

# FARIA/SOUTHWEST HILLS ANNEXATION

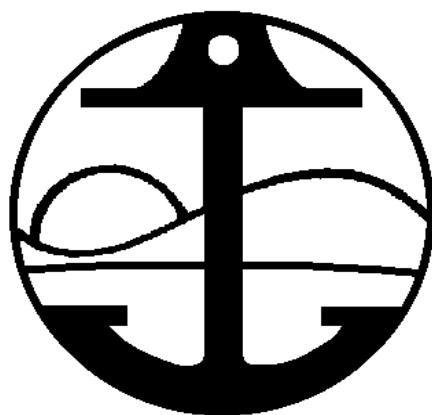
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SCH#2017032027

## **DRAFT ENVIRONMENTAL IMPACT REPORT**

**VOLUME I OF II  
CHAPTERS 1 - 8 & APPENDICES A - C**

PREPARED FOR  
THE CITY OF PITTSBURG



OCTOBER 2018

PREPARED BY



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# **Draft Environmental Impact Report Faria/Southwest Hills Annexation Project**

SCH# 2017032027

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October 2018



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## ACRONYMS AND ABBREVIATIONS

### **A**

A-4	Agricultural Preserve – Parcel 20-acre minimum
AAQS	ambient air quality standards
AB	Assembly Bill
ABAG	Association of Bay Area Governments
AbE	Altamont clay
AcF	Altamont-Fontana complex, 30 to 50 percent slopes
AcG	Altamont-Fontana complex, 50 to 75 percent slopes
AFY	acre-feet per year
AL	Agricultural Lands
ALS	Advanced Life Support
ANSI	American National Standards Institute
AOSPP	Agricultural and Open Space Preservation Policy
AP Zone Act	Alquist-Priolo Earthquake Fault Zoning Act
APN	Assessor's Parcel Numbers
AST	above-ground storage tank
ATCM	Asbestos Airborne Toxic Control Measure
AWSC	all-way stop-control

### **B**

BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BAU	Business As Usual
BPPA	Botanical Priority Protection Area

### **C**

C <sub>2</sub> F <sub>6</sub>	Hexafluoroethane
CAAQS	California Ambient Air Quality Standards
CaC	Capay clay
CAP	Clean Air Plan
Cal-EPA	California Environmental Protection Agency
CAL Green Code	California Green Building Standards Code
Cal-OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CALFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board

CBSC	California Building Standards Code
CBSC	California Building Standards Commission
CBC	California Building Code
CC&R	covenants, conditions, and restrictions
CCAA	California Clean Air Act
CCC	Contra Costa County
CCCFPD	Contra Costa County Fire Protection District
CCR	California Code of Regulations
CCTA	Contra Costa Transportation Authority
CCWD	Contra Costa Water District
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDMG	California Department of Mines and Geology
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESA	California Endangered Species Act
CF <sub>4</sub>	tetrafluoromethane
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Program
CIWMB	California Integrated Waste Management Board
CKH	Cortese-Knox-Hertzberg Local Government Reorganization Act
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNWS	Concord Naval Weapons Station
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Resources
CRP-OS	Concord Reuse Project Conservation Open Space
CSUS	California State University, Sacramento
CTS	California tiger salamander
CVP	Central Valley Project
CWA	Federal Clean Water Act

## **D**

dB	decibel
DDSD	Delta Diablo
Df	Debris Flow
DHS	Department of Health Services

DI	Delay Index
DOC	Department of Conservation
DOGGR	Division of Oil, Gas and Geothermal Resources
DOT	Department of Transportation
DPM	diesel particulate matter
DTSC	Department of Toxic Substance Control
du/ac	dwelling units per acre
DWR	Department of Water Resources

## **E**

EB	Eastbound
EBCNPS	California Native Plant Society, East Bay Chapter
EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District
ECCC HCP/NCCP	East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan
ECCRFFA	East Contra Costa Regional Fee & Financing Authority
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Phase I Environmental Site Assessment

## **F**

FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRMs	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FWS	United States Department of Fish and Wildlife

## **G**

GHAD	geological hazard abatement districts
GHG	greenhouse gas
GPA	General Plan Amendment
gpd	gallons per day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plans
GWMP	Groundwater Management Program
GWP	Global Warming Potential

## **H**

H <sub>2</sub> S	hydrogen sulfide
HCP	Habitat Conservation Plan

HCP/NCCP	Habitat Conservation Plan/Natural Community Conservation Plan
HCS	Highway Capacity Software
HLDR	Hillside Low Density Residential
HOV	high occupancy vehicle
HPD	Hillside Planned Development
HWCL	Hazardous Waste Control Law
HVAC	Heating, Ventilation, and Air Conditioning
Hz	Hertz

## **I**

I	Interstate
IBC	International Building Code
ICC	International Code Council
ISO	Insurance Service Office
ITE	Institute of Transportation Engineers

## **K**

kWh	million kilowatt-hours
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## **L**

L <sub>50</sub>	median sound level
LAFCo	Local Agency Formation Commission
LCFS	Low Carbon Fuel Standard
Ld	Lodo-Rock outcrop complex
L <sub>dn</sub>	day/night average sound level
LDL	Larson Davis Laboratories
LDR	Low Density Residential
L <sub>eq</sub>	average, or equivalent, sound level
LIM	Land Inventory and Monitoring
L <sub>max</sub>	maximum sound level
LOS	level of service
LTMF	local traffic mitigation fee

## **M**

MBTA	Migratory Bird Treaty Act
MDUSD	Mount Diablo Unified School District
MGD	million gallons per day
MM	million
MOE	measure of effectiveness
MOU	Memorandum of Understanding
mpg	miles per gallon
mph	miles per hour

MPO	metropolitan planning organization
msl	median sea level
MSR	Municipal Service Review
MTC	Metropolitan Transportation Commission
MTCO <sub>2e</sub>	metric tons of carbon dioxide equivalent
MTSO	Multi-Modal Transportation Service Objectives
MW	megawatts

## **N**

N <sub>2</sub> O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NEHRP	National Earthquake Hazards Reduction Program
NHPA	National Historic Preservation Act of 1966
NIH	National Institute of Health
NO <sub>2</sub>	nitrogen dioxide
NOAA	National Oceanic Atmospheric Administration
NOP	Notice of Preparation
NO <sub>x</sub>	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWIC	North West Information Center

## **O**

OHWM	ordinary high water mark
OPR	Office of Planning and Research
OS	Open Space
OSHA	Occupational Safety and Health Administration

## **P**

PCB	Polychlorinated Biphenyls
pcpmpl	passenger cars per mile per lane
PD	Planned Development
PDA	Priority Development Areas
PG&E	Pacific Gas & Electric Company
PFC	perfluorocarbons
PM	particulate matter
PMC	Pittsburg Municipal Code
ppd	pounds per day
PPM	parts per million

ppