capacity to treat approximately 50,000 gallons of wastewater per day. As described in Section 2, Project Description, the sewer treatment plant would include an influent pump station, a headworks facility, odor control, a membrane bioreactor facility, ultraviolet

²³ EKI Environment & Water, Inc. (EKI). 2024. Water Supply Evaluation. March.

²⁴ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

²⁵ Ibid.

²⁶ City of Livermore. Livermore Water Reclamation Plant. Website: <https://www.livermoreca.gov/departments/public-works/water-resources/wastewater-service/livermore-water-reclamation-plant>. Accessed February 13, 2024.

²⁷ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

²⁸ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

disinfection, an effluent and recycled water pump station and pipelines, solids handling, a chemical facility, administration, laboratory, operations, and maintenance.

Long-Term Treatment Capacity Plans

The City of Livermore published a Sewer Master Plan in December 2017, and a LWRP Master Plan in November 2013. As stated above, the LWRP is owned and operated by the City of Livermore, southeast of the Livermore Municipal Airport. The LWRP has a treatment capacity of approximately 8.5 mgd and treated an average dry weather flow of 6 mgd in the summer in 2015, a decrease from average flows of 6.96 mgd in 2012.^{29, 30} The City of Livermore projects that reasonably foreseeable future development would increase wastewater average dry weather flow by approximately 0.62 mgd (744,690 gallons per day).³¹ The LWRP Master Plan recorded its highest peak daily flow of 9.98 mgd in March 2011, although the average peak daily flow was only 11 percent larger than average dry weather flow.³² The majority of waste is treated to a secondary level, disinfected by ultraviolet light, and then discharged into the San Francisco Bay via LAVWMA pipelines.³³ Approximately two mgd of wastewater receives tertiary treatment at the LWRP and is recycled back to the City of Livermore's customers. However, this recycled water is not purchased by Cal Water.

Wastewater Generation

California Water Service—Livermore District

Wastewater generated by land uses within the Livermore District service area is conveyed via existing infrastructure to the City of Livermore's LWRP for primary, secondary, and tertiary treatment. Treated water is then disposed of into the San Francisco Bay or reused as recycled water.

Project Site

The project site is currently vacant and does not contain any wastewater infrastructure or any land uses that generate wastewater.

Stormwater

Generation and Collection

County of Alameda

The County's Public Works Department oversees municipal storm drainage within the County limits. The municipal storm drainage system consists of ditches, inlets, basins, and underground piping. The Alameda County Flood Control and Water Conservation District maintains Storm Drainage Master Plans for each zone in their district, as well as engineering standards that guide development of the municipal storm drainage system.

Project Site

The project site is located in unincorporated Alameda County, adjacent to the City of Pleasanton. The project area is covered by the San Francisco Bay Municipal Regional Stormwater Permit (MRP). The

²⁹ City of Livermore. 2017. Sewer Master Plan, Final Report. December.

³⁰ City of Livermore. 2013. Livermore Water Reclamation Plant 2012 Master Plan Update. November.

³¹ City of Livermore. 2017. Sewer Master Plan, Final Report. December.

³² City of Livermore. 2013. Livermore Water Reclamation Plant 2012 Master Plan Update. November.

³³ Ibid.

MRP was adopted on May 11, 2022, and applies to 79 Bay Area municipalities in order to standardize requirements, pool resources, and achieve results on a large scale.³⁴ The project site is located in the northern section of the Upper Alameda Creek Watershed, within the Chain of Lakes subwatershed but adjacent to the Arroyo Mocho Canal subwatershed to the west.³⁵ There are no existing public storm drainage lines on the project site or on the project-adjacent portion of Busch Road.

The proposed project would construct storm drainage lines under internal streets in the project site and under Busch Road. These storm drainage lines would flow east and drain into a primary bioretention area, either under Design Option A or Design Option B, as described in Section 2.6, Project Description, of this Draft EIR.

Solid Waste

County of Alameda

Solid waste collection and disposal in the County is overseen by the Alameda County Department of Environmental Health (ACDEH), which is responsible for ensuring the correct operation and closure of solid waste facilities.³⁶ Additionally, it is also responsible for ensuring proper storage and transportation requirements of solid waste. The staff regulates these activities by permitting and inspecting landfills, transfer stations, refuse collection vehicles, and other facilities; providing information to the public; and investigating complaints regarding illegal disposal or storage of solid wastes.

City of Pleasanton

Solid waste collection and disposal in the City is provided by Pleasanton Garbage Service, Inc. (PGS). PGS currently contracts with Browning Ferris Industries for disposal at the Vasco Road Landfill in Livermore. The Vasco Road Landfill has a total design capacity of 40,207,100 cubic yards. It is authorized to accumulate 2,518 tons of solid waste per day. According to the Alameda County Countywide Integrated Waste Management Plan (IWMP), and assuming achievement of countywide waste reduction goals, the Vasco Road Landfill has a current remaining capacity of 11,560,000 cubic yards with an estimated closure year of 2051.

Project Site

Currently, the project site generates minimal solid waste, which is collected by the PGS. The proposed project would be served by PGS for both solid waste and recycling services.

³⁴ San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB). 2022. San Francisco Bay Region: Municipal Regional Stormwater NPDES Permit. May 11.

³⁵ Alameda County Flood Control and Water Conservation District. 2024. Upper Alameda Creek Watershed – Northern Section. Website: <https://acfloodcontrol.org/the-work-we-do/resources/upper-alameda-creek-watershed-north/>. Accessed February 13, 2024.

³⁶ Alameda County Department of Environmental Health (ACDEH). 2024. Solid Waste Program. Website: <https://deh.acgov.org/solidwaste/solid-waste.page?>. Accessed February 13, 2024.

3.17.2 - Regulatory Framework

Federal

Safe Drinking Water Act

The Safe Drinking Water Act authorizes the United States Environmental Protection Agency (EPA) to establish national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Department of Health Services conducts most enforcement activities.

Clean Water Act (National Pollutant Discharge Elimination System)

The Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the nation. Under the CWA, the EPA implements pollution control programs and sets wastewater standards.

The National Pollutant Discharge Elimination System (NPDES) permit program was established within the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

State

California Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), which was passed in California in 1969, the State Water Board has the ultimate authority over State water rights and water quality policy. Porter-Cologne also establishes nine Regional Water Quality Control Boards (RWQCBs) to oversee water quality on a day-to-day basis at the local and regional level. The RWQCBs engage in a number of water quality functions in their respective regions and regulate all pollutant or nuisance discharges that may affect either surface water or groundwater.

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Sections 10610–10656) requires that all urban water suppliers with at least 3,000 customers prepare UWMPs and update them every 5 years. The act requires that UWMPs include a description of water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions. Specifically, UWMPs must:

- Provide current and projected population, climate, and other demographic factors affecting the supplier's water management planning;
- Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier;
- Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage;
- Describe plans to supplement or replace that source with alternative sources or water demand management measures;
- Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (associated with systems that use surface water);
- Quantify past and current water use;
- Provide a description of the supplier's water demand management measures, including schedule of implementation, program to measure effectiveness of measures, and anticipated water demand reductions associated with the measures; and
- Assess the water supply reliability.

California Health and Safety Code

Section 64562 of the California Health and Safety Code establishes water supply requirements for service connections to public water systems. Before additional service connections can be permitted, enough water must be available to the public water system from its water sources and distribution reservoirs to adequately, dependably, and safely meet the total requirements of all water users under maximum-demand conditions.

California Senate Bills 610 and 221

Senate Bill (SB) 610 and SB 221 (Water Code § 10910(c)(2)) amended State law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 seek to promote more collaborative planning between local water suppliers and cities and counties by requiring that detailed information regarding water availability be provided to decision-makers prior to approval of specified large development projects. SB 610 requires that detailed information be included in a Water Supply Assessment (WSA), which is then included in the administrative record that serves as the evidentiary basis for an approval action by a city or county. SB 221 requires that the detailed information be included in a verification of water supply. Under SB 610, WSAs must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code Section 10912(a)) subject to the California Environmental Quality Act (CEQA).

California Water Conservation Act

The California Water Conservation Act (SB X7-7) was enacted in November 2009 and requires each urban water supplier to select one of four water conservation targets contained in California Water Code Section 10608.20 with the statewide goal of achieving a 20 percent reduction in urban per capita water use by 2020. Under SBX7-7, urban retail water suppliers are required to develop water use targets and submit a water management plan to the Department of Water Resources by July

2011. The plan must include the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use.

California Model Water Efficient Landscape Ordinance

The California Model Water Efficient Landscape Ordinance was adopted by the California Office of Administrative Law in September 2009, and requires local agencies to implement water efficiency measures as part of its review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the ordinance into their own code requirements for landscaping. The County has not adopted a local ordinance.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill 939, the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent in 1995 and 50 percent in 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, amendments to the California Integrated Waste Management Act introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

Regional

San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay RWQCB administers the NPDES stormwater permitting program and regulates stormwater in the San Francisco Bay region. The Alameda County Public Works Agency is a permittee under the Alameda County Countywide Clean Water Program. Stormwater discharges from construction activities on 1 acre or more are regulated by the RWQCB and are subject to the permitting requirements of the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (General Construction Permit).

The San Francisco Bay RWQCB also prepared the San Francisco Bay Basin Water Quality Control Plan (Basin Plan) for San Francisco Bay. The Basin Plan contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the region and describes beneficial uses of major surface waters and their tributaries.

Local

East County Area Plan

The ECAP contains the following policies related to utilities and service systems:

General Public Facilities

Goal **To provide for the development, operation, and expansion of major public facilities and to ensure the compatibility of adjacent land uses.**

Policy 138 The County shall allow development and expansion of major public facilities (e.g., hospitals, research facilities, landfill sites, jails, etc.) in appropriate locations inside and outside the Urban Growth Boundary consistent with the policies and Land Use Diagram of the East County Area Plan.

Policy 139 The County shall ensure that new major public facilities are properly sited to avoid land use conflicts and potential health and safety risks.

Policy 140 The County shall encourage the design of new or expanding public facilities to serve as models for the community. Features that should be incorporated into public facility design include drought-tolerant landscaping, energy conserving features, public art, child care, open space usable by workers and the public, and accessibility to all members of the community. The County shall investigate the potential for shared use of public facilities, such as joint use of neighborhood parks and school playgrounds.

Policy 146 The County shall actively consult with other agencies to monitor expansion and renovation plans for major public facilities and provide comments related to land use compatibility and safety issues where appropriate.

Solid Waste and Hazardous Waste Facilities

Goal **To provide sufficient long-term landfill capacity for County residents, without impeding achievement of the recycling goals in the County Charter, and to ensure the compatibility of solid waste facilities and adjacent uses.**

Policy 154 The County shall abide by the policies and Siting Criteria in the Alameda County Hazardous Waste Management Plan to ensure the responsible handling of hazardous waste in the County.

Program 68 The County shall evaluate new development proposals for their ability to provide hazardous waste collection points or other collection measures, such as curbside pickup service, where the number of households (as identified in the County Household Hazardous Waste Element) warrants this service. The County shall coordinate collection points with the Waste Management Authority.

Solid Waste Facilities

Goal **To ensure the safe and efficient disposal or recycling of waste.**

Policy 247 The County shall conform its solid waste policies and programs to the Recycling Plan prepared by the Recycling Board, and generally coordinate its hazardous and solid waste management with the Alameda County Waste Management Authority's goals,

policies, and plans, except to the extent that they are inconsistent with the Initiative or the Recycling Plan.

- Policy 248** The County shall promote use of solid waste source reduction, recycling, composting, and environmentally-safe transformation of wastes.
- Policy 249** The County shall support efforts to provide solid waste resource recovery facilities and household hazardous waste collection facilities convenient to residences, businesses, and industries.
- Policy 250** The County shall encourage development of innovative technologies to reclaim contaminated soils and sewage sludge.
- Program 89** The County shall amend the Zoning Ordinance as necessary to conditionally allow solid waste resource recovery facilities and household hazardous waste collection facilities in locations convenient to residences, businesses and industries.
- Program 90** The County shall amend the Zoning Ordinance as necessary to conditionally allow soil treatment facilities and co-composting in conjunction with existing landfill sites or on other appropriate locations.
- Program 91** The County shall amend the Zoning Ordinance as necessary to specifically recognize bioremediation of contaminated soils and co-composting of sewage sludge as industrial processes which can take place in industrial areas of the County as a permitted or conditionally permitted land use.

Water

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 251** The County shall work with the Alameda County Flood Control and Conservation District (Zone 7), local water retailers, and cities to develop a comprehensive water plan to assure effective management and long-term allocation of water resources, to develop a contingency plan for potential short-term water shortages, and to develop uniform water conservation programs. The water plan should include a groundwater pump monitoring and cost allocation system in order to facilitate groundwater management and to recover the cost of purchased water stored in the groundwater basin. In developing this plan, the East Bay Regional Park District (EBRPD) shall be consulted regarding potential direct or indirect effects of water use on EBRPD recreation facilities.
- Policy 252** The County shall encourage Zone 7 to pursue new water supply sources and storage facilities only to the extent necessary to serve the rates and levels of growth established by the Initiative and by the general plans of the cities within its service area.

- Policy 253** The County shall approve new developments 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.
- Policy 254** The County shall encourage Zone 7 and local water retailers to require new development to pay the full cost of securing, conveying, and storing new sources of water.
- Policy 255** The County shall encourage Zone 7 to maximize use of the Chain-of-Lakes for water supply development and groundwater management. Zone 7 is encouraged to stage implementation of the system so that each component may be utilized as it becomes available.
- Policy 256** The County shall discourage water service retailers from constructing new water distribution infrastructure which exceeds future water needs based on a level of development consistent with the Initiative.
- Policy 257** The County shall support more efficient use of water through such means as conservation and recycling, and shall encourage the development of water recycling facilities to help meet the growing needs of East County.
- Policy 258** The County shall encourage Zone 7, water retailers, and cities to sign the California Urban Water Conservation Council's Memorandum of Understanding which binds parties to implement Best Management Practices where feasible.
- Policy 259** The County shall include water conservation measures as conditions of approval for subdivisions and other new development.
- Policy 260** The County shall require major projects (see definition in Table 1 of the ECAP) to mitigate projected water consumption by applying one or more Best Management Practices that reduce water consumption off-site.
- Policy 261** The County shall encourage the efficient use of water for landscape irrigation, vineyards and other cultivated agriculture. To this end, the County shall encourage the use of recycled water, treated by the reverse osmosis or other process and meeting groundwater basin standards set forth by the Regional Water Quality Control Board, for agricultural irrigation.
- Policy 262** The County shall encourage Zone 7 and the water retailers to require separate service connections and meters where large quantities of water are used for special purposes such as golf courses and landscape irrigation so that consumption of water for these uses can be managed in times of drought. To this end, the County shall, if feasible, require the use of recycled water for golf courses and shall encourage use of recycled water for nonresidential landscaping, irrigated agriculture, and groundwater recharge in accordance with Regional Water Quality Control Board adopted standards.

- Policy 263** The County shall continue to seek alternative methods for economic reuse of wastewater in addition to those already considered.
- Program 92** The County Board of Supervisors shall sign the California Urban Water Conservation Council's Memorandum of Understanding which binds parties to implement Best Management Practices where feasible.
- Program 93** The County shall work with appropriate agencies (e.g., County Agricultural Commission, Soil Conservation Service, and the University of California Experimental Station) to provide farmers with information about water conserving agricultural practices.

Sewer

Goal **To provide efficient and cost-effective sewer facilities and services.**

- Policy 265** The County shall work with the Tri-Valley Wastewater Authority (TWA) and other East County jurisdictions to ensure that additional export capacity and/or reclaimed water capacity is allocated so that the ECAP development pattern can occur.
- Policy 268** The County shall continue to pursue adequate sewage export capacity for unincorporated residential, commercial, and industrial development, consistent with the East County Area Plan, through participation in the TWA or by other means.
- Policy 270** The County shall encourage development of water reclamation facilities, where feasible, in order to reduce wastewater export and to provide additional water to help meet the growing needs of the East County.
- Policy 271** The County shall promote the use of reverse osmosis wastewater treatment and other recycling technologies at the Livermore Treatment Facility and other locations.
- Policy 272** The County shall not approve new rural residential development utilizing septic tanks over the groundwater basin on lots of less than five acres. If clusters of five or more rural residences are proposed for areas of less than 100 acres, special hydrologic studies may be required.
- Policy 274** The County shall require that all new discrete wastewater treatment plants be operated and maintained by a public agency, and that sufficient funds for long-term operation and maintenance are assured.
- Policy 275** The County shall condition the approval of new development on verification that adequate wastewater treatment and export and/or reclamation capacity exists to serve the development.
- Policy 276** The County shall require new development to pay its fair share of the costs of East County planned sewer system improvements including treatment, distribution, and export.

Storm Drainage and Flood Control

Goal **To provide efficient, cost-effective, and environmentally sound storm drainage and flood control facilities.**

Policy 277 The County shall work with the Alameda County Flood Control and Water Conservation District (Zone 7) to provide for development of adequate storm drainage and flood control systems to serve existing and future development.

Policy 278 The County shall promote flood control measures that advance the goals of recreation, resource conservation (including water quality and soil conservation), groundwater recharge, preservation of natural riparian vegetation and habitat, and the preservation of scenic values of the County's arroyos and creeks.

Policy 279 The County shall require new development to pay its fair share of the costs of East County storm drainage and flood control improvements.

Policy 280 The County shall regulate new development on a case-by-case basis to ensure that, when appropriate, project storm drainage facilities shall be designed so that peak rate flow of stormwater from new development will not exceed the rate of runoff from the site in its undeveloped state.

Policy 281 The County shall support and encourage the design of future flood control projects in a manner that preserves and/or restores and enhances riparian vegetation.

Policy 282 The County shall encourage use of natural or nonstructural stormwater drainage systems to preserve and enhance the natural features of a site.

Policy 283 The County shall ensure that development proposals within designated dam inundation areas are referred to the Office of Emergency Services and to appropriate local police departments for evaluation and updating of emergency response and evacuation plans.

Program 96 The County shall initiate a cooperative effort among interested agencies (e.g., County Planning Department, County Public Works, Zone 7, California Department of Fish and Game, East Bay Regional Park District, Livermore Area Recreation and Park District) that will integrate multiuse objectives for storm drainage and flood control features.

Program 97 The County shall develop design criteria for on-site flood control features such as detention and retention ponds and for stream channels improved for multiuse purposes. Criteria shall address integrating visual and other multiuse concerns into the physical design of flood control features and shall encourage use of permeable materials to enhance on-site percolation.

Program 98 The County shall require new development to set aside sufficient right-of-way and setback areas to accommodate multiuse objectives for storm drainage and flood

control features. Required rights-of-way and setback areas may exceed the 20 foot setback required under the County's Watercourse Protection Ordinance.

Program 99 The County shall identify the agency responsible for maintenance of on-site retention and detention basins prior to project approval.

Program 100 The County shall encourage Zone 7 to include upstream stormwater detention measures and or a by-pass channel in its Flood Control Master Plan to reduce or eliminate the need for downstream channel improvements in order to preserve as much of the existing riparian habitat of the Arroyo de la Laguna south of the Bernal Bridge and along Alameda Creek as possible.

Utilities

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 286 The County shall work with PG&E to design and locate appropriate expansion of gas and electric systems.

Policy 287 The County shall require new developments to locate utility lines underground, whenever feasible.

Water Quality

Goal To protect and enhance surface and groundwater quality.

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 large land areas.

- Program 108** The County shall implement all federal, State and locally imposed statutes, regulations, and orders that apply to stormwater quality. Examples of these include, but are not limited to:
- NPDES stormwater permit issued by the California 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.

Alameda County Code of Ordinances

The Alameda County Code of Ordinances contains the following applicable ordinances related to utilities and service systems:

Chapter 6.40—Solid Waste Collection and Organics Waste Reduction

Chapter 6.40 is also referred to as the Alameda County Solid Waste Collection and Organics Waste Reduction Ordinance. This ordinance establishes regulations regarding solid waste collection and reduction measures in unincorporated Alameda County.

Chapter 13.04—Sewer Service System

Chapter 13.04, Sewer Service System, establishes standards and conditions, and provides revenues, relating to the use and management of the sewerage system, and establishes uniform requirements for discharges into the wastewater collection and the treatment system used jointly with other public entities.

Chapter 16.28—Underground Utilities

Chapter 16.28, Underground Utilities, was adopted by the County to ensure that all utility distribution or communication facilities supplying electric, communication, or similar or associated services, installed in and for the purpose of supplying such service to any residentially zoned subdivision requiring the filing of a final map shall be placed underground. Utilities do not include metal poles used for street lighting, traffic signals, pedestals for police and fire system

communications and alarms, pad-mounted transformers pedestals, pedestal-mounted terminal boxes and meter cabinets, substations, and facilities used to carry voltages higher than 35,000 volts.

Chapter 17.64—Water Efficient Landscape Ordinance

Chapter 17.64, Water Efficient Landscape Ordinance, was enacted by the County pursuant to California Government Code Section 65591 and became effective on January 1, 2010. The Ordinance promotes the conservation and efficient use of water and prevents the waste of water resources while recognizing the values and benefits of landscapes as essential to the quality of life in California.

California Water Service—Livermore District 2020 Urban Water Management Plan

Cal Water prepared and adopted the Livermore District 2020 UWMP in June 2021 to meet the requirements of the California Urban Water Management Planning Act. The Livermore District UWMP evaluates sources of the water supply for the Livermore District service area's population and future water demand until 2045, the planning horizon. The Livermore District 2020 UWMP is intended to help facilitate implementation of SB 610 and SB 221.

3.17.3 - Methodology

This section is based on the information provided by a number of sources, which are described below.

EKI prepared a WSE that evaluated water supply impacts, generally consistent with the requirements for a WSA per California Water Code Section 10910. On April 23, 2024, Cal Water determined that the WSE is sufficient, complete, and all estimations used for projected water demands and supply are correct. The WSE is provided in Appendix J. EKl also prepared a Recycled Water Balance Technical Memorandum for the proposed project, which summarizes the recycled water balance for the proposed production, storage, and disposal of recycled water associated with the proposed project. The Recycled Water Balance Technical Memorandum is also provided in Appendix J. Additionally, Bert L. Michalczyk Consulting Engineers, Inc. provided a memorandum that provided more information on wastewater and water, which was utilized in the preparation of this analysis. This document is also included in Appendix J of this Draft EIR.

Cal Water reviewed and evaluated the Technical Memorandum from Woodard & Curran regarding the Arroyo Lago Water Supply Evaluation completed by EKl. The review shows that the WSE is completed in accordance with the requirements of SB 610 and SB 221 for creating a WSA. The Technical Memorandum found that the WSE's estimation of incremental annual project water demand is consistent with what is typically found in a WSA. The Technical Memorandum confirmed the findings that there is sufficient Cal Water supply from Zone 7 to support the development. This document is included in Appendix J of this Draft EIR.

FirstCarbon Solutions (FCS) also reviewed relevant County documents, including the General Plan, ECAP, and the County's Municipal Code. Furthermore, FCS reviewed relevant documents from the City of Livermore and the City of Pleasanton, including the City of Livermore Sewer Master Plan and the Livermore District UWMP.

3.17.4 - Thresholds of Significance

The lead agency utilizes the criteria in the CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts to utilities and service systems are significant environmental effects.

Would the project:

- a) 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?
- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- e) Comply with federal, State, and local statutes and regulations related to solid waste?

3.17.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where appropriate.

Water or Wastewater Treatment Facilities

Impact UTIL-1: **The proposed project would not 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.**

Impact Analysis

Construction

Water Supply

As stated above, the project site is not located in a water service area and does not contain any existing water or wastewater treatment facilities. As part of the proposed project, the project site would be joining the Livermore District water service area. As described under Impact UTIL-2, the proposed project would create the need for new water facilities but would not result in insufficient water supply. The proposed project would also construct 400,000 gallons of water storage for fire and emergency use. However, there would be no need to construct new or expand existing water treatment facilities beyond that already proposed as part of the proposed project. Therefore, environmental impacts related to the need for relocation or construction of new or expanded water supply facilities would be less than significant.

Wastewater Treatment

The proposed project would install a new on-site sewer collection system consisting of 8-inch diameter pipes that would discharge into another proposed 8-inch diameter pipe that would be constructed on Busch Road. The proposed off-site 8-inch diameter wastewater line would flow eastward past the end of Busch Road and then turn northward, eventually connecting to a proposed 1-acre sewer treatment plant, as shown in Exhibits 2-6a and 2-6b.

As discussed in Section 2, Project Description, the proposed sewer treatment plant would use a membrane bioreactor sewage treatment system, capable of producing disinfected tertiary recycled water as defined in California Code of Regulations Title 22, Section 60301.230, treating approximately 50,000 gallons of wastewater per day.³⁷ As discussed under Impact UTIL-3, the proposed wastewater facility would treat all wastewater generated by the proposed project and would therefore not require new wastewater facilities outside of the proposed project or expanded wastewater facilities at the LWRP.

The sewer treatment plant would include an influent pump station, a headworks facility, odor control, a membrane bioreactor facility, ultraviolet disinfection, an effluent and recycled water pump station and pipelines, solids handling, a chemical facility, administration, laboratory, operations, and maintenance. Disinfected tertiary recycled water produced by the wastewater treatment facility would be stored in lined storage ponds and would be disposed of through irrigation of agricultural spray fields.³⁸ The proposed wastewater treatment facility would also be required to meet the applicable requirements of the Water Reclamation Requirements for Recycled Water Use (Order WQ 2016-0068-DDW). Further, the treatment plant would have further oversight through permitting with the State Water Board and San Francisco Bay RWQCB. Additionally, the project applicant would file a Notice of Intent (NOI) under the Statewide General Recycled Water Order with the San Francisco Bay RWQCB for Waste Discharge Requirements (WDRs) related to its treatment and agricultural spray field in compliance with Title 22. As such, impacts related to wastewater treatment facilities would be less than significant.

Stormwater Drainage

There are no structures or impervious surfaces currently on the project site. The proposed project would develop 194 single-family residential units on a vacant site, resulting in an increase of 18.8 acres of impervious surfaces relative to existing conditions on-site.

The proposed project would install an on-site drainage system. Six-inch gutters would be constructed on proposed internal streets to capture surface runoff, where it would enter an underground piping system 18 inches in diameter. This piping system would connect to a proposed 36-inch stormwater pipeline which would be developed under Busch Road and connect to a proposed approximately 0.9-acre bioretention area, which would be located either west of El Charro Road (Design Option A) or east of El Charro Road (Design Option B), as described in Section 2, Project Description. The bioretention area would contain two layers: an 18-inch layer of bioretention soil mix, and a 12-inch layer of Class II permeable rock. The bioretention area would be protected by an 8-foot berm and

³⁷ EKI Environment & Water, Inc. (EKI). 2024. Updated Recycled Water Balance for Arroyo Lago, Pleasanton, CA. Technical Memorandum. January.

³⁸ Ibid.

would treat all incoming stormwater from the project site. In combination with an additional off-site 0.03-acre bioretention area, there would be sufficient capacity to meet the stormwater treatment needs of the proposed development.

In accordance with applicable provisions of Section C.3 of the San Francisco Bay Regional Water Quality Control Board Municipal Regional Permit (Order No. R2-2015-0049, NPDES Permit No. CAS612008) (or more recent permit), the proposed project would implement Low Impact Development (LID) stormwater management methods into the on-site storm drainage system, such as infiltration, evapotranspiration, or biotreatment.

The proposed project would not connect to a storm drainage system beyond its own proposed system. In addition, the collective storm drainage measures listed above would serve to slow, reduce, and meter the volume of runoff leaving the project site and ensure that downstream storm drainage facilities are not inundated with project-related stormwater. Impacts related to stormwater drainage facilities would be less than significant.

Electric Power

Electricity services would be provided by PG&E. Existing overhead utility lines along the proposed project frontage on Busch Road would be relocated underground. As discussed in Section 3.5, Energy, impacts related to energy use from electric power would be less than significant. Therefore, the proposed project would not result in the relocation or construction of new or expanded electric power facilities, and impacts would be less than significant.

Telecommunications

AT&T would provide phone services, and Comcast would provide phone and high-speed internet services to the project site. The proposed project would not require the construction or expansion of telecommunications facilities because it is located by existing urban development that already contains sufficient telecommunications facilities. Therefore, impacts related to the need for relocation or construction of new or expanded telecommunications facilities would be less than significant.

Operation

Impacts related to the need for relocation or construction of new or expanded water supply, wastewater treatment, stormwater drainage, or telecommunications facilities are limited to construction impacts. No respective operational impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Water Supplies

Impact UTIL-2: **The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.**

Impact Analysis

Construction

Impacts related to sufficient water supplies are limited to operational impacts. No respective construction impacts would occur.

Operation

Water supply would be provided to the project site by Cal Water through its Livermore District. The proposed project would construct 194 single-family residential units and 49 Junior Accessory Dwelling Units (JADUs). As discussed in Section 3.13, Population and Housing, the proposed project's 243 total units would result in an expected population of approximately 691 persons. The project-specific WSE estimated water demand within the proposed project using a factor of 52.3 gpcd and estimated a total residential water demand of 36,296.2 gpd, or 34.3 AFY for residential water uses. In addition, the WSE estimates an annual water demand of 9.9 AFY for the 5.6 acres of landscaped areas within the proposed project. Including an additional demand of 2.8 AFY for distribution system losses, the WSE estimates that the proposed project would generate an annual demand of 47 AFY.³⁹

As stated above and in Table 3.17-1, Cal Water found that the water demand of its service area would rise from an expected 9,333 AFY in 2025 to an expected 9,632 AFY in 2045 in a normal year scenario. The proposed project would represent approximately 0.68 percent of the projected water supply totals forecasted for year 2045. Furthermore, the Livermore District UWMP found that it would also be able to fully serve its service area in all multi-year drought scenarios, including the highest water demand scenario 5-year drought in 2045, which would result in an expected water demand of 10,128 AFY.⁴⁰ The UWMP projects that its total supply would meet the demand of the normal year scenario and that the purchased water and groundwater supply is expected to be able to meet the projected demands through 2025, even if there is a 5-year drought.

The proposed project would also construct 400,000 gallons of water storage, including 360,000 gallons of water storage for fire use, and 20,046 gallons of emergency water storage. Accordingly, the WSE concludes that sufficient water supply is available to the District to meet all future demands within its existing service area and those associated with the proposed project, assuming successful addition of the proposed project to the District's service area. Therefore, impacts related to sufficient water supply availability would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

³⁹ EKI Environment & Water, Inc. (EKI). 2024. Water Supply Evaluation. March.

⁴⁰ Ibid.

Mitigation Measures

None required.

Wastewater Treatment Capacity

Impact UTIL-3: **The proposed project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments.**

Impact Analysis

Construction

Impacts related to sufficient water supplies are limited to operational impacts. No respective construction impacts would occur.

Operation

The proposed project would generate an estimated 32,667 gpd.⁴¹ As noted under Impact UTIL-1, the proposed project would construct a 1-acre sewer treatment plant that would provide treatment capacity of 50,000 gallons per day. Disinfected tertiary recycled water produced by the wastewater treatment facility will be stored in lined storage ponds and will be disposed of through the irrigation recycled water spray fields (Exhibits 2.6a and 2.6b), which are located outside of the Alameda County Urban Growth Boundary and zoned for agricultural use.⁴² As such, this treatment capacity of the proposed sewer treatment plant would have enough capacity to serve the proposed project’s expected wastewater generation, and no new or expanded wastewater treatment or conveyance facilities would be required beyond those provided in the proposed project.

As previously discussed, the proposed wastewater treatment facility would be a membrane bioreactor treatment plant capable of producing disinfected tertiary recycled water as defined in California Code of Regulation, Title 22, Section 60301.230. Disinfected tertiary recycled water produced by the wastewater treatment facility would be stored in lined storage ponds and would be disposed of through irrigation of agricultural spray fields.⁴³ The treatment plant would have oversight through permitting with the State Water Board and San Francisco Bay RWQCB. Additionally, the project applicant would file a NOI under the Statewide General Recycled Water Order with the San Francisco Bay RWQCB. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

⁴¹ 90 percent of the estimated water demand from the proposed project (36,292.2 gpd).

⁴² EKI Environment & Water, Inc. (EKI). 2024. Updated Recycled Water Balance for Arroyo Lago. Pleasanton, CA. Technical Memorandum. January.

⁴³ Ibid.

Attainment of Solid Waste Reduction Goals

Impact UTIL-4: The proposed project would not 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?

Impact Analysis

Construction

The proposed project would result in the construction of 194 single-family homes, 49 JADUs, and various off-site improvements. Using residential and nonresidential construction waste generation rates published by the EPA, an estimate of the total construction debris generated by the proposed project is provided in Table 3.17-4.

Table 3.17-4: Construction Solid Waste Generation

Land Use	Waste Generation Rate	Square Footage	Construction Waste Generation	
			Tons	Cubic Yards
Residential	4.38 pounds per square foot	1,152,166 ¹	2,523	3,532
Nonresidential	3.89 pounds per square foot	61,788	120	168
Total	–	–	2,643	3,700

Notes:
 1 ton = 2,000 pounds; 1 ton = 1.4 cubic yards
¹ Calculated by using the average of 194 residential units multiplied by 2,541 square feet (smallest house size) and 194 residential units multiplied by 3,398 square feet (largest house size).
 Source: United States Environmental Protection Agency (EPA). 1998; FirstCarbon Solutions (FCS). 2024.

Development of the proposed project would generate an estimated 3,700 cubic yards of construction debris. This waste volume represents 0.03 percent of the 11.56 million cubic yards of remaining capacity at the Vasco Road Landfill. Furthermore, the proposed project would be required to comply with the County’s 2003 Green Building Ordinance, which requires that a minimum of 50 percent of construction and demolition debris at County projects be diverted through recycling and reuse. The values shown in the above table do not adjust construction solid waste generation to account for debris recycling that would serve to divert waste from the landfill. Therefore, short-term construction impacts would be less than significant.

Operation

Using a standard operational waste generation rate of 3.0 pounds per capita per day obtained from the Countywide IWMP,⁴⁴ the proposed project would generate approximately 2,073 pounds of waste per day⁴⁵ or approximately 378 tons of operational waste per year.

⁴⁴ County of Alameda. 2023. Alameda County Integrated Waste Management Plan. November 17.

⁴⁵ 691 persons multiplied by 3.0 pounds per capita per day.

The proposed project would generate an estimated 530 cubic yards of operational solid waste on an annual basis at buildout. This waste volume represents approximately 0.004 percent of the 11.56 million cubic yards of remaining capacity at the Vasco Road Landfill. Moreover, these values do not adjust operational solid waste generation to account for recycling and waste reduction activities that would serve to divert waste from the landfill. Therefore, long-term operational impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Solid Waste Regulations

Impact UTIL-5: **The proposed project would comply with federal, State, and local statutes and regulations related to solid waste.**

Impact Analysis

The proposed project would generate solid waste during construction operation and maintenance. Common construction waste may include metals, masonry, plastic pipes, rocks, dirt, cardboard, or green waste related to land development. A significant impact would occur if the proposed project would conflict with federal, State, or local management and reduction statutes and regulations related to solid waste.

During construction, the proposed project would be required to comply with the County’s Ordinance Code Chapter 6.40 relating to solid waste collection and organics waste reduction measures. Furthermore, the proposed project would be required to comply with the County’s 2003 Green Building Ordinance, which requires that a minimum of 50 percent of construction and demolition debris at County projects be diverted through recycling and reuse. Additionally, the County’s 2009 Green Building Ordinance aims to achieve a 75 percent reduction of waste going to landfills. These measures would ensure compliance with the Integrated Waste Management Act by ensuring project construction waste is transferred to facilities that can adequately recycle solid waste. Additionally, Statewide ordinances, including AB 341, AB 939, and SB 1016 require waste reduction, recycling, and diversion. Therefore, the proposed project would be required to abide by and be consistent with federal, State, and local statutes and regulations related to solid waste, including the California Health and Safety Code, California Code of Regulations, California Public Resources Code, ECAP, and Municipal Code. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.17.6 - Cumulative Impacts

The cumulative analysis considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project.

Water

The geographic scope of the cumulative potable water analysis is the Livermore District service area. The proposed project's estimated demand is 47 AFY of potable water. The Cal Water UWMP indicates that potable water demand and supplies would total 9,380 AFY in 2025. The proposed project's demands would represent less than 1 percent of potable water supplies. Furthermore, the Cal Water UWMP estimates that sufficient water is available to meet the needs of its service area through the year 2045, which accounts for long-term growth assumptions.

For those projects that are located within the Livermore District's service area, the Cal Water UWMP anticipates adequate water supplies for all water year scenarios through 2045. These projects would be required to demonstrate that they would be served with potable water service as a standard requirement of the development review process, and these projects may be required to implement water conservation measures. Furthermore, the proposed project would not require any additional off-site water facilities to be constructed and expanded and, thus, would not result in physical impacts on the environment from such activities. Therefore, the proposed project, in conjunction with other past, present, and reasonably foreseeable projects, would not have a cumulatively significant impact related to potable water supply.

Wastewater

The geographic scope of the cumulative wastewater analysis is the Livermore District service area, which provides wastewater collection and treatment services.

Owned and operated by the City of Livermore, the LWRP has a capacity to treat approximately 8.5 million gpd and currently treats flows of 4.0 to 7.0 million gpd of wastewater.⁴⁶ All future projects that are tributary to the LWRP would be required to demonstrate that sewer service is available to ensure that adequate sanitation can be provided. The proposed project would generate an estimated 32,667 gpd.⁴⁷ As noted under Impact UTIL-1, the proposed project would construct a 1-acre sewer treatment plant that would provide treatment capacity of 50,000 gallons per day. As such, this treatment capacity of the proposed sewer treatment plant would have enough capacity to serve the proposed project's expected wastewater generation, and no new or expanded wastewater treatment or conveyance facilities would be required beyond those provided in the proposed project. As the proposed sewer treatment plant would have adequate capacity to serve the proposed project, the proposed project would not have a cumulatively significant impact related to wastewater.

⁴⁶ California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. June.

⁴⁷ 90 percent of the estimated water demand from the proposed project (36,292.2 gpd).

Storm Drainage

The County’s Public Works Department oversees municipal storm drainage within the County limits. The municipal storm drainage system consists of ditches, inlets, basins, and underground piping. The Alameda County Flood Control and Water Conservation District maintains Storm Drainage Master Plans for each zone in their district, as well as engineering standards that guide development of the municipal storm drainage system.

All future development projects in the County are required to provide storm drainage facilities that collect and detain stormwater. The storm drainage facilities shall include provisions for future upstream development, and no development shall discharge at a rate that exceeds the capacity of any portion of the existing downstream system. Runoff from storms up to the 100-year return frequency is conveyed through storm facilities and disposed of in a manner that protects public and private improvements from flood hazards. The proposed project would install an on-site storm drainage system consisting of inlets, piping, and two bioretention areas, configured either under Design Option A or Design Option B. The bioretention areas and associated stormwater drainage infrastructure proposed would have adequate capacity to serve the proposed project in storm events. Therefore, the proposed project would not have a cumulatively considerable contribution to stormwater impacts. Furthermore, the proposed project would implement standard stormwater measures during construction to ensure downstream water quality impacts are minimized to the greatest extent possible. In addition, the proposed project would provide water quality measures to prevent pollution during project operations. Most past, and all present and reasonably foreseeable future development must comply with applicable State and local requirements that ensure no significant adverse impacts would result. Therefore, the proposed project, in conjunction with other past, present, and reasonably foreseeable projects, would not have a cumulatively significant impact related to storm drainage.

Solid Waste

While solid waste and recycling collection services for the project site would be provided by PGS, the geographic scope of the cumulative solid waste analysis is the County, which operates solid waste landfills and oversees regional waste diversion programs.

The cumulative projects listed in Table 3-1, as well as other relevant cumulative projects as required by CEQA, would generate additional solid waste as summarized in Table 3.17-5.

Table 3.17-5: Cumulative Operational Solid Waste Generation

Land Use	Waste Generation Rate	Size	Approximate Waste Generation	
			Daily Total (tons)	Annual Total (tons)
Single-family Residential	3.0 pounds per capita per day	368 residential units or approximately 1,046 persons	1.569	572.685
Multi-family Residential	3.0 pounds per capita per day	710 residential units or approximately 2,017 persons	3.026	1,104.308

Land Use	Waste Generation Rate	Size	Approximate Waste Generation	
			Daily Total (tons)	Annual Total (tons)
Industrial	62.5 pounds per 1,000 square feet per day	715,000 square feet	22.344	8,155.469
Commercial	13 pounds per 1,000 square feet per day	205,027 square feet	1.333	486.427
Total	–	–	29.272	10,318.889

Notes:
All values are approximate.
1 ton = 2,000 pounds; 1 ton = 1.4 cubic yards
Source: California Department of Resources, Recycling, and Recovery (CalRecycle). Estimated Solid Waste Generation.

The proposed project is anticipated to generate approximately 1.04 tons of solid waste per day. The Vasco Road Landfill has a permitted daily capacity of 2,518 tons, and a total remaining permitted capacity of 11.56 million tons. The anticipated waste volume of the project and cumulative projects' solid waste represents approximately 1.2 percent of the landfill's permitted daily capacity. As such, sufficient capacity is available to serve the proposed project, as well as existing, planned, and probable future land uses in the County for the foreseeable future. Therefore, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to solid waste.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

3.18 - Wildfire

3.18.1 - Introduction

This section describes the existing wildfire conditions in the project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to wildfire that could result from implementation of the project. Information in this section was obtained from the California Department of Forestry and Fire Protection (CAL FIRE), the County of Alameda (County), the Bay Area Air Quality Management District (BAAQMD), the Livermore-Pleasanton Fire Department (LPFD), the Alameda County Fire Department (ACFD), the City of Pleasanton (City), the Arroyo Lago Offsite Utility Flood Study prepared by Schaaf and Wheeler on March 13, 2024 (Appendix G), and the Arroyo Lago, Alameda County – Hydrology Analysis provided by Carlson, Barbee, and Gibson, Inc. on May 3, 2023, and revised on January 24, 2024 (CBG) (Appendix G). and the City of Pleasanton (City).

The following public comment was received during the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP) scoping period related to wildfire. This Draft EIR considered these comments in preparing this analysis. The comment is summarized as follows:

- The Draft EIR should evaluate impacts from natural disasters.

3.18.2 - Environmental Setting

Wildfire Hazard Area Designations

Alameda County

Land uses in the County range from rural, agricultural, and open space to urban and developed. Covering a total area of approximately 525,440 acres, the County contains 115,864 acres of land located in Very High Fire Hazard Severity Zones (FHSZ), 112,041 acres of High FHSZ, and 24,084 acres of Moderate FHSZ located in State Responsibility Area (SRA).¹ Most of the eastern half of the County is identified as highly susceptible to wildland fire hazards, while most of the western half of the County is under an urban area designation.² The southeastern portion of the County, along the Santa Clara County and San Joaquin County lines are located within a Very High FHSZ (VHFHSZ), and portions of the northeast along the San Joaquin County and Contra Costa County lines are located within a High FHSZ.³ Another VHFHSZ is located along the Contra Costa County line between San Leandro and Castro Valley. Moderate FHSZs are located centrally along the High and VHFHSZ.⁴ Alameda County is subject to wildland fires due to its hilly terrain, weather conditions, and the nature of its plant coverage.⁵

¹ California Department of Forestry and Fire Protection (CAL FIRE). 2022. Alameda County State Responsibility Area Fire Hazard Severity Zones. Website: https://osfm.fire.ca.gov/media/1yelle2d/fhsz_county_sra_11x17_2022_alameda_ada.pdf. Accessed February 26, 2024.

² County of Alameda. 2016. Figure S-5 of the Safety Element, Alameda County General Plan. September.

³ California Department of Forestry and Fire Protection (CAL FIRE). 2022. Alameda County State Responsibility Area Fire Hazard Severity Zones. Website: https://osfm.fire.ca.gov/media/1yelle2d/fhsz_county_sra_11x17_2022_alameda_ada.pdf. Accessed February 26, 2024.

⁴ Ibid.

⁵ County of Alameda. 2013. Alameda County General Plan, Safety Element. January 8.

According to the CAL FIRE Fire Hazard Severity Zone Map, there are three VHFHSZs located in a Local Responsibility Area (LRA) within the County: a strip along the State Route (SR) 13 in the northwest portion of the County, the southwestern portion of the City, and the northwestern portion of Scott's Corner.⁶

City of Pleasanton

The City is primarily designated as an LRA but contains High and Moderate SRA FHSZs by the southern and western City Limits.⁷ The City also contains a VHFHSZ in an LRA, located in the southwestern portion of the City.⁸

Project Site

According to CAL FIRE, the project site is not located in a Moderate, High, or Very High Fire Hazard SRA, and is also not located in an LRA VHFHSZ. The nearest Very High Fire Hazard in an SRA to the project site is approximately 3.86 miles southwest of the project site. The nearest VHFHSZ in an LRA is located approximately 3.06 miles southwest of the project site. Generally, the nearest FHSZ is approximately 1.55 miles north of the project site, north of Interstate 580 (I-580), and is designated as a Moderate FHSZ in an SRA.

Wildfire-conductive Conditions

Grassland or other vegetation in California is easily ignited, particularly in dry seasons. Wildfire is a serious hazard in high dry fuel load areas, particularly near areas of natural vegetation and steep slopes since fires tend to burn more rapidly on steeper terrain. Wildfire is also a serious hazard in areas of high wind, given that fires will travel faster and farther geographically when winds are higher. Furthermore, wildfire is more likely in areas where electric power lines are located above ground where they may encounter flammable vegetation or building materials.

Alameda County

As discussed above, much of Alameda County is subject to wildland fires, and thus under CAL FIRE FHSZ designations, due to the area's hilly terrain, weather conditions, and the nature of its plant coverage.⁹ In 2022, the average wind speed in the County ranged from 4 to 6 miles per hour (mph), and generally blew southeast in the winter and west to southwest in the summer.¹⁰ Electric power lines mostly occur in urban areas and along roadways. Natural gas pipelines occur frequently across

⁶ California Department of Forestry and Fire Protection (CAL FIRE). 2008. Alameda County Very High Fire Hazard Severity Zones in LRA. Website: https://34c031f8-c9fd-4018-8c5a-4159cdf6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-map/upload-1/fhszl_map1.pdf. Accessed February 26, 2024.

⁷ California Department of Forestry and Fire Protection (CAL FIRE). 2008. Pleasanton Very High Fire Hazard Severity Zones in LRA. Website: <https://34c031f8-c9fd-4018-8c5a-4159cdf6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-map/upload-4/pleasanton.pdf>. Accessed February 26, 2024.

⁸ Ibid.

⁹ County of Alameda. 2013. Alameda County General Plan, Safety Element. January 8.

¹⁰ Bay Area Air Quality Management District (BAAQMD). 2023. Air District Air Quality Data. Website: <https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/#/>. Accessed February 26, 2024.

the County, including residential and commercial areas. The areas most susceptible to wildfire are the hilly northwestern, central, and southeastern portions of the County.¹¹

City of Pleasanton

According to CAL FIRE, 903 urban acres in the City are subject to high or very high wildfire threat, and 6,157 acres are in wildland urban interface fire threat areas.¹² Areas of the City that pose a wildfire risk are in the hills west of I-680 and in the hills to the south of the most developed areas of the City due to fuel loading and topography. The center of the City is not considered to be an area of high risk.

Project Site

The project site is located adjacent to the eastern portion of the City. The project site is relatively flat and low in elevation (approximately 354 to 360 feet above mean sea level). The project site is currently vacant and contains some moderate-sized shrubs and low-lying grass vegetation that is dry in summer and autumn months. The project site does not contain any bodies of water but is adjacent to Lake I of the Zone 7 Chain of Lakes to the North. Additionally, Cope Lake is located 0.47 mile east of the project site.

The project site is located within an urbanized area and is surrounded by both urban features and reservoirs that provide fuel breaks in the event of a fire, such as the Zone 7 Chain of Lakes, I-580, Livermore Municipal Airport, and residential and industrial development to the west and south of the project site.

The BAAQMD monitors the Bay Area's air quality at a number of stations, and the closest station to the project site is located in the City of Livermore, approximately 4 miles east. The average wind speed at this station varied from month to month and ranged from 4 to 6 mph in 2022.¹³

Emergency and Evacuation Routes/Access

CAL FIRE

CAL FIRE is responsible for fire protection and stewardship of over 31 million acres of California's privately owned wildlands.¹⁴ CAL FIRE also provides varying levels of emergency services in 36 of California's 58 counties via contracts with local governments. As a result of its major incident management experience and department size, CAL FIRE is often asked to assist or take the lead in disasters.¹⁵ In November 2018, the Camp Fire wildfire occurred in Northern California, resulting in the deadliest wildfire to occur in State history, causing 85 deaths, destroying 18,804 structures, and burning 153,336 acres of land.¹⁶ In August 2020, the Santa Clara Unit (SCU) Lightning Complex

¹¹ Alameda County. 2022. 2021 Alameda County Local Hazard Mitigation Plan. March.

¹² City of Pleasanton. 2008. Proposed Pleasanton General Plan 2005-2025 Draft Environmental Impact Report. September.

¹³ Bay Area Air Quality Management District (BAAQMD). 2023. Air District Air Quality Data. Website: <https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/#/>. Accessed February 26, 2024.

¹⁴ California Department of Forestry and Fire Protection (CAL FIRE). 2023. About. Website: <https://www.fire.ca.gov/about>. Accessed February 26, 2024.

¹⁵ Ibid.

¹⁶ California Department of Forestry and Fire Protection (CAL FIRE). 2022. Top 20 Deadliest California Wildfires. October 24.

wildfire occurred over Stanislaus, Santa Clara, Alameda, Contra Costa, and San Joaquin Counties, and burned 396,625 acres of land.¹⁷

Alameda County

The ACFD provides fire protection and emergency medical services in and around the cities of San Leandro, Dublin, Newark, Union City and Emeryville, the Lawrence Berkeley National Laboratory and the Lawrence Livermore National Laboratory, and all unincorporated areas of the County excluding the community of Fairview.¹⁸ The ACFD serves the County with 29 fire stations to serve a population of 394,000, including emergency medical services.¹⁹ The ACFD consists of 26 engine companies, seven ladder truck companies, one heavy rescue vehicle, and additional specialized equipment.²⁰ Unincorporated areas of the County are served by nine stations, encompassing a service area of 431 square miles and a population of 126,397.²¹

According to the Safety Element of the General Plan, the eastern and southern areas of the County include large portions of wildland, grazing land, and rural farmlands, which pose a large wildfire hazard.

The Alameda County Office of Homeland Security and Emergency Services is responsible for planning, outreach, and training or disaster management and emergency preparedness.²² The ACFD strives to maintain a 5-minute response time for both fire and medical emergencies.²³ The main routes into and out of the County that would most likely serve as evacuation routes are I-80, I-580, I-680, and I-880, as well as SR-24, SR-84, SR-92, and SR-123.

City of Pleasanton

The LPFD provides the Cities of Pleasanton and Livermore with fire protection and emergency medical services.²⁴ In 2020, the LPFD served a population of approximately 171,385 in an approximately 49.45 square mile area.²⁵ The LPFD has an automatic mutual aid agreement with the ACFD to provide voluntary fire protection, rescue, and emergency medical services, without supplanting day-to-day services of the ACFD service area.

Project Site

As discussed in Section 3.14, Public Services, the nearest fire station to the project site is LPFD Fire Station 1, located approximately 0.64 mile south of the project site, with the next closest fire station being LPFD's Fire Station 3, located approximately 1.4 miles northwest of the project site. LPFD's average response time for the project site and surrounding area is approximately 6 minutes and 3

¹⁷ California Department of Forestry and Fire Protection (CAL FIRE). 2022. Top 20 Largest California Wildfires. October 24.

¹⁸ Alameda County Fire Department (ACFD). 2023. About Us. Website: <https://fire.acgov.org/about-us/>. Accessed February 26, 2024.

¹⁹ Ibid.

²⁰ Ibid.

²¹ County of Alameda. 2013. Alameda County General Plan, Safety Element. January 8.

²² County of Alameda. 2012. Alameda County Emergency Operations Plan. December.

²³ Alameda County Fire Department (ACFD). 2023. FAQs. Website: <https://fire.acgov.org/faqs/>. Accessed February 26, 2024.

²⁴ Livermore-Pleasanton Fire Department (LPFD). 2023. About Us. Website: <https://www.lpfire.org/about-us>. Accessed February 26, 2024.

²⁵ Livermore-Pleasanton Fire Department (LPFD). 2020. Year End Report–2020. Website: <https://www.lpfire.org/home/showpublisheddocument/6001/637575327264800000>. Accessed March 11, 2024.

seconds. The nearest ACFD fire station is ACFD Station 18, located approximately 2.36 miles north of the project site.

The proposed project would evacuate via Busch Road, which connects to I-580 through the Valley Avenue and Santa Rita Road main arterial roads.

Post-fire Slope Instability and Drainage Pattern Changes

Slope instability from wildfire scarring of the landscape can result in more intensive flooding and landslides. These post-fire slope soils and altered drainage patterns can more easily creep away downslope sides of foundations and can also reduce lateral support.

Alameda County

The major post-wildfire hazards in the County are unstable hill slopes and altered drainage patterns. Slopes may suffer landslides, slumping, soil slips, and rockslides. Figure S-4 of the County General Plan's Safety Element identifies locations in the County susceptible to slope failure. In 2020 and 2022, the County recorded two and four fire incidents respectively, with no incidents being reported in 2021.²⁶ As of December 2023, one incident was reported for 2023.²⁷ The incident, the Flynn Fire, covered 80 acres near I-580 and North Flynn Road in Altamont, an unincorporated community northeast of the City of Livermore. The fire started on July 29, 2023, and was 100 percent contained by the CAL FIRE SCU on July 30, 2023.

Project Site

According to Figure S-5 of the General Plan Safety Element, the project site is not located on a site susceptible to landslides or an area where landslides previously occurred. Furthermore, the project site is relatively flat (approximately 354 to 360 feet above mean sea level) and would therefore not be susceptible to any slope instabilities. According to the Hydrology Analysis prepared by Carlson, Barbee, & Gibson, Inc. (CBG) on May 3, 2023, and revised on January 24, 2024, located in Appendix G, the project site has a gentle slope toward the center of the site, where stormwater is conveyed via a small swale into a larger earthen channel. The existing earthen channel, located southeast of the project site, conveys the stormwater from the project site and a portion of the adjacent site, east to an existing 24-inch culvert under El Charro Road. The existing 24-inch storm drainpipe daylights and the water discharges on the east side of El Charro Road where the stormwater continues east toward Cope Lake.

3.18.3 - Regulatory Framework

Federal

United States Department of Interior

Review and Update of the 1995 Federal Wildland Fire Management Policy

1. **Safety**—Firefighter and public safety is the first priority. All Fire Management Plans and activities must reflect this commitment.

²⁶ California Department of Forestry and Fire Protection (CAL FIRE). 2023 Incident Archive. Website: <https://www.fire.ca.gov/incidents/2023>. Accessed February 26, 2024.

²⁷ Ibid.

2. **Fire Management and Ecosystem Sustainability**—The full range of fire management activities will be used to help achieve ecosystem sustainability, including its interrelated ecological, economic, and social components.
3. **Response to Wildland Fire**—Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected dictate the appropriate management response to the fire.
4. **Use of Wildland Fire**—Wildland fire will be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions contained in operational plans.
5. **Rehabilitation and Restoration**—Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, and safety, and to help communities protect infrastructure.
6. **Protection Priorities**—The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have been committed to an incident, these human resources become the highest value to be protected.
7. **Wildland Urban Interface**—The operational roles of federal agencies as partners in the Wildland Urban Interface are wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify the mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer, and may also enter into formal agreements to assist State and local governments with full structural protection.)
8. **Planning**—Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland and prescribed fires based on the area’s approved land management plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations.
9. **Science**—Fire Management Plans and programs will be based on a foundation of sound science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical, and sociological factors. Information needed to support fire

management will be developed through an integrated interagency fire science program. Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, Fire Management Plans, and implementation plans.

10. **Preparedness**—Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.
11. **Suppression**—Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.
12. **Prevention**—Agencies will work together and with their partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires.
13. **Standardization**—Agencies will use compatible planning processes, funding mechanisms, training and qualification requirements, operational procedures, values-to-be-protected methodologies, and public education programs for all fire management activities.
14. **Interagency Cooperation and Coordination**—Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.
15. **Communication and Education**—Agencies will enhance knowledge and understanding of wildland fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.
16. **Agency Administrator and Employee Roles**—Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency administrators are responsible and will be held accountable for making employees available.
17. **Evaluation**—Agencies will develop and implement a systematic method of evaluation to determine effectiveness of projects through implementation of the 2001 Federal Fire Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

State

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the California Governor's Office of Emergency Services (Cal/OES), which coordinates the responses of other agencies. When Contra

Costa County experiences an emergency, an Emergency Operations Center (EOC) may be opened. In the event an EOC is opened, emergency response team members coordinate efforts and work with local fire and police agencies, emergency medical providers, the California Highway Patrol (CHP), CAL FIRE, California Department of Fish and Wildlife (CDFW), and California Department of Transportation (Caltrans).

California Department of Forestry and Fire Protection Threat Potential Mapping

CAL FIRE has mapped fire threat potential throughout California. CAL FIRE maps fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The threat levels include no fire threat, moderate, high, and very high fire threat. Further, the maps designate the City of Pleasant Hill as the LRA of the project site. Additionally, CAL FIRE produced a 2010 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. The CAL FIRE Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Building Standards Code

The State of California provided a minimum standard for building design through the 2022 California Building Standards Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The 2022 CBC is based on the 2021 International Building Code but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and particular types of construction.

California Fire Code

The California Fire Code, Chapter 9 of Title 24 of the California Code of Regulations, was created by the California Building Standards Commission based on the International Fire Code and is updated every 3 years. The California Fire Code establishes the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the California Fire Code contains minimum standards for development in the wildland urban interface and fire hazard areas. The California Fire Code also provides regulations and guidance for local agencies in the development and enforcement of fire safety standards.

California Public Resources Code

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors²⁸ on construction equipment that use an internal combustion engine; specify requirements for the safe

²⁸ A spark arrestor is any device that prevents the emission of flammable debris from a combustion source (i.e., fireplaces, internal combustion engines, and wood burning stoves).

use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code [PRC] § 4442);
- Appropriate fire suppression equipment would be maintained during the highest fire danger period—from April 1 to December 1 (PRC § 4428);
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC § 4427); and
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (PRC § 4431).

Regional

Association of Bay Area Governments Hazard Mitigation Plan

The Association of Bay Area Governments (ABAG) multi-jurisdictional Local Hazard Mitigation Plan (LHMP) for the San Francisco Bay Area was updated in 2010 in partnership with the Bay Conservation and Development Commission (BCDC) Adapting to Rising Tides Program to support local governments in the regional plan for existing and future hazards of climate change. This detailed 5-year plan identifies potential natural and human-made hazards, assesses their potential risks, and includes mitigation methods to reduce risks. The potential hazards identified in the plan include earthquakes and liquefaction, wildfires, floods, drought, solar storms, dam or levee failure, disease outbreak, freezes, wind, heat, thunder and lightning storms, siltation, tornadoes, hazardous materials, slope failure and mudflows, and other hazards. Similarly, mitigation measures include hazard event planning, emergency preparedness coordination, education, facility upgrades, and monitoring actions.

Local

East County Area Plan

The East County Area Plan (ECAP) is part of the Alameda County General Plan, and establishes goals, policies, and programs within the East County area. The ECAP establishes the goals and policies related to wildfire:

Policy 46 The County shall require all new residential development to meet County standards for adequate road access, sewer and water facilities, fire protection, building envelope location, visual compatibility, and public services.

- Policy 125** The County shall not approve new development in areas with potential natural hazards (flooding, geologic, 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 225** The County shall require new development to pay their fair share of the costs for providing police, fire, and emergency medical services and facilities.
- Policy 226** The County shall require Major New Urban Development to meet the Level of Service standard for police, fire, and emergency medical services.
- Policy 227** The County shall require that new developments are designed to maximize safety and security and minimize fire hazard risk to life and property.
- Policy 229** The County shall limit development to very low densities in areas where emergency medical response times will average more than 15 minutes.
- Policy 294** The County shall limit residential development to very low densities in high fire hazard zones as identified by the Fire Hazard Severity Scale.
- Policy 296** 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 297** The County shall require all new homes in rural residential areas that are located in high fire hazard areas to be sited and designed to minimize risks to life and property.
- Policy 299** The County shall refer development applications to the County Fire Patrol, or local fire district, for review and recommendation.
- Policy 300** The County shall require the use of fire resistant building materials, fire resistant landscaping, and adequate clearance around structures in "high" and "very high" fire hazard areas.

Alameda County Local Hazard Mitigation Plan

In March 2022, the County adopted the 2021 Alameda County LHMP to replace the previous 2016 LHMP. The purpose of the plan is to assess risks posed by hazards and to develop prioritized action plans to reduce risks in Alameda County.²⁹ Hazard mitigation is the use of long- and short-term strategies to reduce the loss of life, personal injury, and property damage that can result from a disaster. It involves planning efforts, policy changes, programs, capital projects, and other activities that can mitigate the impacts of hazards. The LHMP contains the following “Mitigation Actions” aimed at reducing the vulnerability from natural hazards within the County:

²⁹ County of Alameda. 2022. 2021 Alameda County Local Hazard Mitigation Plan. March.

- Mitigation Action 1** Require after-action reports with clear recommendations for improvements after events in which the Operational Area Emergency Operations Center is activated.
- Mitigation Action 2** Establish standby contracts to be used for emergency response and recovery support.
- Mitigation Action 3** For county-leased or contracted facilities and services, clarify building owner roles and responsibilities during and after an emergency or disaster.
- Mitigation Action 4** Develop and implement a methodology to systematically assess all hazards outlined in this LHMP in considering building acquisitions and sales, portfolio planning, major retrofits, capital improvement planning, and master planning for county-owned and county-leased facilities.
- Mitigation Action 16** Install appropriate standby power systems such as generators and solar photovoltaic systems with energy storage systems to allow for grid independent operation in new and existing critical facilities that meet current and projected loads, site parameters, risk assessment, flexibility requirements, and operating concerns.
- Mitigation Action 17** Determine and secure enough fuel storage for generators to use. Develop contingency plans for obtaining generator fuel.
- Mitigation Action 21** Continue to expand the County’s Cooling Our Communities/ Heat Preparedness Program by developing action plans that identify and describe public transportation access and routes—particularly for transit-dependent neighborhoods—to pre-identified extreme weather centers and wildfire evacuation points and Red Cross shelters.
- Mitigation Action 22** Replace deteriorating and/or install more water storage tanks to be available for use during periods of prolonged droughts and for firefighting activities.
- Mitigation Action 35** Retrofit existing critical facilities through ignition-resistant construction using non-combustible materials, technologies, and assemblies on existing buildings and structures that are in conformance with local fire-related codes and standards.
- Mitigation Action 36** Create an online and off-line public outreach campaign for Red Flag Warnings and fire weather flags. Include information about what a Red Flag Warning is, what areas may be closed, what individuals should do to be prepared, and what activities should be avoided. Tailor outreach material to various target groups, including people experiencing homelessness and older, younger, and non-English-speaking residents.

- Mitigation Action 37** Continue to implement the Defensible Space Fuel Reduction Program. The program helps Alameda County property owners with vegetation management projects that will lead to compliance with their local fire department’s defensible space requirements in areas designated as Priority Hazard Zones.
- Mitigation Action 38** Fireproof-coat critical facilities in Very High FHSZs to allow structures to extend their strength in the event of a fire.
- Mitigation Action 39** Develop a countywide structure ignition zone assessment program for homeowners where mitigation specialists visit interested homeowners to develop a comprehensive report that recommends mitigation actions to take. Develop a grant program to assist homeowners with implementing recommended action items if funding is available.
- Mitigation Action 40** Implement fuel reduction projects, such as pruning, utility management, removal of understory, and biomass removal, which are beyond defensible space measures but within 2 miles of homes and other structures.

Alameda County Emergency Operations Plan

The Alameda County Emergency Operations Plan (EOP) establishes foundational policies and procedures that define how Alameda County will effectively prepare for, respond to, recover from, and mitigate against natural or human-caused disasters, including wildfires. The Alameda County Operational Area consists of incorporated cities, unincorporated areas, and special districts within the County. The EOP is based on the functions and principles of the California Standardized Emergency Management System, the National Incident Management System, and the Incident Command System. It identifies how the County emergency operational system fits into the overall California and national risk-based, all-hazard emergency response and recovery operations plans.

Alameda County Fire Code

The Alameda County Fire Code is also found as Chapter 6.04 of the County Code of Ordinances. As of April 2023, the Alameda Fire Code is based on the 2022 California Fire Code and contains modifications necessary to provide suitable fire protection standards for Alameda County’s local geography and needs.

3.18.4 - Methodology

This evaluation focuses on whether the proposed project would result in changes to the physical environment that would cause or exacerbate adverse effects related to wildfires or whether the proposed project would be placed in a location susceptible to wildfire or post-wildfire conditions. The evaluation also includes a determination of whether changes to the physical environment caused by the proposed project would impair or interfere with emergency response plans, expose people to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire, expose people/structures to downslope flooding or landslides, or include installation or maintenance of

infrastructure that may exacerbate fire risk. The following analysis is based, in part, on information provided by the General Plan, the ECAP, and the CAL FIRE website.

3.18.5 - Thresholds of Significance

The lead agency utilizes the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether wildfire impacts would be considered significant from implementation of the proposed project.

If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:

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

For purposes of this analysis, the following thresholds are used to evaluate the significance of wildfire impacts resulting from implementation of the project.

- Impaired implementation of or interference with an adopted emergency response plan or emergency evacuation plan via blockage of an evacuation route or provision of only one access point for emergency vehicles.
- Location in or near area of steep slopes, high wind areas, or historical wildfire burn areas leading to greater wildfire risk and, thereby, exposing project occupants to smoke and other wildfire-related air pollutants.
- Installation or maintenance of roads, fuel breaks, emergency water sources, electrical power lines, or natural gas lines that may exacerbate fire risk.
- Location in or near area of wildfire-scarred slopes or altered drainage areas and, thereby, exposing project occupants to flooding and landslide hazards.

3.18.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Emergency Response/Evacuation Plan Consistency

Impact WILD-1: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

Construction

During construction activity, it is expected that construction equipment and vehicles would be accessing and leaving the project site, which could potentially impede evacuation or emergency vehicle access. However, as discussed under Impact HAZ-6 and Impact TRANS-4, the proposed project would result in less than significant impacts to emergency access and would not impair implementation of or physically interfere with an adopted emergency response plan. Furthermore, the proposed project would comply with the County EOP, which would ensure efficient response to emergency incidents associated with emergencies affecting the County. In addition, construction traffic for the proposed project and off-site improvements would primarily occur through I-580 onto El Charro Road. The connection of El Charro Road onto the project site and off-site improvement areas would be mostly private and inaccessible to public traffic and would therefore not result in any road closures. Furthermore, off-site improvements to Busch Road would be conducted such as not to block road access. Therefore, access to Busch Road, the evacuation route from the project site, would not be impeded. As such, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan during construction, and potential impacts related to emergency response/evacuation plan consistency would be less than significant.

Operation

As indicated in Section 3.9, Hazardous Materials, and Section 3.14, Public Services, the proposed project would be adequately served by police and fire services, including respective evacuation or emergency vehicle access. The proposed project would not create a permanent increase in population unaccounted for in the General Plan that could lead to overwhelming calls for emergency services. Additionally, the proposed project would be designed to comply with County standards to accommodate emergency vehicle access by providing two points of access to the project site, internal roadways that would be available to emergency vehicles, compliant emergency vehicle turning widths, and compliant hydrant access. Furthermore, as discussed above, the proposed project would not result in a road closure to Busch Road, the evacuation route from the project site. Furthermore, the proposed project would comply with Policies 46, 125, 225, 226, 227, 296, and 299 of the ECAP, which require design review, compliance with State and County fire safety standards, ACFD project design review, and continuous fire safety standard enforcement throughout operation of the proposed project. As such, the proposed project would not conflict with the County EOP or ECAP, and operational impacts related to emergency response/evacuation plan consistency would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Expose Project Occupants to Pollutant Concentrations from Wildfire

Impact WILD-2: **The proposed project would not, 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.**

Construction

Impacts related to exposure of project occupants to pollutant concentrations from wildfire are limited to operational impacts. However, given that the project site is not located on or near steep terrain surrounded by natural vegetation, is mostly surrounded by urban uses, and does not consistently experience high winds, the project site would not be prone to wildfires.

Moreover, the proposed project would comply with all applicable fire codes and provide standard BMP features for fire suppression during construction. Furthermore, construction pollutants would not be located within an area vulnerable to prevailing winds or upslope of construction workers. No respective construction impacts would occur.

Operation

The project site is located in an unincorporated area of the County, between the Cities of Livermore and Pleasanton, adjacent to the Zone 7 Chain of Lakes formation. The project site is relatively flat and is surrounded by urbanized uses to the west and south, lakes and open grassland to the east and north. These areas are lacking in woodlands or vegetation that could provide fuel load for wildfire, or steep slopes that could cause fire to spread more rapidly. Furthermore, features such as the Zone 7 Chain of Lakes and Busch Road serve as fuel breaks in the event of a fire. The open space adjacent to the east of the project site contains a similarly flat slope, lack of fuel load for wildfire, and has the same adjacent features to serve as fuel breaks in the event of a fire.

According to CAL FIRE, neither the project site, nor the off-site improvements, are located in an SRA or an LRA FHSZ.³⁰ The nearest FHSZ is approximately 1.55 miles north of the project site, north of I-580, and is designated as a Moderate FHSZ in an SRA.³¹ The nearest VHFHSZ is located in an LRA approximately 3.06 miles southwest of the project site. As discussed in Section 3.19.2, Environmental Setting, the BAAQMD monitors the Bay Area’s air quality at a number of stations, and the closest station to the project site is located in the City of Livermore, approximately 4 miles east of the project site. The average wind speed at this station varied from month to month and ranged from 4 to 6 mph in 2022.³² Given that the project site is generally flat, is not located on or near steep terrain surrounded by natural vegetation, is mostly surrounded by urban uses, and does not consistently experience high winds, the project site would not be prone to wildfires.

Risk of impacts related to wildfire on the project site would be further reduced by the proposed project through compliance with applicable State and local plans and regulations. Specifically, the ECAP contains Policy 299, which requires that ACFD review and approve the proposed project’s site

³⁰ California Department of Forestry and Fire Protection (CAL FIRE). 2022. FHSZ Viewer. Website: <https://egis.fire.ca.gov/FHSZ/>. Accessed April 26, 2023.

³¹ Ibid.

³² Bay Area Air Quality Management District (BAAQMD). 2023. Air District Air Quality Data. Website: <https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/#/>. Accessed April 24, 2023.

plan. Furthermore, the County EOP and LHMP incorporate further requirements into project design and address response to emergency incidents affecting the County. The proposed project would also be required to comply with the California Fire Code regarding emergency access and types of building materials. As discussed in Section 3.14, Public Services, the proposed project would also be adequately served in terms of fire protection services by the ACFD. Therefore, impacts related to exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of wildfire would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Infrastructure That Exacerbates Fire Risk

Impact WILD-3: **The proposed project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.**

Construction

Impacts related to installation or maintenance of infrastructure (such as roads, fuel breaks, emergency water sources, electrical power lines, or natural gas lines) that may exacerbate fire risk are limited to operational impacts. No respective construction impacts related to infrastructure that exacerbates fire risk would occur.

Operation

The proposed project would include emergency access routes on Busch Road and via the private El Charro Road. The project site is in an urban area surrounded by existing roadways to the south and west and is adjacent to a lake and vegetation open space area with minimal fuel loading to the west and north. The proposed project would not require the installation of firebreaks, because it is in an urban area surrounded by existing developments with little natural vegetation. Furthermore, the vegetated open space east of the project site would be maintained with fuel reduction projects, such as pruning, utility management, removal of understory, and biomass removal as part of LHMP Mitigation Action 40.³³ As discussed in Section 3.18, Utilities and Service Systems, the proposed project would also develop water infrastructure to deliver potable water from the California Water Service to the project site and would have adequate potable water to serve the proposed project during normal, dry, and multiple dry years. New electrical power and natural gas lines on and connecting to the project site would be installed underground, minimizing potential ignition and related fire risk above ground, at the project site according to the CBC, CFC, Alameda Fire Code and Chapter 16.28 of the County Code of Ordinances, Underground Utilities.

³³ The LHMP “Mitigation Action” discussed is not a CEQA mitigation measure, but a policy listed under the County LHMP.

The proposed project would also develop off-site roadway, bicycle, and pedestrian facilities as well as a water storage and booster pump facility, sewer treatment plant, recycled water storage facility, agricultural spray fields, and two bioretention areas to support the proposed project. The primary bioretention area is being considered under two alternatives: Design Option A, which would locate the primary bioretention facility west of El Charro Road, and Design Option B, which would locate the primary bioretention facility east of El Charro Road. Similar to the project site, these off-site improvements, including both design options, are not located in or adjacent to a FHSZ, are on relatively flat parcels, and would be developed according to State and local fire safety standards and regulations. These off-site improvements would also be constructed in areas adjacent to Lake I, Lake H, and Cope Lake of the Zone 7 Chain of Lakes formation, which would serve as fuel breaks in the event of a wildfire. Therefore, impacts related to infrastructure that exacerbates fire risk would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Flooding and Landslide Hazards Due To Post-fire Slope Instability/Drainage Changes

Impact WILD-4: **The proposed project would not 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.**

Construction

Impacts related to post-fire slope instability are limited to operational impacts. No respective construction impacts related to flooding and landslide hazards due to post-fire slope instability or drainage changes would occur.

Operation

According to the California Department of Conservation EQ Zapp, the southern portion of the project site is located in within a designated Earthquake-Induced Landslide Zone.³⁴ In accordance with MM GEO-1, the proposed project would be required to prepare a Design-Level Geotechnical Evaluation and implement all recommendations included in the evaluation. As described further in Section 4.8, *Geology and Soils*, the implementation of MM GEO-1 would ensure that all associated risks of seismically induced impacts are reduced to a less than significant level. As such, the proposed project would not expose people or structures to landslides as a result of runoff, post-fire slope instability, or drainage changes. Impacts would be less than significant.

With regards to flooding, FEMA classifies the residential project site as Zone X, which is an area outside a 0.2 percent annual flood chance floodplain.³⁵ Therefore, while the residential project site is

³⁴ California Department of Conservation (DOC). 2023. Earthquake Zones of Required Investigation. Website: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>. Accessed December 1, 2023.

³⁵ Federal Emergency Management Agency (FEMA). 2009. Flood Insurance Rate Map (FIRM) Alameda County and Unincorporated Areas, Panel 336 of 725.

not likely to be inundated with flood flows, a few of the proposed off-site improvements, including the agricultural irrigation spray fields, the water storage and booster pump facility and associated bioretention area, and a second bioretention area under Design Option B, would be located in Flood Zone A, which represents a high-risk area designated as Special Flood Hazard Area (SFHA) with a 1 percent annual chance of flooding (Exhibit 3.9-1a and 3.9-1b). While potential flooding of the proposed bioretention facilities, including the one proposed under Design Option B, the agricultural spray fields, and the water storage and booster pump facility would likely not result in the release of any pollutants, flooding of the water storage and booster pump could impact the operation of that facility. However, due to the location of the water storage and booster pump facility being in close proximity to Lake I, Lake H, and Cope Lake, it is likely that the water storage and booster pump facility would not be significantly impacted by flooding because all three lakes would need to completely fill and overflow in order for the facility to flood. Furthermore, the Arroyo Lago Offsite Utility Flood Study prepared by Schaaf and Wheeler on March 13, 2024, for the proposed project (Appendix G) indicates that the proposed off-site improvements would likely not be inundated during a 100-year storm event because it is unlikely that the 100-year water surface elevation would be above ground at the location for the off-site improvements and spills that occur from the nearby lakes would be contained into the quarry ponds. Additionally, the water storage and booster pump facility would be designed following the FEMA-published guidelines for development occurring within a 100-year flood hazard zone. Additionally, the stormwater drainage facilities would have sufficient capacity to serve the proposed project. Therefore, impacts related to flood hazards would be less than significant.

Furthermore, the Hydrology Analysis Memorandum prepared by CBG (Appendix G) indicates that the proposed project would have sufficient drainage capacity to serve the proposed project and associated off-site improvements. Additionally, the residential project site and associated off-site improvement areas have not been affected by previous wildfires that could have resulted in drainage changes or loss of vegetation. Therefore, impacts related to flooding and landslide hazards due to post-fire slope instability or drainage changes would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-1 Design-Level Geotechnical Study

Prior to issuance of building and grading permits, an updated design-level geotechnical exploration and assessment shall be performed by a qualified Geotechnical Engineer. The design-level exploration and reporting shall include (but would not be limited to) the following items:

- Hollow-stem auger borings, including matched-pair borings.
- Soil sample collection at depths relevant to building-specific foundation design.
- Laboratory testing, including (but not limited to) moisture content, unit weight, gradation, Atterberg Limits, strength, consolidation, and corrosivity testing.

- Design-level assessment of geologic and geotechnical hazards, including (but not limited to) the following:
 - Characterization of subsurface conditions.
 - Consolidation of compressible soil based on in situ structural loading.
- Design recommendations for foundation system design.
- Design-level subexcavation, ground improvement, and/or surcharging recommendations.
- Foundation constructability recommendations.
- Design-level earthwork and improvement design and construction recommendations.
- Design-level features required for landslides.

The recommendations included in the Design-level Geotechnical Report shall be implemented during construction activities, including grading and excavation.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

3.18.7 - Cumulative Impacts

The geographic scope of the cumulative analysis related to wildfire is the project vicinity or roughly the eastern portion of the County, which geographic area is susceptible to wildfire with the exception of areas that contain natural fire breaks, such as lakes. The analysis also considers the foreseeable development projects listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, in unincorporated Alameda County and the surrounding cities, in addition to the proposed project.

Wildfire Hazards and Emergency/Evacuation Response

A combination of federal, State, and local regulations limit or minimize the potential for exposure to wildfires by reducing the amount of development in wildland urban interface areas, ensuring new development is developed according to the CBC, California Fire Code, Alameda Fire Code, and incorporating requirements for fire-safe construction into the land use planning. Development listed in Table 3-1 consists predominantly of residential and commercial development. Cumulative Project No. 3 (Blessing Drive RAI Residential Project) is the only cumulative project located in a High FHSZ. This project would be subject to all City of Pleasanton General Plan policies applicable to new development, especially those that would reduce potential impacts associated with new development in a High FHSZ, such as Program 13.6 and Program 13.7, which require new development to incorporate wildland interface mitigation measures and landscape with fire resistant plant materials. Cumulative Project No. 1 (Aramis Solar Energy Generation and Storage Project) and a southeastern portion of Cumulative Project No. 5 (Chain of Lakes Conveyance Project) are located in a Moderate FHSZ. The rest of the cumulative projects are not located in an FHSZ. The proposed project and other projects listed in Table 3-1 would be in or near areas that are already developed, and do not contain significant levels of dry fuel susceptible to ignition, or significantly high average wind speeds.

All cumulative projects would be subject to similar fire protection development standards and be required to comply with County or City ordinances and General Plan policies and plan review by the local fire departments to assist in protecting life and property in the event of a wildfire. In addition, all cumulative projects would be covered under existing emergency response plans by the County and/or City. Cumulative projects located in Alameda County would be required to be consistent with the County EOP. Cumulative projects located in the City of Pleasanton would be required to comply with the City of Pleasanton's Comprehensive Emergency Management Plan and LHMP. For these reasons, cumulative impacts with respect to wildfire hazards would be less than significant.

The proposed project's incremental contribution to cumulative wildfire hazard impacts would not be significant. The project site is generally flat and is not located within an SRA or an LRA FHSZ. The proposed project would be constructed according to applicable plans, policies, programs, and regulations designed to mitigate wildfire hazards, including the incorporation of fire suppression features such as fire resistant landscaping and internal fire sprinklers in buildings. Additionally, the proposed project's design would not exacerbate any existing wildfire hazard in the project's vicinity because the degree of wildland fire hazard, including secondary hazards, would not substantially change with implementation of the proposed project, and current hazards would not significantly increase, as described above. The proposed project would implement MM GEO-1, which requires the preparation of a Design-Level Geotechnical Evaluation and would implement all recommendations included in the evaluation. Implementation of MM GEO-1 would ensure that all associated risks of seismically induced impacts are reduced to a less than significant level.

Additionally, a few of the off-site components, including a bioretention area, the water storage and booster pump facility, and a second bioretention area in Design Option B, are located in an area classified as Zone A, which represents a high-risk area designated as SFHA with a 1 percent annual chance of flooding. The proposed project would be designed following the FEMA-published guidelines for development occurring within a 100-year flood hazard zone. Therefore, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to wildfires.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM GEO-1.

Level of Cumulative Significance After Mitigation

Less than significant impact with mitigation incorporated.

CHAPTER 4: EFFECTS FOUND NOT TO BE SIGNIFICANT

4.1 - Introduction

This chapter is based on the Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP), dated May 12, 2023, and contained in Appendix A of this Draft EIR. The NOP was prepared to identify the potentially significant effects of the project and was circulated for public review between May 12, 2023, and June 23, 2023. In the course of the NOP evaluation, certain impacts were found to be less than significant, because construction and operation of the proposed project would not result in such impacts.

This chapter provides a brief description of effects found not to be significant or less than significant, based on the NOP; public comments received on the NOP; or more detailed analysis conducted as part of the EIR preparation process. Only three written comments were received regarding the proposed agricultural irrigation recycled water spray fields. Those comments concerned project information or water quality and are addressed in Chapter 2, Project Description, Section 3.9, Hydrology and Water Quality, and Section 3.17, Utilities and Service Systems, of this Draft EIR. Note that a number of impacts that are found to be less than significant are addressed in the various Draft EIR topical sections (Sections 3.1 through 3.18) to provide more comprehensive discussion of why impacts are less than significant, in order to better inform decision-makers and the general public.

4.2 - Environmental Effects Found not to be Significant

4.2.1 - Agriculture Resources and Forestry Resources

The project site is designated for Medium Density Residential (MDR) uses in the East County Area Plan (ECAP) and is zoned for Agriculture (A) under the County zoning ordinance.^{1,2} As discussed in Chapter 2, Project Description, while the existing zoning of the project site sets the primary use of the project site as agricultural, the MDR land use designation of the project site supersedes the primary uses allowed by the zoning. Therefore, the proposed project is consistent with the applicable general plan regulations, and for the purposes of the Housing Accountability Act, the proposed residential uses of the project do not conflict with the project site's zoning. Additionally, the proposed project would include approximately 8.5 acres of agricultural irrigation spray fields. No new agricultural crops would be planted, but treated effluent water from the wastewater treatment plant would be sprayed over existing natural vegetation in the area.

The project site is mapped as "Other Land" by the California Department of Conservation Farmland Mapping and Monitoring Program, which is considered a nonagricultural soil classification.³ In

¹ County of Alameda. 1994. East County Area Plan. May 5.

² County of Alameda. 2023. Unincorporated Alameda County Public Access Map (PAM). Website: <https://acpwa.maps.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773>. Accessed February 22, 2024.

³ California Department of Conservation. 2022. California Important Farmland Finder. Website: <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed February 22, 2024.

addition, the project site is not under a Williamson Act Contract.⁴ The County General Plan Conservation Element classifies the soil on the project site as Capability Unit IIIs5 soil, which is very deep, poorly to imperfectly drained, slowly permeable, and fine- to very fine-textured. Soils under Class III are determined by the General Plan to have severe limitations, and are determined to not be suitable for a Prime or Unique Farmland designation within the General Plan.⁵ As such, construction and operation of the proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural uses, or result in the loss or conversion of forestland to non-forest uses. The proposed project would not conflict with any zoning for agricultural use or a Williamson Act Contract, or any zoning for forestland or timberland. Therefore, no impact related to agriculture or forestry resources would occur.

⁴ California Department of Conservation. 2021. California Williamson Act Enrollment Finder. Website: <https://maps.conservation.ca.gov/dlrp/WilliamsonAct/>. Accessed February 29, 2024.

⁵ County of Alameda. 1976. Conservation Element of the Alameda County General Plan. November 23.

CHAPTER 5: OTHER CEQA CONSIDERATIONS

5.1 - Significant Unavoidable Impacts

California Environmental Quality Act (CEQA) Guidelines Section 15126.2(a)(b) requires an Environmental Impact Report (EIR) to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented.

Based on the analyses contained in this Draft EIR, the County of Alameda (County) has determined that the proposed project in conjunction with other cumulative development in the County would result in the project-level and cumulative significant and unavoidable impacts listed below.

5.1.1 - Greenhouse Gas Emissions Impacts

Greenhouse Gas Emissions and Conflict with Plan, Policy, or Regulation that Reduces Emissions

The proposed project is evaluated against the design elements in Criterion A of the Bay Area Air Quality Management District's (BAAQMD's) 2022 greenhouse gas (GHG) emission significance thresholds, which require all-electric design, energy efficiency, 15 percent vehicle miles traveled (VMT) reduction below the average VMT per capita for the Alameda County East Planning Area, and Tier 2 Electric Vehicle (EV) charging infrastructure.

- **All-Electric Design:** The proposed project has considered the implementation of a mitigation measure which would ensure that the proposed project would have an all-electric design in compliance with this first design element; however, this mitigation measure was determined to be legally infeasible at the time this EIR was prepared. The proposed project would implement two feasible mitigation measures to address impacts due to use of natural gas. The proposed project would implement Mitigation Measure (MM) GHG-1, which would require the proposed project to implement pre-wiring during construction so that an all-electric design could be utilized in the future. The proposed project would also implement MM GHG-2, which would require the proposed project to purchase qualified carbon credits to offset the projected project GHG emissions from natural gas usage over the lifetime of the proposed project. Although MM GHG-1 and MM GHG-2 may reduce the proposed project's contribution to climate impacts, the proposed project would be inconsistent with the first BAAQMD design element at the time of construction.
- **Energy Efficiency:** As demonstrated in Section 3.5, Energy, the proposed project would not result in any wasteful, inefficient, or unnecessary energy usage, consistent with the second BAAQMD design element.
- **VMT:** As detailed in Section 3.16, Transportation, the residents of the proposed project would be expected to generate 29.9 VMT per capita daily which is greater than the threshold of 25.9 VMT per capita, or 15 percent below the average VMT per capita for the Alameda County East Planning Area. Implementing a variety of countermeasures would be expected to result in a

reduction of VMT between 4.2 to 5.7 percent only. As a result, the proposed project could not achieve the 15 percent VMT reduction as required by BAAQMD thresholds. The proposed project's VMT impact is significant and unavoidable and is inconsistent with the third BAAQMD design element.

- **Tier 2 EV Charging Infrastructure:** The proposed project would provide CALGreen Tier 2 EV parking levels, and thus is inconsistent with the fourth BAAQMD design element.

Therefore, the proposed project would satisfy only one of the four design elements as outlined in the BAAQMD GHG threshold Criterion A. As such, impacts would be significant and unavoidable.

Cumulative Impacts

The proposed project would emit new GHG emissions in conjunction with other projects within the Air Basin. As discussed above, the proposed project would have a significant and unavoidable GHG impact and, thus, would be considered to have a cumulatively significant impact as well. Therefore, the proposed project's contribution would be cumulatively considerable and, thus, significant in and of itself.

5.1.2 - Transportation

Conflict with CEQA Guidelines Section 15064.3, Subdivision (b)

As detailed in Section 3.16, Transportation, the residents of the proposed project would be expected to generate 29.9 VMT per capita daily which is greater than the threshold of 25.9 VMT per capita, or 15 percent below the average VMT per capita for the Alameda County East Planning Area (which includes Dublin, Pleasanton, Livermore, and surrounding unincorporated areas). Implementing a variety of countermeasures would be expected to result in a reduction of VMT between 4.2 to 5.7 percent only. The proposed project would implement MM TRANS-2a and MM TRANS-2b, which implement sidewalk improvements and traffic calming measures on all project roadways. However, even with the implementation of the proposed mitigation, the proposed project would still result in a significant and unavoidable impact.

Hazards

As detailed in Section 3.16, Transportation, of the Draft EIR, the proposed project would have a significant and unavoidable impact related to queueing at the intersections of Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue. This impact could be addressed by retiming the traffic signals at these intersections; however, because these signals are located within the City of Pleasanton and the City is not the lead agency for the proposed project, implementation of mitigation measures that would retime these the traffic signals at Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue to accommodate queues associated with trips anticipated to be generated by the proposed project has been deemed unenforceable, and therefore cannot be implemented as part of the proposed project.

Cumulative Impacts

Cumulative projects within the nine-county Metropolitan Transportation Commission area may generate new VMT, which would be added to the roadway network within the geographic context. All cumulative projects would be required to comply with County and local ordinances and General Plan policies that address VMT, as well as mitigate their fair share of impacts related to VMT. Nonetheless, cumulative projects would have a potentially significant impact related to VMT.

As discussed above, VMT is, by definition, cumulative. The proposed project would contribute to an increase in VMT, and that increase would be considered significant and unavoidable with the implementation of MM TRANS-2a and MM TRANS-2b. Therefore, the proposed project would have a cumulatively considerable contribution to VMT. As such, the proposed project, in conjunction with other planned and approved projects, would result in a significant and unavoidable cumulative impact with respect to VMT.

Additionally, the proposed project would have sufficient available sight distance and no hazardous geometric roadway design features. However, there is no available mitigation that could address significant impacts related to sufficient vehicle queue space. Therefore, the proposed project's contribution to roadway hazard related impacts would be cumulatively considerable. As such, the proposed project, in conjunction with other planned and approved projects, would result in a significant and unavoidable cumulative impact with respect to roadway hazards.

5.2 - Growth-inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines § 15126.2(e)). CEQA Guidelines, as interpreted by the City, state that a significant growth-inducing impact may result if the project would:

- Induce substantial population growth in an area (for example, by proposing new homes and commercial or industrial businesses beyond the land use density/intensity envisioned in the general plan);
- Substantially alter the planned location, distribution, density, or growth rate of the population of an area; or
- Include extensions of roads or other infrastructure not assumed in the general plan or adopted capital improvements project list, when such infrastructure exceeds the needs of the project and could accommodate future developments.

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing unplanned population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated

from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

Direct Population Growth

As discussed in Chapter 2, Project Description, the proposed project consists of the development of 194 single-family homes with approximately 25 percent (49 homes) designed with junior Accessory Dwelling Units (ADUs), resulting in up to 243 total residential units. As such, it would include direct population growth through the development of new housing and indirect growth through the creation of new jobs.

According to the 2023-2031 Housing Element Update: Initial Study – Mitigated Negative Declaration (ISMND), unincorporated Alameda County has an average of 2.84 residents per household.¹ Using this figure as a multiplier, the proposed project could result in up to 691 new residents in unincorporated Alameda County. As discussed in Section 3.13.1, Existing Conditions, the California Department of Finance (CDF) estimates that unincorporated Alameda County’s 2023 population was 147,006 persons.² The proposed project’s increase in population would represent an increase of less than 1 percent relative to the 2023 estimate.

Table 5-1: Project-Related Population Growth

Dwelling Units	Persons Per Household	Population Growth	Population Growth as a Percent of County of Alameda
243	2.84	691	0.47% ¹

Notes:
¹ Alameda County’s population in 2023 was estimated to be 147,006.
 Source: County of Alameda, 2023. California Department of Finance (CDF). 2023.

The 2023-2031 Regional Housing Need Assessment (RHNA) has planned for unincorporated Alameda County to accommodate 4,711 total residential units by 2031; 1,976 of these residential units would be for above moderate-income level units. The proposed project would result in up to 194 market-rate single-family residential units and up to 49 affordable ADUs, which would be credited toward the RHNA numbers for unincorporated Alameda County. The proposed development would account for approximately 5 percent of the total dwelling units expected to be built by 2031 and 12 percent of above-moderate income level units. Furthermore, the proposed project is included in the draft Alameda County Housing Element Update as a proposed development that is anticipated to be

¹ County of Alameda. 2023. 2023-2031 Housing Element Update: Initial Study – Mitigated Negative Declaration. Website: [https://www.acgov.org/cda/planning/housing-element/documents/Alameda -County-HEU_Public-Draft-IS-MND.pdf](https://www.acgov.org/cda/planning/housing-element/documents/Alameda%20County%20HEU_Public-Draft-IS-MND.pdf). Accessed December 4, 2023.

² California Department of Finance (CDF). 2023. E-1 Population and Housing Estimates for Cities, Counties, and the State, 2020-2023. Website: <https://dof.ca.gov/Forecasting/Demographics/estimates-e1/>. Accessed December 4, 2023.

completed by January 31, 2031.³ Thus, implementation of the project would not constitute substantial, unplanned direct population growth within unincorporated Alameda County.

Indirect Population Growth

The project would not significantly or adversely affect the permanent jobs/housing balance. The project would create residential and nonresidential development but would not create a housing demand above what would otherwise occur. The project would include up to 243 new residential units and up to 691 new residents. Some new residents would be expected to have existing jobs in the area. In addition, the proposed project is expected to generate less than two full-time employees. Housing included as part of the project would help the County achieve a more even jobs/housing balance by providing much-needed housing.

The project site currently consists of primarily vacant, undeveloped land. The proposed project would construct the necessary water utility infrastructure required for the proposed project. Electrical and natural gas infrastructure would connect to existing utility infrastructure on and adjacent to the project site. Furthermore, the proposed project would generally be compatible with the surrounding residential uses and not pressure adjacent properties to redevelop with new or different land uses. As a result, it is not anticipated that nearby residents would relocate. Therefore, the project would not remove a barrier to growth or create an indirect population increase.

Since the project would not result in indirect growth, negatively alter the existing jobs/housing balance, or be inconsistent with the direct growth projections for the County, implementation of the proposed project would have a less than significant growth-inducing impact. No mitigation measures are necessary.

5.3 - Mandatory Findings of Significance

Public Resources Code Section 21083 requires lead agencies to make a finding of a “significant effect on the environment” if one or more of the following conditions exist:

- 1) A proposed project has the potential to degrade the quality of environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife species to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare, or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.
- 2) Has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- 3) The possible effects of a project are individually limited but cumulatively considerable.
- 4) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

³ County of Alameda. 2023. Alameda County Housing Element HCD Review Draft – October 2023. Website: <https://www.acgov.org/cda/planning/housing-element/documents/Alameda-County-Housing-Element-6th-Cycle-HCD-Draft.pdf>. Accessed December 4, 2023.

Based on the analysis provided in Section 3.3, Biological Resources, the proposed project's impacts related to special-status species and special-status natural communities and habitat would be less than significant with mitigation incorporated. Additionally, the proposed project's impacts on riparian habitat, a special-status species associated with riparian or wetlands habitats, as well as wildlife corridors, would be less than significant with mitigation incorporated. Therefore, implementation of MM BIO-1a and MM BIO-1b would reduce impacts on special-status species. MM BIO-2a and MM BIO-2b would reduce impacts to sensitive natural communities or riparian habitats.

With implementation of MM BIO-1a, MM BIO-1b, MM BIO-2a, and MM BIO-2b, the proposed project would not substantially degrade the quality of the environment, reduce fish or wildlife habitat, reduce fish or wildlife populations below self-sustaining levels, eliminate a plant or animal community, or reduce the number or range of a rare or endangered plant or animal.

Based on the analysis provided in Section 3.4, Cultural Resources and Tribal Cultural Resources, the proposed project's impacts related to California history or prehistory would be less than significant with mitigation incorporated. Implementation of MM CUL-2a and MM CUL-2b would reduce impacts to prehistoric, historic, cultural, or tribal-cultural resources encountered during ground-breaking activities. Implementation of MM CUL-3 would reduce impacts to human remains that could be unearthed during excavation or grading activities.

With implementation of MM CUL-2a and MM CUL-2b, the proposed project would not substantially degrade the quality of the environment or eliminate important examples of the major periods of California history or prehistory.

Based on the discussion provided above, compliance with required guidelines and statutes and implementation of the mitigation measures, the project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below-self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, impacts would be less than significant with the incorporation of MM BIO-1a, MM BIO-1b, MM BIO-2a, MM BIO-2b, MM CUL-2a, MM CUL-2b, and MM CUL-3.

The proposed project would help realize the County's long-term housing goals. Additionally, as the analysis presented in this Draft EIR shows in Table 3.10-1, the proposed project would be consistent with the County of Alameda East County Area Plan (ECAP) non-objective goals and policies. The Draft EIR further includes a review of the County's long-term planning goals for each environmental topic. Accordingly, the proposed project would not advance short-term goals to the disadvantage of long-term goals.

The analysis presented in this Draft EIR includes a review of proposed project's potential impacts related to air quality, biological resources, cultural resources, noise, and transportation, among other environmental issue areas. As presented throughout this Draft EIR, the proposed project's cumulative impacts would either be significant and unavoidable, less than significant with mitigation incorporated, less than significant, or there would be no impacts.

There would be less than significant cumulative impacts with regard to aesthetics, light, and glare, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, and utilities and service systems.

Potentially significant cumulative impacts related to air quality, biological resources, cultural resources and tribal cultural resources, geology and soils, hydrology and water quality, and wildfire would be mitigated to less than significant levels with the implementation of MM AIR-1, MM AIR-3, MM BIO-1a, MM BIO-1b, MM BIO-2a, MM BIO-2b, MM CUL-2a, MM CUL-2b, MM CUL-3, MM GEO-1, and MM GEO-6.

Significant and unavoidable impacts would occur related to GHG emissions and transportation. While implementation of MM GHG-1, MM GHG-2, MM TRANS-2a, and MM TRANS-2b would reduce impacts to these topical sections, there is no feasible mitigation available that would fully bring these impacts to less than significant levels.

Overall, with implementation of the mitigation measures outlined above, impacts associated with the proposed project would remain significant and unavoidable for GHG emissions and transportation. The implementation of other projects in the County would be required to demonstrate regulatory compliance and implement similar mitigation measures, as applicable. Therefore, the proposed project would have some impacts that are individually limited, but cumulatively considerable.

Compliance with and implementation of the proposed project's mitigation measures, existing regulations, and the County's standard permit conditions would ensure that the proposed project would not result in substantial adverse effects on human beings, including effects related to air pollution, seismic and geologic hazards, hazardous materials, flooding and natural disasters, or noise and vibration. Therefore, impacts associated with the proposed project would be less than significant.

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CHAPTER 6: ALTERNATIVES TO THE PROPOSED PROJECT

6.1 - Introduction

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6, this Draft Environmental Impact Report (Draft EIR) contains a comparative impact assessment of alternatives to the proposed project. The primary purpose of this section is to provide decision-makers and the general public with a reasonable number of feasible project alternatives that could attain most of the basic project objectives while avoiding or reducing any of the proposed project's significant adverse environmental effects.

An EIR must describe a reasonable range of alternatives to the proposed project, or to its location, which would feasibly attain most of the proposed project's basic objectives while reducing or avoiding "any" of its significant effects (State CEQA Guidelines § 15126.6(a)). The discussion of alternatives is subject to a rule of reason and the scope of alternatives to be analyzed must be evaluated on the facts of each case. This analysis is guided by the following considerations set forth under CEQA Guidelines Section 15126.6:

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
 - Failure to meet most of the basic project objectives;
 - Infeasibility; or
 - Inability to avoid significant environmental effects.

6.1.1 - Significant Unavoidable Impacts

The proposed project was analyzed for potentially significant impacts related to each of the environmental topic areas discussed in Sections 3.1, Aesthetics, Light, and Glare, through 3.18, Wildfire. The results of the analysis demonstrate that the proposed project would result in significant and unavoidable impacts related to greenhouse gas emissions (GHG) and transportation.

The proposed project would result in the following significant unavoidable impacts:

- **GHG Impacts and Conflict with Plan, Policy, or Regulation that Reduces Emissions:** As discussed in Section 3.7, Greenhouse Gas Emissions, of the Draft EIR, the proposed project would have a significant and unavoidable impact because it does not demonstrate a 15 percent reduction in resident Vehicle Miles Traveled (VMT) as required by the Bay Area Air Quality Management District (BAAQMD) thresholds, and it is not consistent with other BAAQMD design elements requiring the incorporation of an all-electric design. Therefore, the proposed project would satisfy one of the four design elements as outlined in the BAAQMD GHG threshold Criterion A at the time of project construction and, thus, result in significant and unavoidable impacts even with mitigation incorporated.

- **Cumulative GHG Emissions Impacts:** As discussed in Section 3.7, Greenhouse Gas Emission, of the Draft EIR, the proposed project would emit new GHG emissions in conjunction with other projects within the Air Basin. As discussed above, the proposed project would have a significant and unavoidable GHG impact and, thus, would be considered to have a cumulatively significant impact as well. Therefore, the proposed project's contribution would be cumulatively considerable and, thus, significant in and of itself.
- **Conflict with CEQA Guidelines Section 15064.3, Subdivision (b):** As detailed in Section 3.16, Transportation, of the Draft EIR, the residents of the proposed project would be expected to generate 29.9 VMT per capita daily which is greater than the threshold of 25.9 VMT per capita, or 15 percent below the average VMT per capita for the Alameda County East Planning Area (which includes Dublin, Pleasanton, Livermore, and surrounding unincorporated areas). Implementing a variety of countermeasures would be expected to result in a reduction of VMT of only 4.2 to 5.7 percent. As a result, the proposed project would result in a significant and unavoidable impact without sufficient mitigation available.
- **Substantially increase hazards due to geometric design feature or incompatible hours:** As detailed in Section 3.16, Transportation, of the Draft EIR, the proposed project would have a significant and unavoidable impact related to queueing at the intersections of Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue. This impact could be addressed by retiming the traffic signals at these intersections; however, because these signals are located within the City of Pleasanton and the City is not the lead agency for the proposed project, implementation of mitigation measures that would retime these traffic signals to accommodate queues associated with trips anticipated to be generated by the proposed project has been deemed unenforceable and therefore cannot be implemented as part of the proposed project.
- **Cumulative VMT Impacts:** As detailed in Section 3.16, Transportation, of the Draft EIR, the proposed project, in conjunction with other past, present, and reasonably foreseeable projects, would have a cumulatively significant impact related to VMT. Cumulative projects in the nine-county Metropolitan Transportation Commission (MTC) may generate new VMT, which would be added to the roadway network. All cumulative projects would be required to comply with County and local ordinances and General Plan policies that address VMT, as well as to mitigate their fair share of impacts related to VMT. Nonetheless, cumulative projects would have a potentially significant impact related to VMT. Further, VMT, by definition, is cumulative. The proposed project would contribute to an increase in VMT, and that increase would be considered significant and unavoidable. Therefore, the proposed project would have a cumulatively considerable contribution to VMT. As such, the proposed project, in conjunction with other planned and approved projects, would result in a significant and unavoidable cumulative impact with respect to VMT.
- **Cumulative Roadway Hazard Impacts:** The proposed project would have sufficient available sight distance and no hazardous geometric roadway design features. However, there is no available mitigation that could address significant impacts related to sufficient vehicle queue space. Therefore, the proposed project's contribution to roadway hazard related impacts would be cumulatively considerable. As such, the proposed project, in conjunction with other

planned and approved projects, would result in a significant and unavoidable cumulative impact with respect to roadway hazards.

6.1.2 - Alternatives to the Proposed Project

The three alternatives to the proposed project analyzed in this section are as follows:

- **Alternative 1: No Project, No Build Alternative.** Under the No Project, No Build Alternative (Alternative 1), the proposed project would not be constructed. The project site would remain closed and vacant, and no development of any kind would occur. No land use activities would occur.
- **Alternative 2: Annexation into the City of Pleasanton Alternative.** Under the Annexation into the City of Pleasanton Alternative (Alternative 2), the residential component of the proposed project would remain the same as the proposed project, except that the site would be annexed into the City of Pleasanton. Under this alternative, the proposed project would connect to the City's utility systems (e.g., water, sanitary sewer), eliminating the need to construct certain off-site improvements under the proposed project, including the water storage and booster pump facility, sewer treatment plant, recycled water storage facility, and agricultural spray fields.
- **Alternative 3: Mixed-use Alternative.** Under the Mixed-use Alternative (Alternative 3), the proposed project would remain in the County of Alameda's jurisdiction and all off-site improvements as proposed under the proposed project would remain, but the residential component would have a reduced number of residential units. A total of 95 single-family homes would be built, with 25 percent containing deed-restricted accessory dwelling units (ADUs) (24 homes), and the rest of the project site would include neighborhood retail/commercial uses consistent with the East County Area Plan (ECAP) Medium Density Residential (MDR) designation. Therefore, the residential component under this alternative would total approximately 13 acres and the neighborhood commercial uses would total approximately 13 acres.

These three alternatives to the proposed project are analyzed below. These analyses compare the proposed project and each individual project alternative. In several cases, the description of the impact may be the same under each alternative when compared with the CEQA Thresholds of Significance (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the proposed project and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

6.2 - Project Objectives

The underlying purpose of the proposed project is to contribute to the County's housing inventory by developing vacant, underutilized property in a manner consistent with the goals, programs, and policies of the County's General Plan and State law.

The objectives of the proposed project are to:

- Contribute additional housing opportunities consistent with the County's Housing Element¹ and its Sixth Cycle Regional Housing Needs Assessment (RHNA) approved by the Association of Bay Area Governments (ABAG).
- Develop the project site in accordance with applicable, objective County land use regulations.
- Further preservation of open space by providing for the compact and orderly development of sites adjacent to existing development.
- Generate new, additional property tax revenues.
- Provide a range of professionally designed housing options, including single-family homes and affordable ADUs.
- Create a walkable outdoor environment by providing open space, parks, and walking trails for both private and public use, allowing both existing and new residents to take advantage of the development.
- Ensure adequate utility infrastructure exists, including sewer, water, and storm drains, to accommodate the development.
- Promote the efficient use of water and energy through incorporation of water and energy conservation measures.

6.3 - Alternative 1—No Project, No Build Alternative

Under Alternative 1, the proposed project would not be constructed. The project site would remain closed and vacant, and no development of any kind would occur. Additionally, no land use activities would occur.

6.3.1 - Impact Analysis

Aesthetics, Light, and Glare

Under Alternative 1, the project site would not be developed with 194 single-family homes. No vegetation would be removed or impacted. The new residential units, recreational amenities, and associated off-site improvements would not be constructed and operated on/off the project site. There would be no change in visual character, views, nighttime lighting, daytime glare, or shadow, as there would be no change to the existing topography or vegetation/landscaping. Thus, there would be no aesthetics impacts under this alternative.

Under the proposed project, impacts related to aesthetics would be less than significant (see Section 3.1, Aesthetics, Light, and Glare, of the Draft EIR); however, as Alternative 1 would not involve any development that would change any of aesthetics on the project site, no impact would occur and it would have less aesthetic impact as compared to the proposed project.

¹ At the time this Draft EIR was prepared, the County's Updated Housing Element and the Sixth Cycle Regional Housing Needs Assessment (RHNA) are currently in review. Any future changes to the County's Updated Housing Element and RHNA are expected to be minimal and would not result in significant changes to the analysis.

Air Quality

Under Alternative 1, short-term construction and long-term operational air emissions would not occur as no construction or land use changes would take place, no project operations would be established, and no project-related traffic or stationary source emissions would be generated by residents occupying the new homes.

Under the proposed project, impacts related to air quality were potentially significant but reduced to a less than significant level with the implementation of mitigation (see Section 3.2, Air Quality, of the Draft EIR). However, because Alternative 1 would not result in development—and therefore would result in no impacts to air quality—Alternative 1 would have less air quality impact as compared to the proposed project.

Biological Resources

Under Alternative 1, the project site would not be developed with 194 single-family homes and associated off-site improvements as proposed under the proposed project. Thus, no ground-disturbing activities would occur. Under this alternative, there would be no improvements to the project site that would result in changes to the biological environment that could impact wildlife or habitats on-site. Alternative 1 would not have the potential to impact special-status bats or nesting birds, nor would it impact Arroyo willow thickets or coast live oak. Thus, there would be no biological resources impacted under this alternative.

Under the proposed project, project impacts related to biological resources would be less than significant with mitigation incorporated (see Section 3.3, Biological Resources, of the Draft EIR). However, because Alternative 1 would have no impact on biological resources at all, it would have fewer biological resources impacts as compared to the proposed project.

Cultural Resources and Tribal Cultural Resources

Under Alternative 1, the project site would not be developed with 194 single-family homes and associated off-site improvements as proposed under the proposed project. Thus, no ground-disturbing activities would occur. Therefore, no direct impacts would occur with respect to existing and or undiscovered cultural resources or Tribal Cultural Resources (TCRs) because ground disturbance from the construction of the proposed project and supporting infrastructure would not occur.

Under the proposed project, project impacts related to cultural resources and TCRs would be less than significant with mitigation incorporated (see Section 3.4, Cultural Resources and Tribal Cultural Resources, of the Draft EIR). However, because no development would occur under Alternative 1, the potential for direct impacts to cultural resources and TCRs associated with the Alternative 1 would be substantially less as compared to the proposed project.

Energy

Under Alternative 1, the project site would not be developed with 194 single-family homes and associated off-site improvements as it would under the proposed project. Currently, the project site

is vacant and there is no existing development on-site that uses energy. Therefore, there would be no energy uses associated construction or operation under this alternative since no development would occur.

Under the proposed project, all of the proposed project's impacts related to energy would be less than significant or less than significant with mitigation incorporated (see Section 3.5, Energy, of the Draft EIR). However, because no development would occur under Alternative 1, there would be no impacts to energy. Impacts related to energy would be fewer than those under the proposed project.

Geology, Soils, and Seismicity

Under Alternative 1, the project site would not be developed with 194 single-family homes and associated off-site improvements as proposed under the proposed project, and no ground-disturbing activities would occur. Therefore, soil disturbance associated with grading and building activities would not occur. No new buildings, landscaping, utilities, or other infrastructure would be constructed on the project site; thus, there would be no impacts associated with landslides, soil stability, or earthquakes as could occur under the proposed project.

Under the proposed project, all of the proposed project's impacts related to geology and soils would be less than significant or less than significant with mitigation incorporated (see Section 3.6, Geology and Soils, of the Draft EIR). Specifically, the proposed project's mitigation requires the project applicant to prepare a design-level geotechnical study and implement any specific mitigation required in the study in order to ensure there would be less than significant impacts to the project site's geology, soils, and susceptibility to impact of seismicity. However, because Alternative 1 does not include any development or ground-disturbing activities, there would be no impacts to geology, soils, and seismicity. Impacts would be fewer than the proposed project.

Greenhouse Gas Emissions

Under Alternative 1, the project site would not be developed with 194 single-family homes and associated off-site improvements as proposed under the proposed project, and no ground-disturbing activities would occur. Thus, because this alternative would not include any development, it would not contribute to global climate change through direct emissions of GHGs from on-site area sources or through vehicle trips generated.

Under the proposed project, project impacts related to GHGs were found to be significant and unavoidable (see Section 3.7, Greenhouse Gas Emissions, of the Draft EIR). As discussed above in Section 6.1.1, Significant and Unavoidable Impacts, of this chapter, the proposed project would not meet all four design elements outlined in the BAAQMD GHG threshold Criterion A at the time of project construction, even with mitigation measures incorporated. However, because Alternative 1 does not include any development that would produce additional GHG or necessitate vehicle trips that would contribute to GHG emission, it would have less GHG impact compared to the proposed project.

Hazards and Hazardous Material

Under Alternative 1, the project site would not be developed with 194 single-family homes and associated off-site improvements as proposed under the proposed project, and no ground-disturbing activities would occur. As such, the existing environmental conditions would remain. Because no construction or operation of residential and utility development would occur on-site, there would be no opportunity for an accidental spill of hazardous materials or the use of household hazardous materials during operation.

Under the proposed project, all of the impacts related to hazards and hazardous materials would be less than significant (see Section 3.8, Hazards and Hazardous Materials, of the Draft EIR). No project-specific mitigation would be required, and the County has determined that no further cleanup is required; however, four conditions of approval would be required in order to finalize the Alameda County Department of Environmental Health's approval documentation and administrative record concluding that potential environmental impacts from former mining operations have been adequately investigated and delineated and found not to present an adverse risk to human health or the environment. Because no development or ground-disturbing activities would occur on-site under Alternative 1, impacts related to hazards and hazardous materials would be fewer as compared to the proposed project.

Hydrology and Water Quality

Under Alternative 1, the project site would not be developed with 194 single-family homes and associated off-site improvements as proposed under the proposed project, and no ground-disturbing activities would occur. As such, there would be no change related to hydrology, stormwater runoff and drainage, water quality, groundwater recharge and depletion, or flooding, as there would be no change to the existing on-site conditions resulting in changes in impervious or pervious surfaces on the project site. Presently, the site does not contain any impervious surfaces. Stormwater from the existing project site is conveyed via a small swale into a larger earthen channel. The existing earthen channel, located southeast of the project site, conveys stormwater from the project site (as well as stormwater from the adjacent parcel) eastward to an existing 24-inch culvert under El Charro Road, which discharges on the east side of El Charro Road and drains in Cope Lake.

Under the proposed project, impacts related to hydrology and water quality would be less than significant (see Section 3.9, Hydrology and Water Quality, of the Draft EIR). Alternative 1 would have no impacts related to hydrology and water quality, and as such, impacts would be reduced compared to the proposed project.

Land Use and Planning

Under Alternative 1, there would be no impacts to land use as the project site would remain in its current state and existing land uses would remain. Continuation of the current use of the land would not conflict with any land use plan or policy or conflict with any habitat or community conservation plan or result in the division of a community.

Under the proposed project, there would be no impacts or less than significant impacts related to land use (see Section 3.10, Land Use and Planning, of the Draft EIR). The proposed project would be

consistent with the governing MDR designation and the types of permitted uses set forth in the ECAP for this designation. Therefore, impacts related to land use would be the same under Alternative 1 as the proposed project.

Mineral Resources

Under Alternative 1, the project site would not be developed with 194 single-family homes and associated off-site improvements as proposed under the proposed project, and no ground-disturbing activities would occur. As such, the existing environmental conditions would remain, no soils would be excavated, and no construction would occur.

Under the proposed project, all of the proposed project's impacts related to mineral resources would be less than significant (see Section 3.11, Mineral Resources, of the Draft EIR). There would be no loss of known mineral resources of value or locally-important resource recovery sites; however, because no ground-disturbing activities would occur under Alternative 1, impacts related to mineral resources would be reduced as compared to the proposed project.

Noise

Under Alternative 1, the proposed project would not be developed with 194 single-family homes and associated off-site improvements as proposed under the proposed project, and no ground-disturbing activities would occur. With no development occurring on-site, no new noise would be generated by construction, operations, or traffic generated by the proposed housing. Therefore, noise-sensitive land uses in the vicinity of the project site would not experience any change in noise levels as compared to existing conditions.

Under the proposed project, impacts related to noise would be less than significant or less than significant with mitigation incorporated (see Section 3.12, Noise, of the Draft EIR). The proposed project would be required to implement a multi-part mitigation measure to reduce potential construction-period noise impacts. Because Alternative 1 would not result in any new noise sources, short-term and long-term noise impacts would be reduced compared to that of the proposed project.

Population and Housing

Under Alternative 1, the proposed project would not be developed with 194 single-family homes and associated off-site improvements as proposed. Presently, the project site is vacant with no existing residential or employment uses. Because no new residential or employment uses would be added to the site under this alternative, there would be no impacts to population and housing.

Under the proposed project, impacts related to population and housing would be less than significant (see Section 3.13, Population and Housing, of the Draft EIR); however, because Alternative 1 would not include any new residential or employment uses, impacts would be less as compared to the proposed project.

Public Services

Under Alternative 1, the proposed project site would not be developed with 194 single-family homes and associated off-site improvements as proposed. As such, no new residential units or nonresidential square footage would be developed that would result in demand for public services.

Under the proposed project, impacts to public services would be less than significant (see Section 3.14, Public Services, of the Draft EIR); however, because Alternative 1 does not involve any development that would demand public services, impacts to public services would be fewer compared to that of the proposed project.

Recreation

Under Alternative 1, the proposed project site would not be developed with 194 single-family homes and associated off-site improvements as proposed. As such, this alternative would not result in the addition of residential dwelling units that would result in new residents. Therefore, no change would occur in the demand for parks and recreational facilities.

Under the proposed project, impacts related to recreation would result in less than significant impacts (see Section 3.15, Recreation, of the Draft EIR); however, because Alternative 1 would result in no impact to recreational facilities, impacts to recreation would be fewer compared to that of the proposed project.

Transportation

Under Alternative 1, the proposed project site would not be developed with 194 single-family homes and associated off-site improvements as proposed. There would be no impact on traffic operations, transit, or pedestrian facilities as no new transportation demand would occur. Alternative 1 would not include frontage improvements to Busch Road, including the construction of an approximately 8-foot-wide sidewalk and an approximately 6-foot-wide Class II bicycle lane. This alternative would also not include redevelopment of Busch Road into a two-lane road with a split median.

Under the proposed project, project impacts related to transportation, specifically project-level VMT, cumulative VMT, and hazards due to a geometric design feature, would be significant and unavoidable. The proposed project would result in less than significant impacts related to conflicts with a program plan, ordinance, or policy of the circulation system (see Section 3.16, Transportation and Traffic, of the Draft EIR). Compared to the proposed project, impacts would be of lesser magnitude under Alternative 1 because it would not generate any new transportation demands. Additionally, this alternative would have no contribution to cumulatively considerable impacts. Compared to the proposed project, there would be no cumulative impacts under this alternative.

Utilities and Service Systems

Under Alternative 1, the proposed project site would not be developed with 194 single-family homes and associated off-site improvements as proposed. There would be no impact on utilities and service systems because there would be no changes to the current project site, including no new residential

units or nonresidential square footage that would result in demand for utilities and service systems. The utility-related off-site improvements proposed by the project would not be required.

Under the proposed project, impacts related to utilities and service systems would be less than significant (see Section 3.17, Utilities and Service Systems, of the Draft EIR); however, because Alternative 1 requires no new utilities or services systems, impacts to utilities and service systems would be fewer compared to that of the proposed project.

Wildfire

Under Alternative 1, the proposed project site would not be developed with 194 single-family homes and associated off-site improvements as proposed. As such, this alternative would have no impact related to wildfires because it would result in no physical changes to the current project site, including no new residential units or nonresidential square footage. Therefore, no change would occur related to wildfires.

Under the proposed project, impacts related to wildfire would be less than significant or less than significant with mitigation incorporated (see Section 3.18, Wildfire, of the Draft EIR). However, because Alternative 1 does not include any development, impacts related to wildfires would be reduced compared to that of the proposed project.

6.3.2 - Conclusion

Under Alternative 1, the proposed project site would not be developed with 194 single-family homes and associated off-site improvements would not be constructed. No physical changes would occur on the project site, and there would not be a potential for new environmental impacts to occur. Alternative 1 would substantially or incrementally reduce or eliminate short-term, long-term, and cumulative impacts in all categories when compared to the proposed project.

However, Alternative 1 would not accomplish many of the project objectives discussed in Section 6.2, above. Alternative 1 would result in the development of zero new residential units, and thus would not provide housing opportunities consistent with the County's Housing Element and the RHNA approved by the ABAG; generate new, additional property tax revenues; or provide a range of professionally designed housing options, as the proposed project would. Alternative 1 would keep the space open; however, the open space currently available is private and gated. Under Alternative 1, open space would continue to remain private and closed to the public. Under the proposed project, 0.9 acres of park and sidewalks would be available to the public. Accordingly, this alternative would satisfy none of the project objectives, and thus this alternative is undesirable under CEQA.

6.4 - Alternative 2—Annexation into the City of Pleasanton Alternative

Under Alternative 2, the proposed project site, which is currently within the jurisdiction of the County, would be annexed into the City. Alternative 2 would include the residential component as proposed under the proposed project. However, because the proposed project would be located within the City, it would be served by the City's utility providers and public service providers. Thus, the proposed project would not need to develop the following off-site components: water storage

and booster pump facility, sewer treatment plant, recycled water storage facility, and agricultural irrigation recycled water spray fields.

This alternative would result in the development of the same number of residential units and would include the same roadway, bicycle, and pedestrian improvements along Busch Road. As such, many impacts under this alternative would be largely similar to the proposed project, and the analysis of impacts in Chapter 3 would apply to Alternative 2. To avoid unnecessary repetition and to focus on a comparison of this alternative to the proposed project, the following analysis focuses on those impacts that could be different from the proposed project.

6.4.1 - Impact Analysis

Aesthetics, Light, and Glare

Similar to the proposed project, under Alternative 2, the proposed development would not introduce any development to scenic ridges, hillsides, and rock outcroppings where structures would interrupt the aesthetic landscape of the area. Additionally, this alternative would have no impact on scenic resources within a designated State Scenic Highway. The results of the Shade and Shadow Study prepared for the residential component of the proposed project in Section 3.1, Aesthetics, Light, and Glare, of the Draft EIR would also apply to Alternative 2. There would be a less than significant impact on the solar panels located on the roofs of adjacent, existing development west of the project site.

Under Alternative 2, the project site would be developed with 194 single-family homes, but several off-site components would not be developed, including the sewer treatment plant, the water storage and booster pump facility, the recycled water storage facility, and agricultural spray fields. Therefore, Alternative 2 would result in fewer changes in visual character, views, nighttime lighting, daytime glare, or shadow.

The project impacts related to aesthetics would be similar to the proposed project and would result in no impact or less than significant impacts (see Section 3.1, Aesthetics, Light, and Glare, of the Draft EIR); however, as it would involve less development, Alternative 2 would have an incrementally lower level of aesthetic impacts compared to the proposed project.

Air Quality

Under Alternative 2, short-term construction and long-term operational air emissions would be reduced, compared to the proposed project, as no construction or land use changes would take place off-site aside from the roadway, pedestrian, and bicycle improvements along Busch Road. Specifically, under the proposed project, the total impact area would be approximately 65 acres, while under Alternative 2, the total impact area would be limited to just the residential component site and the Busch Road improvements, totaling approximately 27 acres—a reduction of 38 acres. The temporary impact area, which includes the haul route and the dirt harvest area, would remain the same under Alternative 2 and the proposed project, approximately 4 acres. Further, project operations associated with the sewer treatment plant, water storage and booster pump facility, recycled water storage facility, and agricultural irrigation recycled water spray fields would not be established.

A summary of the project as proposed (with off-site improvements) compared to Alternative 2² is provided in Table 6-1 below.

Table 6-1: Comparison of Construction Criteria Pollutant Emissions

Construction Activity	Criteria Pollutant Emissions			
	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
Proposed Project				
Proposed Project Construction Emissions (Pounds)	12,515.5	26,622.0	1,067.1	980.3
Average Daily Construction Emissions (Pounds/Day)	13.86	29.48	1.18	1.09
BAAQMD Significance Thresholds (Pounds/Day)	54	54	82	54
Significant Impact?	No	No	No	No
Alternative 2				
Alternative 2 Construction Emissions (Pounds)	11,976.4	22,182.8	884.6	812.6
Average Daily Construction Emissions (Pounds/Day)	13.26	24.57	0.98	0.90
BAAQMD Significance Thresholds (Pounds/Day)	54	54	82	54
Significant Impact?	No	No	No	No
Notes: This analysis relies on a 903-day construction schedule for both scenarios, consistent with the construction schedule and modeling results contained in Appendix B. Off-site improvements included in the proposed project scenario were assumed to overlap with the main construction site activities, resulting in the same 903-day schedule for both scenarios. BAAQMD = Bay Area Air Quality Management District NO _x = nitrogen oxides PM ₁₀ = particulate matter less than 10 micrometers in diameter PM _{2.5} = particulate matter less than 2.5 micrometers in diameter ROG = reactive organic gases Source: Appendix B.				

As shown in Table 6-1 above, total emissions and average daily emissions would be lower in the Alternative 2 scenario compared to the proposed project scenario. Criteria pollutant emissions would be less than the applicable BAAQMD significance thresholds under both scenarios.

Mitigation would be required for the proposed project to reduce potential impacts from the generation of fugitive dust during construction. The BAAQMD determines a project to result in a potentially significant impact if that project were not to implement construction Best Management Practices (BMPs) to minimize the extent of fugitive dust emissions during project construction. Fugitive dust would be generated under both the proposed project scenario and Alternative 2. Therefore, MM AIR-1 would be required to ensure implementation of construction BMPs recommended by the BAAQMD under both scenarios. Similarly, implementation of MM AIR-1 would

² Emissions for Alternative 2 were approximated using the “Residential Project Site Construction” presented in Table 3.2-11, Construction Emissions of Air Quality, of the Draft Environmental Impact Report (EIR).

sufficiently reduce project construction emissions to less than significant levels under both the proposed project and Alternative 2 scenarios.

MM AIR-3 was required to reduce potential health risk impacts from construction of the proposed project. MM AIR-3 requires that all applicable construction equipment utilized in mass grading, paving, and building construction phases be Tier IV or Tier IV Equivalent. Health risk impacts from the proposed project were found to be less than significant after implementation of MM AIR-3. The primary toxic air contaminant (TAC) of concern for the proposed project or Alternative 2 would be diesel particulate matter (DPM). The majority of exhaust emissions of DPM (as particulate matter less than 10 microns in diameter [PM₁₀] exhaust) would be generated from construction activities associated with the residential component of the proposed project. As such, MM AIR-3 would be required under both the proposed project and Alternative 2 scenarios. Likewise, both scenarios would be less than significant with mitigation.

Although the proposed project as mitigated would not result in significant emissions of air quality pollutants (see Section 3.2, Air Quality, of the Draft EIR), the air quality impacts associated with Alternative 2 would be less than the proposed project due to the reduction in construction and operational impacts associated with the elimination of the utility-related off-site components.

Biological Resources

Under Alternative 2, the project site would still be developed with 194 single-family homes. However, no construction or ground-disturbing activities would occur related to the off-site utility improvements. Under Alternative 2, the total impact area would be reduced by approximately 38 acres. Further, all of the project development would be located west of El Charro Road, with the exception of the small rocky outfall, thereby avoiding any development east of El Charro Road where a majority of the identified sensitive biological resources are located. While the current configuration of the proposed project's utility-related off-site improvements is designed to avoid significant impacts related to biological resources under the proposed project, Alternative 2 would avoid the area almost entirely.

Therefore, changes related to wildlife or habitat associated with Alternative 2 would be less relative to the proposed project. Although the proposed project's impacts related to biological resources are determined to be less than significant with mitigation incorporated (see Section 3.3, Biological Resources, of the Draft EIR), Alternative 2 would have a slightly lower level of biological resources impacts compared to the proposed project because the area designated for utility-related off-site improvements would not be developed.

Cultural Resources and Tribal Cultural Resources

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction or ground-disturbing activities would occur related to the majority of the off-site components aside from the roadway, pedestrian, and bicycle improvements along Busch Road. Under Alternative 2, the total impact area would be reduced by approximately 38 acres. Therefore, development related to ground-disturbing activity would be reduced. Direct impacts could still occur with respect to existing and/or undiscovered cultural resources or TCRs because ground disturbance

from the construction of the proposed development would still occur. Although the proposed project's impacts related to cultural resources and TCRs are determined to be less than significant with mitigation incorporated (see Section 3.4, Cultural Resources and Tribal Cultural Resources, of the Draft EIR), Alternative 2 would have a lower level of cultural resources and TCR impacts compared to the proposed project due to the reduction in ground-disturbing activity associated with the elimination of the utility-related off-site improvements.

Energy

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to the majority of the off-site components aside from the roadway, pedestrian, and bicycle improvements along Busch Road. Therefore, there would be no energy uses associated with the construction and operation of the various off-site components, but energy uses would still be associated with construction and operation of the residential project site.

Compared to the proposed project, direct energy impacts would be reduced under this alternative. Although the proposed project's impacts related to energy would be less than significant (see Section 3.5, Energy), Alternative 2 would have a similar, but lower, level of energy impacts compared to the proposed project.

Geology, Soils, and Seismicity

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction of off-site utility-related improvements would occur. As previously discussed, the total impact area under Alternative 2 would be reduced by approximately 38 acres as compared to the proposed project.

Under the proposed project, project impacts related to geology, soils, and seismicity are determined to be less than significant with mitigation incorporated (see Section 3.6, Geology and Soils, of the Draft EIR). While Alternative 2 would reduce the total project impact area, a design-level geotechnical study and mitigation related to paleontological mitigation would be required under both the proposed project and Alternative 2. However, because 38 fewer acres would be developed under this alternative, soil disturbance associated with grading and building activities would be less than under the proposed project. Thus, Alternative 2 would have a lower level of geology impacts compared to the proposed project.

Greenhouse Gas Emissions

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to the majority of the off-site components aside from the roadway, pedestrian, and bicycle improvements along Busch Road. The County does not have a qualified Climate Action Plan (CAP), so the proposed project was analyzed against BAAQMD GHG thresholds, Criterion A. However, the City's Pleasanton CAP 2.0 is a qualified GHG emission reduction plan per CEQA requirements, so development under Alternative 2 is analyzed for consistency with Pleasanton CAP 2.0.

The Pleasanton CAP 2.0 can be utilized to streamline the GHG emissions analysis for projects that are consistent with the demographic forecasts, and land use assumptions in the Pleasanton CAP 2.0 can utilize the City’s CEQA GHG Checklist to demonstrate consistency with the Pleasanton CAP 2.0 GHG emissions reduction strategy and, if consistent, can tier from the environmental review contained in the Pleasanton CAP 2.0 Initial Study/Negative Declaration. In doing so, these projects would result in less than significant GHG emissions and not result in a cumulatively considerable GHG emissions impact. While Alternative 2 is consistent with the General Plan land use designation, the project does not meet the mandatory requirements for streamlining. Therefore, similar to the proposed project, development under Alternative 2 would be fully analyzed against the City’s Quantitative GHG thresholds.

The Pleasanton CAP 2.0 includes specific strategies and actions to reduce emissions to 4.11 metric tons (MT) carbon dioxide equivalent (CO₂e) per capita by 2030 (70 percent below 1990 levels) and provide substantial progress toward carbon neutrality by 2045. Based on the preliminary analysis conducted for the proposed project, the majority of the GHG emissions would be generated from the residential component of the project during operation. Using the initial analysis and modeling prepared for the proposed project, Alternative 2 would likely still produce approximately 4.13 MT CO₂e per capita, which is above the 4.11 MT CO₂e per capita threshold set by the City’s quantitative thresholds. Therefore, because less development would occur under this alternative, there would be less GHG emissions; however, impacts related to GHG would still likely be potentially significant given the City’s GHG thresholds.

A summary comparison of the estimated GHG emissions for both the proposed project and Alternative 2 is provided in Table 6-2 below.

Table 6-2: Comparison of Greenhouse Gas Emissions

Parameter	Proposed Project Scenario	Alternative 2
Total Construction GHG Emissions	3,228 MT CO ₂ e over the entire construction duration	2,745 MT CO ₂ e over the entire construction duration
Total Annual Project Emissions (Operations plus Amortized Construction Emissions)	2,872 MT CO ₂ e per year	2,856 MT CO ₂ e per year
Efficiency Rate (MTCO ₂ e per resident)	4.16 MT CO ₂ e/capita/year ^{1,2}	4.13 MT CO ₂ e/capita/year ^{2,3}
Notes: ¹ 2,872 MT CO ₂ e per year divided by 691 residents equals 4.16 MTCO ₂ e/capita/year. ² Both the proposed project and Alternative 2 were assumed to have a service population of 691 new residents based on information provided in Section 3.13, Population and Housing. Unincorporated Alameda County has an average of 2.84 residents per household (Section 3.13, Population and Housing, of the Draft EIR). ³ 2,856 MT CO ₂ e per year divided by 691 residents equals 4.13 MTCO ₂ e/capita/year.		

Under the proposed project, project impacts related to greenhouse gas emissions were found to be significant and unavoidable (see Section 3.7, Greenhouse Gas Emissions, of the Draft EIR).

Implementation of Alternative 2 would still result in the construction of the residential component of

the proposed project, resulting in increased GHG emissions from baseline conditions due to stationary and mobile source emissions. Alternative 2's construction and operation and GHG emissions would likely still be significant. Alternative 2 would also result in significant and unavoidable VMT impacts because removal of the off-site improvements would not substantially affect project VMT as the uses associated with the utility-related off-site components are expected to result in less than one vehicle trip per day. As such, impacts under Alternative 2 would be similar to the proposed project but slightly less than the proposed project.

Hazards and Hazardous Materials

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to off-site utility improvements; overall, the total project impact area would be reduced by 38 acres. Because less development would occur under this alternative, impacts related to hazards and hazardous materials from the off-site improvements of the proposed project would be reduced.

Under the proposed project, impacts related to hazards and hazardous materials would be less than significant (see Section 3.8, Hazards and Hazardous Materials of the Draft EIR). This alternative would result in similar, but slightly lower, impacts related to hazards and hazardous materials.

Hydrology and Water Quality

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to off-site utility improvements, reducing the project footprint by 38 acres. All of the proposed development under Alternative 2 would be located west of El Charro Road. Thus, all the development would be located in in FEMA Flood Hazard Zone X, an area of minimal flood hazard, completely avoiding development within FEMA Flood Hazard Zone A, a 1 percent annual chance flood hazard zone. Therefore, Alternative 2 would avoid development that could occur in a flood zone compared to the proposed project under both Design Option A and Design Option B.

Under the proposed project, impacts related to hydrology and water quality would be less than significant (see Section 3.9, Hydrology and Water Quality, of the Draft EIR). As Alternative 2 would reduce the amount of development in a flood zone and would result in lower impacts related to hydrology and water quality compared to the proposed project.

Land Use

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to off-site utility improvements. Alternative 2 would result in similar residential development, which would not divide an established community, and if the proposed project site were annexed into the City of Pleasanton, it would be designated and zoned in accordance with the City's General Plan and Zoning Ordinance. As such, Alternative 2 would not conflict with any land use plans or policies.

Under the proposed project, impact related to land use and planning were less than significant (see Section 3.10, Land Use and Planning, of the Draft EIR). Because both the proposed project and

Alternative 2 are consistent with the existing land use regulations on the site, impacts would remain the same as the proposed project.

Mineral Resources

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to off-site utility improvements. All of the proposed development under Alternative 2 would be located west of El Charro Road and outside of the Mineral Resource Zone 2 (MRZ-2) area. Accordingly, development under this alternative would have a reduced impact compared to the proposed project because it would avoid activity in an MRZ-2 zone. Additionally, as previously discussed, the total impact area under the proposed project would be reduced by 38 acres under Alternative 2. Because less development would occur under this alternative, soil disturbance associated with grading and building activities would be less than under the proposed project.

The project site is unlikely to contain any mineral resources of local, regional, or Statewide significance. Therefore, although the proposed project's impacts related to mineral resources would be less than significant (see Section 3.11, Mineral Resources, of the Draft EIR), Alternative 2 would have a slightly reduced level of mineral resources impacts compared to the proposed project.

Noise

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to off-site utility improvements. As such, noise impacts associated with the associated off-site utility improvements would be eliminated. As previously discussed, Alternative 2 would reduce the total impact area by approximately 38 acres; thus, construction noise would be reduced accordingly. Regardless of the amount of construction, Alternative 2 would still be required to implement MM NOI-1, which requires implementation of a number of measures to reduce the potential construction-period noise impacts. Operational noise primarily comes from vehicle traffic to the project site, and because the residential component would remain unchanged, operational noise generated by Alternative 2 would be largely the same as the proposed project.

Under the proposed project, impacts related to noise would be less than significant with mitigation incorporated (see Section 3.12, Noise, of the Draft EIR). Since the residential component of the proposed project would be the same under Alternative 2, and mitigation measure NOI-1 would still be required, impacts related to noise would be similar, but slightly less, compared to the proposed project due to the reduction of overall construction activity.

Population and Housing

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to the off-site utility improvements. Because the residential component would remain the same under Alternative 2, the estimated number of new residents generated by the project would also be 691 persons. The off-site utility improvements that would be eliminated under this alternative would not generate new residents and were expected to result in less than one full-time employee.

Under the proposed project, impacts related to population and housing would result in fewer significant impacts (see Section 3.13, Population and Housing), and impacts under the under Alternative 2 would be the same.

Public Services

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to the off-site utility improvements. Because the residential component would remain the same under Alternative 2, the estimated number of new residents generated by the project would also be 691 persons and the demand for public services would be the same as under the proposed project.

However, because under Alternative 2 the project would be located in the City, some of the service providers would be different under Alternative 2. For fire protection and emergency medical services, the Livermore-Pleasanton Fire Department (LFPD) is jointly operated by the cities of Livermore and Pleasanton and firefighters and paramedics are dispatched to a variety of incidents, including structure fires, hazardous materials, medical calls, and traffic accidents. Under the proposed project, the project site is within the Alameda County Fire Department (ACFD) service area but would be served by LFPD, which has an automatic mutual aid agreement with the ACFD to provide voluntary fire protection, rescue, and emergency medical services without supplanting day-to-day services of the ACFD service area. Therefore, impacts related to fire protection and emergency medical services would remain the same under Alternative 2 as the proposed project. As discussed in the Draft EIR, impacts related to fire protection and emergency medical services would be less than significant (see Section 3.14, Public Services, of the Draft EIR).

For police protection, the City is served by the Pleasanton Police Department (Pleasanton PD). Under the proposed project, the project site would be within the jurisdiction of the Alameda County Sheriff's Office (County Sheriff). However, if there is a life-threatening emergency, the County Sheriff can request Pleasanton PD to help address the emergency until the County Sheriff's Office can arrive on the scene. Under Alternative 2, the project would be served solely by Pleasanton PD and would contribute development fees that would support the services of Pleasanton PD. Under the proposed project, impacts related to police protection are determined to be less than significant (see Section 3.14, Public Services, of the Draft EIR), and impacts would be the same under Alternative 2.

For schools, the project site would still be within the Pleasanton Unified School District (PUSD) service area and, thus, would have the same impacts as the proposed project. Under the proposed project, impacts related to schools are less than significant (see Section 3.14, Public Services, of the Draft EIR), and impacts would be the same under Alternative 2.

For recreation services, the Draft EIR evaluated the proposed project's demand on the City's recreational facilities because although the project site is located in unincorporated Alameda County, future residents of the proposed project would use the open space and recreational facilities located in the City due to the site's proximity to the City's recreational facilities. According to the City's 2023–2031 (6th Cycle) Housing Element Update Program EIR, the City maintains 46 developed park sites that total 385 acres of parkland and 1,016 acres of open spaces, which also contain trails for

recreational uses, totaling approximately 1,401 acres of parks and other recreational facilities, which is approximately 17.9 acres per 1,000 residents. Therefore, the City maintains a park service standard of over five acres of park and recreational uses per 1,000 residents, consistent with Program 10.18.

Under Alternative 2, the residential component would not change; therefore, Alternative 2 would still result in an increase of 691 residents and the inclusion of an approximately 0.7-acre private park and approximately 0.5 mile of designated public walking trails. With the addition 691 residents to the City, the ratio of parklands and other recreational uses per 1,000 residents would be approximately 17.8 and would, therefore, not adversely impact the ability of the City to provide adequate services. Further, under Alternative 2, the proposed project would contribute to the City's Capital Facilities Fee to develop or maintain recreational facilities. Under the proposed project, impacts related to recreation facilities are less than significant (see Section 3.14, Public Services, of the Draft EIR), and impacts would be the same under Alternative 2.

For library services, under Alternative 2, the proposed project would be served by the Pleasanton Library system. According to the current Library and Recreation strategic plan, the library currently services approximately 873,440 community members. The project is expecting to add 691 new residents, representing an approximately 0.08 percent increase to the library's service area, which is nominal; impacts would be less than significant. Under the proposed project, impacts related to library services were determined to be less than significant (see Section 3.14, Public Services, of the Draft EIR), and impacts would be the same under Alternative 2.

In summary, the proposed project's impacts related to public services were found to be less than significant (see Section 3.14, Public Services). Under Alternative 2, the majority of the service providers would remain the same, with the exception of recreation services and library services. However, under Alternative 2, the project would contribute to Capital Improvement Fees and developer fees that would support the maintenance and development of public services. As identified above, impacts under Alternative 2 would be the same as compared to the proposed project.

Recreation

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to the off-site utility improvements. Therefore, because the residential component would remain the same under Alternative 2, the estimated number of new residents generated by the project would also be 691 persons. Thus, the demand on recreation facilities would be the same as under the proposed project.

As discussed above, under Alternative 2, the project would be served by the City's Parks and Recreation Department. The Draft EIR evaluated the proposed project's demand on the City's recreational facilities because, although the project site is located in unincorporated Alameda County, future residents of the proposed project would use the open space and recreational facilities located in the City due to the site's proximity to the City's recreational facilities.

Under Alternative 2, the residential component would not change; therefore, Alternative 2 would result in an increase of 691 residents and the inclusion of an approximately 0.7-acre private park and approximately 0.5 mile of designated public walking trails. With the addition 691 residents to the City, the ratio of parklands and other recreational uses per 1,000 residents would remain approximately 17.8 and would, therefore, not significantly change the amount of recreational uses per 1,000 residents in the City or adversely impact the ability of either the City or the County to provide adequate services. Further, under Alternative 2, the project would contribute to the City's Capital Facilities Fee to develop or maintain recreational facilities. Additionally, the City's Municipal Code contains rules and regulations related to payment of capital facilities fees, which includes parks and recreation facilities. Chapter 3.22 of the Municipal Code requires that development projects pay a capital facilities fee apportioned to the cost of the necessary public improvements associated with each development within the City. Accordingly, impacts would be less than significant.

Under the proposed project, impacts related to recreation facilities are less than significant (see Section 3.15, Recreation, of the Draft EIR), and impacts under Alternative 2 would be similar.

Transportation

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to the off-site utility improvements. Alternative 2 would still include the same residential component as the proposed project; therefore, it would result in similar traffic impacts from the residential component as compared to the proposed project.

The City evaluates VMT via a quantitative VMT analysis using the methods applied in the Housing Element Program EIR, with modifications as necessary (e.g., to account for project-specific information and/or to reflect future updates to the Alameda Countywide Travel Demand Model) and analyze impacts against the applicable VMT thresholds provided by the City. Per City guidance, VMT should be calculated using the Alameda County Transportation Commission (Alameda CTC) Model for environmental review. The Draft EIR utilized the Alameda CTC Model to calculate the VMT for the proposed project. Because the changes to the proposed project under Alternative 2 would not change the total VMT calculated, because the location and trip-generating uses (residential) would not change as compared to the proposed project, the VMT calculated for the proposed project would be the same for Alternative 2.

The City screens out projects from further analysis under certain conditions: if a project is located within a low VMT-generating area, is a transit or bicycle/pedestrian project, or is located within 0.5 miles of a regional transit stop. Because the project location would not change under Alternative 2, it would not qualify for VMT screening.

The City's significance threshold for VMT is defined as 15 percent below the Alameda County average as a whole, as opposed to the East Planning Area (which includes Dublin, Pleasanton, Livermore, and surrounding unincorporated areas). Therefore, because the County's average is expected to be 17.6 VMT per resident, the significance threshold is 15 VMT per resident. As discussed above, the VMT would be unchanged under Alternative 2, so the VMT per resident would remain 29.9, which is above the significance threshold set by the City. Therefore, under Alternative

2, the project would need to reduce VMT by 14.9 percent in order to reach a less than significant level. (For comparison, the proposed project would need to reduce VMT by 13.4 percent.) As discussed in the Draft EIR, the proposed project would not be able to apply enough mitigation to reduce VMT by 13.4 percent; therefore, the Alternative 2 would also not be able to reduce VMT sufficiently to avoid the identified impact. Therefore, impacts related to VMT would be significant and unavoidable under Alternative 2, and Alternative 2 would also have a significant and unavoidable cumulative VMT impact.

Additionally, as discussed in the Draft EIR, with existing 2019 and 2023 volumes, 95th percentile queues are projected to exceed the available storage space in dedicated turn lanes at Santa Rita Road/Valley Avenue and Stanley Boulevard/Valley Avenue-Bernal Avenue during both the AM and PM peak-hours. Adding project traffic to the existing 2019 volumes, which results in a conservative analysis as the 2019 volumes are generally higher than 2023 volumes, would increase the 95th percentile queue length in the 100-foot westbound right-turn lane at Santa Rita Road/Valley Avenue during the AM peak-hour from 83 feet to 115 feet. Similarly, the addition of project traffic to existing 2019 volumes would increase the northbound right-turn queue at Stanley Boulevard/Valley Avenue-Bernal Avenue during the AM peak-hour from 172 feet to 187 feet, exceeding the 180-foot pocket length. These impacts would remain the same under Alternative 2 as total trips would not change as compared to the proposed project.

However, retiming the Stanley Boulevard/Valley Avenue-Bernal Avenue to accommodate project traffic would be expected to reduce the northbound right-turn queue to 127 feet, and retiming the signal at Stanley Boulevard/Valley Avenue-Bernal Avenue under baseline conditions to account for project traffic would decrease queues in the eastbound and westbound left-turn lanes to 272 feet and 239 feet respectively, which would remain within the available storage space. Under the proposed project, this mitigation was deemed unenforceable because the signals are located within the City, which is not the lead agency. However, under Alternative 2, the City would be the lead agency and would be able to implement the mitigation and reduce impacts related to geometric design hazards to a less than significant level.

Under the proposed project, impacts related to transportation and traffic would be significant and unavoidable related to project-level VMT, cumulative VMT, and hazards due to a geometric design feature; and less than significant related to conflicts with a program plan, ordinance, or policy of the circulation system (see Section 3.16, Transportation, of the Draft EIR). As discussed above, Alternative 2 would also result in significant and unavoidable impacts related to project-level and cumulative VMT; however, Alternative 2 would likely not have a significant and unavoidable impact related to hazards due to a geometric design feature because the City, as the lead agency, would have the authority to retime the affected traffic signals to avoid significant queueing. Therefore, since Alternative 2 would reduce one significant and unavoidable impact related to transportation to a less than significant level, it would have less impact as compared to the proposed project.

Utilities and Service Systems

Under Alternative 2, the project site would be developed with 194 single-family homes. However, no construction would occur related to the majority of the off-site components, aside from the

roadway, pedestrian, and bicycle improvements along Busch Road. Under Alternative 2, water would be provided by the City of Pleasanton as opposed to Cal Water’s Livermore District, which would provide water under the proposed project. The proposed project would be able to connect directly to the City’s existing water infrastructure; therefore, the approximately 400,000-gallon water storage and booster pump facility would not be required under Alternative 2. Because the residential component would not change under Alternative 2, the development would still be anticipated to result in an annual water demand of 47 acre-feet per year (AFY) as calculated by the project-specific Water Supply Assessment (WSA) prepared for the proposed project. Under Alternative 2, the project would contribute to the City’s capital improvement program through development impact fees. Consistent with applicable State law, the City’s development fees would ensure that the developers pay the cost attributable to the increased demand for the affected public facilities reasonably related to the development project to maintain the existing level of service and achieve an adopted level of service that is consistent with the City’s General Plan and Municipal Code. Impacts under Alternative 2 would be less than significant.

Recycled water, which is nonpotable wastewater that has been treated to a specified quality that allows for reuse generally for landscape irrigation purposes, would be provided by the Dublin San Ramon Services District (DSRSD) Regional Wastewater Treatment Facility (RWTF) and Livermore Water Reclamation Plant (LWRP). Under the proposed project, the Livermore District of Cal Water relies on, and coordinates with, the City of Livermore, the East Bay Dischargers Authority (EBDA), and Livermore-Amador Valley Water Management Agency (LAVWMA) to conduct wastewater collection, treatment, and discharge. Cal Water does not use or bring in recycled water to its operational area. As such, the proposed project includes the development of an approximately 2.5-acre recycled water storage facility that would discharge recycled water into approximately 8.5 acres of agricultural spray fields. Under Alternative 2, a recycled water storage facility would not be required.

For wastewater treatment, the City handles the collection of wastewater generated from three areas: City’s service area, the Ruby Hills development (treated by the LWRP), and the Castlewood Area of Alameda County. The City operates a sanitary sewer system that serves a residential population of approximately 83,007 in a 24-square-mile service area. Wastewater from the City is discharged to and treated at two treatment plants: the RWTF (owned and operated by DSRSD) and the LWRP (owned and operated by the City of Livermore). The LWRP only treats wastewater from the City of Pleasanton’s Ruby Hills housing development. Unrecycled treated wastewater is sent through the LAVWMA pipeline for ultimate disposal by the EBDA in the San Francisco Bay.

Under Alternative 2, the project would connect to the City’s sanitary sewer system directly and would not require construction of the off-site utility improvement proposed by the project. Ultimately, under both Alternative 2 and the proposed project, unrecycled wastewater would be discharged via pipelines owned and operated by the LAVWMA for ultimate discharge into the San Francisco Bay. According to the City’s Housing Element Update EIR, the RWTF and LWRP serving the City of Pleasanton would have a combined capacity to treat up to 26.1 million gallons per day (mgd) plus the current LAVWMA pipeline discharge capacity of 41.2 mgd. As discussed in the Draft EIR, the proposed residential development is anticipated to generate 32,667 gallons per day (gpd) according

to the project-specific Recycled Water Balance Memorandum prepared by EKI Environment & Water, Inc. (EKI) on January 5, 2024. Therefore, the development under Alternative 2 would represent 0.1 percent of the City's total capacity to treat wastewater, not including the LAVWMA pipeline discharge capacity. Thus, impacts related to recycled water and wastewater treatment are less than significant under Alternative 2, which is the same as the proposed project.

Both Alternative 2 and the proposed project would be required to comply the applicable provisions of Section C.3 of the San Francisco Bay Regional Water Quality Control Board Municipal Regional Permit (Order No. R2-2015-0049, NPDES Permit No. CAS612008) (or more recent permit). Under both Alternative 2 and the proposed project, Low Impact Development (LID) stormwater management methods would be implemented into the on-site storm drainage system, such as infiltration, evapotranspiration, or biotreatment. Further, for development within the City as proposed under Alternative 2, the project would be required to meet the City's Stormwater Requirements Checklist, which would ensure the implementation of regulated stormwater infrastructure into development. Compliance with City requirements and policies would ensure that runoff would not inundate downstream storm drainage facilities such that new or expanded facilities would be required. Impacts would be less than significant, which is the same as the proposed project.

Solid waste collection and disposal in the City is provided by Pleasanton Garbage Service, Inc. (PGS). PGS currently contracts with Browning Ferris Industries for disposal at the Vasco Road Landfill in Livermore. The Vasco Road Landfill has a total design capacity of 40,207,100 cubic yards. It is authorized to accumulate 2,518 tons of solid waste per day. Under both Alternative 2 and the proposed project, solid waste services would be provided by PGS. Development of the project would generate an estimated 3,700 cubic yards of construction debris. This waste volume represents 0.03 percent of the 11.56 million cubic yards of remaining capacity at the Vasco Road Landfill. Similarly, the project would generate an estimated 530 cubic yards of operational solid waste on an annual basis at buildout. This waste volume represents approximately 0.004 percent of the 11.56 million cubic yards of remaining capacity at the Vasco Road Landfill. Therefore, PGS and its associated landfill would be able to accommodate the development proposed, resulting in a less than significant impact. Thus, impacts would be the same for Alternative 2 as compared to the proposed project.

Electricity services would be provided by Pacific Gas and Electric Company (PG&E) for both Alternative 2 and the proposed project. Existing overhead utility lines along the proposed project frontage on Busch Road would be relocated underground. Therefore, neither the proposed project nor Alternative 2 would result in the relocation or construction of new or expanded electric power facilities, and impacts would be less than significant.

Under both Alternative 2 and the proposed project, AT&T would provide phone services and Comcast would provide phone and high-speed internet services to the project site. Therefore, the construction or expansion of telecommunications facilities would not be required under either Alternative 2 or the proposed project because it is located by existing urban development that already contains sufficient telecommunications facilities. Therefore, impacts related to the need for

relocation or construction of new or expanded telecommunications facilities would be less than significant under Alternative 2.

In summary, under the proposed project, impacts to utilities and service systems would be less than significant (see Section 3.17, Utilities and Service Systems, of the Draft EIR). Under Alternative 2, the majority of utilities would connect to existing infrastructure owned and maintained by the City; thus, the utility-related off-site improvements would not be constructed. However, under both Alternative 2 and the proposed project, impacts would be less than significant.

Wildfire

Under Alternative 2, the overall footprint of the developed areas would be reduced because the off-site utility improvements would not be constructed, reducing the total project impact area by 38 acres. The project site is not located in a Fire Hazard Severity Zone (FHSZ) in a State Responsibility Area (SRA) or in a Very High FHSZ (VHFHSZ) in a local, State, or federal responsibility area. Additionally, the same emergency services routes would be established under both Alternative 2 and the proposed project. Thus, impacts under Alternative 2 would be less than significant.

Under the proposed project, there would be a less than significant impact related to wildfires (see Section 3.18, Wildfire of the Draft EIR). Therefore, because the overall development area under Alternative 2 would be reduced by 38 acres, this alternative would have less impacts as compared to the proposed project.

6.4.2 - Conclusion

Under Alternative 2, the proposed project site would be annexed into the City of Pleasanton. This alternative would result in the development of the same number of residential units and would include the same roadway, bicycle, and pedestrian improvements along Busch Road compared to the proposed project. Because the development under Alternative 2 would connect and utilize existing City infrastructure and utilities, it would not require construction of off-site utility improvements, thereby reducing the total project impact area by 38 acres. Largely, operational impacts are anticipated to be similar under this alternative to the proposed project because the residential component would not change.

None of the topical areas analyzed above show an increase in impacts as compared to the proposed project. For the majority of topical sections, Alternative 2 would result in fewer impacts due to the reduction in the development footprint. Notably, impacts related to GHG would still be significant under Alternative 2; however, the amount of GHG emissions would be less than the proposed project. Similarly, impacts related to VMT would still be significant and unavailable under Alternative 2. While the reduced amount of construction traffic would reduce construction-related VMT, annexation and removal utility-related off-site improvements would not affect the amount of operational VMT generated by the project. Based on the analysis above, Alternative 2 would not be able to implement sufficient mitigation to achieve compliance with the City's VMT threshold. However, as discussed above, under Alternative 2, significant transportation impacts related to hazards from the geometric design could be reduced to a less than significant level because the City would have the authority to implement mitigation related to signal retiming.

Alternative 2 would result in fewer impacts as compared to the proposed project and would reduce a significant and unavoidable impact to a less than significant level with the incorporation of mitigation. However, the County as lead agency for the proposed project does not have the authority to implement annexation to the City. Annexation is a process that would require active collaboration and approval from the City and Local Agency Formation Commission (LAFCo), which cannot be guaranteed. Thus, Alternative 2 is determined to be infeasible.

6.5 - Alternative 3—Mixed-use Alternative

Under Alternative 3, the proposed project would convert a portion or all of the proposed single-family homes into mixed-use development, including the addition of retail and commercial uses consistent with the ECAP MDR designation, which allows neighborhood commercial uses and similar/compatible uses on sites up to 15 acres with a maximum floor area ratio (FAR) of 0.4. All other project components would remain the same, including the proposed roadway improvements, off-site utility-related improvements, and the private park on the project site. Under Alternative 3, the project would remain within the jurisdiction of the County.

The proposed residential component would be developed with approximately 12.85 acres of neighborhood commercial uses consistent with ECAP MDR designation, resulting in approximately 223,898 square feet of commercial development and approximately 12.85 acres of single-family residential development. The density of the residential components under Alternative 3 would be consistent with the density proposed under the proposed project, 7.3 dwelling units per acre (du/acre). Thus, under this alternative, the residential component would contain 94 dwelling units. Similar to the proposed project, 25 percent of the proposed dwellings would include deed-restricted ADUs (24 units). Therefore, the proposed project would result in approximately 336 new residents^{3,4} and 448 new employees.⁵ This alternative assumes that the commercial component of the proposed project would be consistent with the height, profile, and design of the proposed project.

This alternative has been developed to address the significant and unavoidable GHG and VMT impacts that would occur under the proposed project, specifically focusing on reducing VMT. The primary factors that contribute to the calculation of VMT include the location of the project site and the types of uses proposed at the site. Therefore, a reduction in density of residential uses on-site would not impact the VMT per capita. An alternate location alternative is evaluated in Section 6.7; this alternative focuses on a change in uses.

Numerous studies demonstrate that mixed-use development can impact VMT; however, the quantifiable extent to which it reduces VMT is inconclusive. Because mixed-use development offers a variety of employment, shopping, and recreational opportunities within short distances of

³ County of Alameda. 2023. 2023–2031 Housing Element Update: Initial Study – Mitigated Negative Declaration. Website: https://www.acgov.org/cda/planning/housing-element/documents/Alameda-County-HEU_Public-Draft-IS-MND.pdf. Accessed December 4, 2023.

⁴ 94 single-family dwelling units plus 24 ADUs equals 118 total dwelling units. The County's average number of persons per household is 2.84. 118 multiplied by 2.84 equals approximately 336 residents.

⁵ Based on Institute of Transportation Engineers (ITE) Trip Generation Rates of approximately 1,000 square feet of retail per two employees. 223,898 square feet of retail divided by 1,000, multiplied by 2 equals approximately 448 new employees. Accessed July 18, 2024.

residences, they facilitate the use of non-automobile travel modes and can also shorten car trips, which may in turn reduce passenger vehicle GHG emissions and overall VMT.^{6, 7, 8}

6.5.1 - Impact Analysis

Aesthetics, Light, and Glare

Under Alternative 3, all project components would remain the same, including the off-site improvements, except that a portion of the single-family homes would be replaced by mixed-use development consistent with the ECAP MDR designation. Similar to the proposed project, Alternative 3 would not introduce any development to scenic ridges, hillsides, and rock outcroppings where structures would interrupt the aesthetic landscape of the area. Additionally, this alternative would have no impact on scenic resources within a designated State Scenic Highway. As discussed above, the proposed commercial or retail uses under this alternative would have similar height, profile, and design to the rest of the residential uses proposed. The results of the Shade and Shadow Study prepared for the residential component of the proposed project in Section 3.1, Aesthetics, Light, and Glare, of the Draft EIR would still apply to Alternative 3 because the retail/commercial component would not exceed the heights proposed in the proposed project or could be located away from adjacent development. Therefore, there would be a less than significant impact on the solar panels located on the roofs of adjacent, existing development west of the project site. Alternative 3 would result in similar impacts to aesthetics, light, and glare compared to the proposed project.

Air Quality

Under Alternative 3, short-term construction air emissions would be comparatively the same as compared to the proposed project, as a similar level of construction would occur in the form of mixed-use land uses and single-family homes (in lieu of only single-family homes). Off-site improvements along Busch Road, as well as off-site utility improvements, would remain the same, and therefore construction and long-term operational-related emissions would remain unchanged. Operational-related air emissions from stationary and/or area source emissions generated by commercial and retail land uses and residences would be similar to the proposed project.

Under Alternative 3, per capita VMT would likely be reduced, thereby reducing operational-related emissions associated with vehicular traffic. Thus, Alternative 3 would result in reduced operational-related air emissions from the proposed project in its entirety. However, studies are inconclusive on the extent to which mixed-use development may reduce per capita VMT; therefore, the extent to which operational-related air emissions from vehicular traffic would be reduced cannot be quantified. Although the proposed project as mitigated would not result in significant emissions of

⁶ California Air Resources Board (ARB). 2014. Website: https://ww2.arb.ca.gov/sites/default/files/2020-06/Impacts_of_Land-Use_Mix_on_Passenger_Vehicle_Use_and_Greenhouse_Gas_Emissions_Policy_Brief_0.pdf. Accessed June 7, 2024.

⁷ According to a 2024 analysis conducted by UC Davis which analyzed changes in travel behavior resulting from changes in land-use patterns and the transportation system in specific case study areas, there was a downward trend in VMT, but the conclusions were based on small sample sizes. The evidence is not conclusive.

⁸ California Air Resources Board (ARB). 2024. Website: <https://ww2.arb.ca.gov/sites/default/files/2024-02/Research%20Seminar%20Presentation%20Slides.pdf>. Accessed June 7, 2024.

air quality pollutants (see Section 3.2, Air Quality, of the Draft EIR), the air quality impacts associated with Alternative 3 are assumed to be slightly less than the proposed project.

Biological Resources

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. As such, the same amount of ground disturbance and potential to disturb special-status species or habitats would occur. Under the proposed project, impacts related to biological resources would be less than significant with mitigation incorporated (see Section 3.3, Biological Resources, of the Draft EIR), and impacts under Alternative 3 would be the same.

Cultural Resources and Tribal Cultural Resources

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. As such, the same amount of ground disturbance and potential to impact existing and/or undiscovered cultural resources or TCRs would still occur. Under the proposed project, impacts related to cultural resources and TCRs would be less than significant with mitigation incorporated (see Section 3.4, Cultural Resources and Tribal Cultural Resources, of the Draft EIR), and impacts under Alternative 3 would be the same.

Energy

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Generally, residential uses would be expected to use more energy overall than commercial uses of the same size; therefore, Alternative 3 would be expected to consume slightly less energy as compared to the proposed project. Impacts related to energy would be less than significant for the proposed project (see Section 3.5, Energy). As such, Alternative 3 would have a similar, but slightly less, level of energy impacts compared to the proposed project.

Geology, Soils, and Seismicity

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. As such, the same amount of ground disturbance would occur Alternative 3. Under the proposed project, project impacts related to geology, soils, and seismicity would be less than significant with mitigation incorporated (see Section 3.6, Geology and Soils of the Draft EIR), and impacts under Alternative 3 would be the same.

Greenhouse Gas Emissions

Under Alternative 3, short-term construction GHG emissions would be comparatively the same as the proposed project since a similar level of construction would occur in the form of mixed-use land uses and single-family homes (in lieu of only single-family homes). Off-site improvements along Busch Road and off-site utility improvements would remain the same. Operational-related GHG

emissions from stationary and/or area source emissions generated by commercial and retail land uses and residences would be similar to the proposed project.

Under Alternative 3, per capita VMT is assumed to be reduced; however, as studies are inconclusive on the extent to which mixed-use development may reduce per capita VMT, the level of per capita VMT reduction is not quantified. Additionally, the proposed project would still incorporate natural gas. As such, impacts under Alternative 3 would still be significant and unavoidable, similar to but slightly less than the proposed project.

Hazards and Hazardous Materials

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Specifically, this designation allows neighborhood commercial uses (e.g., retail stores on sites up to 15 acres, with a maximum FAR of 0.4), neighborhood support uses (e.g., child care facilities with a maximum FAR of 0.4), and similar compatible uses.

Commercial uses may introduce more hazardous materials during operation than the typical hazardous materials used in households, but generally, neighborhood commercial or support uses allowed on the project site would not result in hazardous material impacts that are significant and would be required to comply with federal, State, and local regulations. Under the proposed project, impacts related to hazards and hazardous materials would be less than significant (see Section 3.8, Hazards and Hazardous Materials, of the Draft EIR). Therefore, this alternative would result in similar, but slightly greater, impacts related to hazards and hazardous materials compared to the proposed project.

Hydrology and Water Quality

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. As such, the same amount of impervious surfaces is expected to be developed under this alternative as compared to the proposed project. Under the proposed project, impacts related to hydrology and water quality would be less than significant (see Section 3.9, Hydrology and Water Quality, of the Draft EIR), and impacts under Alternative 3 would be the same.

Land Use

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Since the MDR land use designation provides for single-family detached homes, secondary residential units, community and neighborhood commercial uses, such as retail stores on sites up to 15 acres with a maximum FAR of 0.4, neighborhood support uses, such as child care facilities on sites up to 15 acres with a maximum FAR of 0.4, and other compatible uses, this alternative would not result in additional impacts related to land use and planning compared to the proposed project. Under the proposed project, impacts related to land use and planning were less than significant (see Section 3.10, Land Use and Planning, of the Draft EIR), and impacts under Alternative 3 would be the same.

Mineral Resources

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Thus, the same amount of ground disturbance would occur. Under the proposed project, impacts related to mineral resources would be less than significant (see Section 3.11, Mineral Resources, of the Draft EIR), and impacts under Alternative 3 would be the same.

Noise

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Under this alternative, a similar level of construction would occur in the form of mixed-use land uses and single-family homes (in lieu of only single-family homes). Off-site improvements along Busch Road and off-site utility improvements would remain the same, and therefore construction noise would remain unchanged. Operationally, the retail/commercial uses incorporated under this alternative would require a vehicular parking lot; therefore, Alternative 3 would result in similar, but slightly increased, impacts related to operational noise from the development onto the surrounding residential receptors. Under the proposed project, impacts related to noise would be less than significant with mitigation incorporated (see Section 3.12, Noise, of the Draft EIR). As such, impacts related to noise would be similar, but slightly greater, under Alternative 3 as compared to the proposed project.

Population and Housing

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Since fewer homes would be developed under this alternative, the total number of new residents resulting from development of the project would be reduced. Because the location of the project would be the same under Alternative 3, this alternative would not displace or require replacement housing. The proposed project would have a less than significant impact related to population and housing (see Section 3.13, Population and Housing, of the Draft EIR). Therefore, Alternative 3 would result in similar, but slightly less, impacts as compared to the proposed project.

Public Services

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Since fewer homes would be developed under this alternative, the total number of new residents resulting from development of the project would be reduced and the overall demand on public services would be decreased. Generally, residential uses have a greater demand on fire and police services than small-scale retail or commercial uses. Conversely, the demand on school services, recreational services, and library services would be reduced. The proposed project would have a less than significant impact related to public services (see Section 3.14, Public Services). Under Alternative 3, demand on certain public services would slightly increase and would slightly decrease for other public services; therefore, this alternative would have similar impacts on public services compared to the proposed project.

Recreation

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Since fewer homes would be developed under this alternative, the total number of new residents resulting from development of the project would be reduced, and thus, so would the demand on recreational facilities. Under the proposed project, impacts related to recreation facilities are less than significant (see Section 3.15, Recreation, of the Draft EIR). As such, Alternative 3 would have similar, but slightly less, impacts to recreation compared to the proposed project.

Transportation

Under Alternative 3, the proposed project would convert 50 percent of the proposed single-family homes into neighborhood commercial uses consistent with the ECAP MDR designation. All other project components would remain the same, including the proposed off-site improvements and the private park on the project site.

This alternative would generate approximately 1,048 residential trips⁹ and 11,917 employee trips,¹⁰ compared to approximately 2,159 residential trips and less than one employee trip generated by the proposed project. As such, Alternative 3 would result in a higher number of trips compared to the proposed project. However, studies show that mixed-use development can reduce VMT.

Although numerous studies demonstrate that mixed-use development can impact VMT, the quantifiable extent to which it reduces VMT is inconclusive. Because mixed-use development offers a variety of employment, shopping, and recreational opportunities within short distances of residences, they facilitate the use of non-automobile travel modes and can also shorten car trips, which may in turn reduce passenger vehicle GHG emissions.¹¹ According to a 2024 analysis conducted by UC Davis, which analyzed changes in travel behavior resulting from changes in land-use patterns and the transportation system in specific case study areas, there was a downward trend in VMT but based on small samples. While the evidence points in the right direction, it is not conclusive.¹²

Alternative 3 would reduce project-specific and cumulative VMT impact associated with the proposed project. However, as studies are inconclusive on the extent to which mixed-use development may reduce per capita VMT, the level of per capita VMT reduction is unable to be quantified. Under Alternative 3, impacts would be reduced compared to the proposed project but, conservatively, would remain significant and unavoidable.

⁹ Based on Institute of Transportation Engineers (ITE) Trip Generation Rates for single-family homes (9.43) and Accessory Dwelling Units (ADUs) (6.74). 94 single-family homes multiplied by 9.43 plus 24 ADUs multiplied by 6.74 totals approximately 1,048 trips.

¹⁰ Based on ITE Trip Generation Rates for retail/commercial land uses (approximately 26.6 trips per employee). 448 employees multiplied by 26.6 totals approximately 11,917 trips.

¹¹ California Air Resources Board (ARB). 2014. https://ww2.arb.ca.gov/sites/default/files/2020-06/Impacts_of_Land-Use_Mix_on_Passenger_Vehicle_Use_and_Greenhouse_Gas_Emissions_Policy_Brief_0.pdf. Accessed June 7, 2024.

¹² California Air Resources Board (ARB). 2024. <https://ww2.arb.ca.gov/sites/default/files/2024-02/Research%20Seminar%20Presentation%20Slides.pdf>. Accessed June 7, 2024.

Utilities and Service Systems

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. Since fewer homes would be developed under this alternative, the total number of new residents resulting from development of the project would be reduced, from approximately 691 residents compared to approximately 338 residents under this alternative. However, the commercial/retail component proposed under Alternative 3 would also have a demand for water, electricity, internet, and natural gas and would generate recycled water, wastewater, and solid waste. Generally, single-family residential uses demand more water and create more wastewater than retail/commercial uses. Under the proposed project, impacts related to utilities and service systems would be less than significant (see Section 3.17, Utilities and Service Systems, of the Draft EIR). As such, Alternative 3 would have similar, but slightly lower, impacts as compared to the proposed project.

Wildfire

Under Alternative 3, all project components would remain the same except for 50 percent of the single-family homes being converted into neighborhood commercial uses consistent with the ECAP MDR designation. As such, the same amount of ground disturbance and impervious surfaces would occur under Alternative 3. The proposed project would have a less than significant impact related to wildfires (see Section 3.18, Wildfire), and impacts under Alternative 3 would be the same.

6.5.2 - Conclusion

Under Alternative 3, all project components would remain the same except for a portion of the single-family homes being converted into mixed-use development consistent with the ECAP MDR designation. The purpose of Alternative 3 is to evaluate whether changing the uses on-site would address the significant and unavoidable GHG and VMT impacts found under the proposed project. Because mixed-use development has been shown to reduce VMT and GHG impacts as compared to single-family development, a retail/commercial component has been contemplated under this alternative, replacing some of the proposed single-family residential development. However, under this alternative, the majority of the topical areas would result in similar impacts to the proposed project with the exception of air quality, energy, GHG emissions, population and housing, recreation, transportation, and utilities and service systems, where impacts would be slightly reduced. Impacts related to hazards and hazardous materials and noise would be slightly increased.

Alternative 3 would not meet most of the project objectives because this alternative would reduce the number of housing units that would be developed and, thus, would not meet the project objectives as efficiently or to the same extent as the proposed project. The premise of this alternative is based on academic studies but does not rely on quantitative analysis because it is too speculative to confirm the potential reduction in impacts. Therefore, conservatively, this alternative would not reduce any of the significant and unavoidable impacts resulting from the proposed project to a less than significant level.

6.6 - Environmentally Superior Alternative

The qualitative environmental effects of each alternative in relation to the proposed project are summarized in Table 6-3.

Table 6-3: Summary of Alternatives

Environmental Topic Area	Proposed Project	Alternative 1: No Project, No Build Alternative	Alternative 2: Annexation into the City of Pleasanton Alternative	Alternative 3: Mixed Use Alternative
Section 3.1: Aesthetics, Light, and Glare				
Impact AES-1: Scenic vistas	LTS	NI <	LTS ≤	LTS =
Impact AES-2: Scenic resources	NI	NI ≤	NI ≤	NI =
Impact AES-3: Visual character or quality of public views	LTS	NI <	LTS ≤	LTS =
Impact AES-4: New source of light or glare	LTS	NI <	LTS ≤	LTS =
Cumulative impacts	LTS	NI <	LTS ≤	LTS =
Section 3.2: Air Quality				
Impact AQ-1: Consistency with Air Quality Management Plan	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation ≤
Impact AQ-2: Cumulative criteria pollutant emissions impacts	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation ≤
Impact AQ-3: Sensitive receptors exposure to pollutant concentrations	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation ≤
Impact AQ-4: Objectionable odors	LTS	NI <	LTS ≤	LTS ≤
Cumulative impacts	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation ≤
Section 3.3: Biological Resources				
Impact BIO-1: Special-status plant and wildlife species	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Impact BIO-2: Sensitive natural communities or riparian habitat	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Impact BIO-3: Wetlands	LTS	NI <	LTS ≤	LTS =
Impact BIO-4: Fish or wildlife movement	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Impact BIO-5: Conflict with policies or ordinances protecting biological resources	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =

Environmental Topic Area	Proposed Project	Alternative 1: No Project, No Build Alternative	Alternative 2: Annexation into the City of Pleasanton Alternative	Alternative 3: Mixed Use Alternative
Impact BIO-6: Conflict with adopted Habitat Conservation Plan or Natural Community Conservation Plan	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Cumulative impacts	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Section 3.4: Cultural Resources and Tribal Cultural Resources				
Impact CUL-1: Historic resources	NI	NI =	NI =	NI =
Impact CUL-2: Historic resources of archaeological nature or unique archaeological resources	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Impact CUL-3: Human remains	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Impact CUL-4: Listed or eligible Tribal Cultural Resources	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Impact CUL-5: Lead agency determined Tribal Cultural Resources	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Cumulative impacts	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Section 3.5: Energy				
Impact ENER-1: Wasteful, inefficient, or unnecessary consumption of energy resources	LTS	NI <	LTS ≤	LTS ≤
Impact ENER-2: Conflict with or obstruct a State/local plan for renewable energy or energy efficiency	LTS	NI <	LTS ≤	LTS ≤
Cumulative impacts	LTS	NI <	LTS ≤	LTS ≤
Section 3.6: Geology and Soils				
Impact GEO-1: Earthquakes	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Impact GEO-2: Soil erosion or topsoil loss	LTS	NI <	LTS ≤	LTS =
Impact GEO-3: Unstable geologic location	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Impact GEO-4: Expansive soil	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =

Environmental Topic Area	Proposed Project	Alternative 1: No Project, No Build Alternative	Alternative 2: Annexation into the City of Pleasanton Alternative	Alternative 3: Mixed Use Alternative
Impact GEO-5: Septic tanks or alternative wastewater disposal system	LTS	NI <	LTS ≤	LTS =
Impact GEO-6: Unique paleontological resource or site or unique geologic feature	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Cumulative impacts	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Section 3.7: Greenhouse Gas Emissions				
Impact GHG-1: Generation of GHG emissions	SU	NI <	SU ≤	SU ≤
Impact GHG-2: Conflict with plan, policy, or regulation that reduces GHG emissions	SU	NI <	SU ≤	SU ≤
Cumulative impacts	SU	NI <	SU ≤	SU ≤
Section 3.8: Hazards and Hazardous Materials				
Impact HAZ-1: Routine transport, use, or disposal of hazardous materials	LTS	NI <	LTS ≤	LTS ≥
Impact HAZ-2: Upset and accident conditions involving release of hazardous materials	LTS	NI <	LTS ≤	LTS ≥
Impact HAZ-3: Emit hazardous emissions or handle hazardous materials within 0.25 mile of a school	LTS	NI <	LTS ≤	LTS ≥
Impact HAZ-4: Site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5	LTS with COAs	NI <	LTS with COAs ≤	LTS with COAs ≥
Impact HAZ-5: Airport/aviation safety	LTS	NI <	LTS ≤	LTS ≥
Impact HAZ-6: Interfere with an adopted emergency response or evacuation plan	LTS	NI <	LTS ≤	LTS ≥
Impact HAZ-7: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires	LTS	NI <	LTS ≤	LTS ≥
Cumulative impacts	LTS	NI <	LTS ≤	LTS ≥

Environmental Topic Area	Proposed Project	Alternative 1: No Project, No Build Alternative	Alternative 2: Annexation into the City of Pleasanton Alternative	Alternative 3: Mixed Use Alternative
Section 3.9: Hydrology and Water Quality				
Impact HYD-1: Surface and groundwater quality	LTS	NI <	LTS ≤	LTS =
Impact HYD-2: Groundwater supply/recharge	LTS	NI <	LTS ≤	LTS =
Impact HYD-3: Drainage leading to erosion/siltation, flooding, additional sources of polluted runoff, or impedance of flood flows	LTS	NI <	LTS ≤	LTS =
Impact HYD-4: Risk of pollutant release due to inundation	LTS	NI <	LTS ≤	LTS =
Impact HYD-5: Water quality control or sustainable groundwater management plans consistency	LTS	NI <	LTS ≤	LTS =
Cumulative impacts	LTS	NI <	LTS ≤	LTS =
Section 3.10: Land Use and Planning				
Impact LAND-1: Divide an established community	NI	NI =	NI =	NI =
Impact LAND-2: Conflict with applicable plans, policies, or regulations	LTS	LTS =	LTS =	LTS =
Cumulative impacts	LTS	LTS =	LTS =	LTS =
Section 3.11: Mineral Resources				
Impact MIN-1: Loss of known valuable mineral resources	LTS	NI <	LTS ≤	LTS =
Impact MIN-2: Loss of important mineral resource recovery sites	LTS	NI <	LTS ≤	LTS =
Cumulative impacts	LTS	NI <	LTS ≤	LTS =
Section 3.12: Noise				
Impact NOI-1: Substantial noise increase in excess of standards	LTS with mitigation	NI <	LTS with mitigation =	LTS with mitigation ≥
Impact NOI-2: Groundborne vibration/noise levels	LTS	NI <	LTS =	LTS ≥
Impact NOI-3: Excessive noise levels from airport activity	LTS	NI <	LTS =	LTS ≥
Cumulative impacts	LTS	NI <	LTS =	LTS ≥

Environmental Topic Area	Proposed Project	Alternative 1: No Project, No Build Alternative	Alternative 2: Annexation into the City of Pleasanton Alternative	Alternative 3: Mixed Use Alternative
Section 3.13: Population and Housing				
Impact POP-1: Population growth	LTS	NI <	LTS =	LTS ≤
Impact POP-2: Housing displacement/replacement housing	NI	NI ≤	NI =	NI =
Cumulative impacts	LTS	NI <	LTS =	LTS ≤
Section 3.14: Public Services				
Impact PUB-1: Fire protection	LTS	NI <	LTS =	LTS =
Impact PUB-2: Police protection	LTS	NI <	LTS =	LTS =
Impact PUB-3: Schools	LTS	NI <	LTS =	LTS =
Impact PUB-4: Parks	LTS	NI <	LTS =	LTS =
Impact PUB-5: Libraries	LTS	NI <	LTS =	LTS =
Cumulative impacts	LTS	NI <	LTS =	LTS =
Section 3.15: Recreation				
Impact REC-1: Increased use of parks	LTS	NI <	LTS =	LTS ≤
Impact REC-2: Physical effect or recreational facilities on environment	LTS	NI <	LTS =	LTS ≤
Cumulative impacts	LTS	NI <	LTS =	LTS ≤
Section 3.16: Transportation				
Impact TRANS-1: Affect to circulation system	LTS	NI <	LTS =	LTS ≤
Impact TRANS-2: Conflict with CEQA Guidelines Section 15064.3, Subdivision (b)	SU with mitigation	NI <	SU with mitigation =	SU with mitigation ≤
Impact TRANS-3: Hazards	SU	NI <	LTS with mitigation <	SU ≤
Impact TRANS-4: Emergency access	LTS	NI <	LTS ≤	LTS ≤
Cumulative impacts	SU	SU <	SU =	SU ≤
Section 3.17: Utilities and Service Systems				
Impact UTIL-1: Water or wastewater treatment facilities	LTS	NI <	LTS =	LTS ≤
Impact UTIL-2: Water supplies	LTS	NI <	LTS =	LTS ≤

Environmental Topic Area	Proposed Project	Alternative 1: No Project, No Build Alternative	Alternative 2: Annexation into the City of Pleasanton Alternative	Alternative 3: Mixed Use Alternative
Impact UTIL-3: Wastewater treatment capacity	LTS	NI <	LTS =	LTS ≤
Impact UTIL-4: Attainment of solid waste reduction goals	LTS	NI <	LTS =	LTS ≤
Impact UTIL-5: Solid waste regulations	LTS	NI <	LTS =	LTS ≤
Cumulative impacts	LTS	NI <	LTS =	LTS ≤
Section 3.18: Wildfire				
Impact WILD-1: Emergency response/evacuation plan consistency	LTS	NI <	LTS ≤	LTS =
Impact WILD-2: Expose project occupants to pollutant concentrations from wildfire	LTS	NI <	LTS ≤	LTS =
Impact WILD-3: Infrastructure that exacerbates fire risk	LTS	NI <	LTS ≤	LTS =
Impact WILD-4: Flooding and landslide hazards due to post-fire slope instability/drainage changes	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
Cumulative impacts	LTS with mitigation	NI <	LTS with mitigation ≤	LTS with mitigation =
<p>Notes:</p> <p>NI = No impact LTS = Less than significant impact SU = significant and unavoidable impact COAs = Conditions of Approval</p> <p>< Impacts would be reduced compared to the proposed project. ≤ Impacts would be similar to, but slightly reduced, compared to the proposed project. > Impacts would be greater than the proposed project. ≥ Impacts would be similar to, but slightly increased, compared to the proposed project. = Impacts would be the same as the proposed project.</p> <p>Source: FirstCarbon Solutions (FCS). 2024.</p>				

CEQA Guidelines Section 15126.6(e)(2) requires identification of an environmentally superior alternative. As demonstrated by Table 6-3, Alternative 1 (No Project, No Build Alternative) is the environmentally superior alternative as it would reduce impacts in all environmental topic areas. However, as per CEQA Guidelines Section 15126.6(e)(2), if the No Project Alternative is environmentally superior alternative, CEQA requires selection of the “environmentally superior alternative” among the other alternatives evaluated. Alternative 2 (Annexation into the City of Pleasanton Alternative) is an environmentally superior alternative to the proposed project, as

impacts in the majority of the environmental topic areas would be similar but slightly lower, compared to the proposed project, and would not result in greater impacts than the proposed project in any category.

6.7 - Alternatives Rejected From Further Consideration

CEQA Guidelines 15126.6(c) requires an EIR to discuss alternatives that were initially considered but rejected from further consideration. The following are alternatives that were initially considered but rejected from further consideration for the reasons described below.

6.7.1 - Single-Story Alternative

During the Notice of Preparation (NOP) period for this Draft EIR, several commenters requested that an alternative that included single-story homes along the western border, adjacent to existing development, of the project site be considered and analyzed in the Draft EIR. Commenters were concerned about potential impacts from shadows cast by the proposed project onto solar panels at the adjacent homes. This alternative was initially considered but rejected from further consideration because this alternative would not reduce any of the significant impacts of the proposed project. A Shadow Study was performed for the proposed project, as detailed in Section 3.1, Aesthetics, Light, and Glare, of this Draft EIR. The Shadow Study determined that the proposed project would not have a significant impact on solar energy systems on adjacent homes. As such, this alternative would not reduce any significant impacts of the proposed project and was rejected from further consideration. Furthermore, a single-story alternative would reduce the density of the project, and therefore, would not meet the project objectives related to the development of additional housing opportunities in the County to the same degree that the proposed project does.

6.7.2 - Alternative Location

CEQA Guidelines Section 15126.6(f)(2) sets forth considerations to be used in evaluating an alternative location. The section states that the “key question” is whether any of the significant effects of the proposed project would be avoided or substantially lessened by relocating the proposed project. The CEQA Guidelines identify the following factors that may be taken into account when addressing the feasibility of an alternative location:

1. Site suitability
2. Economic viability
3. Availability of infrastructure
4. General Plan consistency
5. Other plans or regulatory limitations
6. Jurisdictional boundaries
7. Whether the project applicant can reasonably acquire, control, or otherwise have access to the alternative site.

Here, “General Plan consistency” is an important factor. CEQA case law is clear that EIRs for proposed private projects consistent with governing General Plan designations generally need not address alternative sites given that such existing General Plan designations embody policy decisions

already made by governing city councils and boards of supervisors. “[T]he keystone of regional planning is consistency—between the general plan, its internal elements, subordinate ordinances, and all derivative land use decisions” (*Citizens of Goleta Valley v. Board of Supervisors* [1990] 52 Cal.3d 553, 572). “Case-by-case reconsideration of regional land use policies, in the context of a project-specific EIR, is the very antithesis of that goal.” (Id. at p. 573.) “[A]n EIR is not ordinarily an occasion for the reconsideration or overhaul of fundamental land use policy” (Ibid).

Since the project site has been designated for residential uses by the ECAP for many years, the proposed project would be consistent with the ECAP’s land use designation, as well as its regional land use policies. Furthermore, the project applicant owns the project site but does not own or control an alternative property that could sufficiently accommodate the proposed project, nor does the applicant have any plans at this time to acquire such an alternative property. Thus, an alternative location was rejected from further consideration as infeasible.

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CHAPTER 7: PERSONS AND ORGANIZATIONS CONSULTED/LIST OF PREPARERS

The following is a non-exhaustive list of persons and organizations consulted during the preparation of this Draft EIR.

7.1 - Persons and Organizations Consulted

7.1.1 - County of Alameda

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PlannerAubrey Rose, AICP

Fire Department

Fire Chief..... William McDonald
Specialist Clerk..... Amy Noyes

Sheriff’s Office

Sheriff Yesenia Sanchez
Undersheriff..... Richard Lucia

7.1.2 - Local Agencies

Alameda County Library

County Librarian Cindy Chadwick

East Bay Regional Park District

Chief of Planning/GIS..... Brian Holt
Planner Eddie Willis

Livermore-Pleasanton Fire Department

Fire Chief..... Joe Testa
Deputy Fire Chief..... Jason Solak

Pleasanton Police Department

Chief..... David Swing
Captain..... Kurt Schlehuder

Pleasanton Public Library

Director of Library and Recreation Heidi Murphy
Assistant Director of Library and Recreation Lia Bushong

Pleasanton Unified School District

Superintendent..... David Haglund

Assistant Superintendent of Business Services..... Ahmad Sheikholeslami

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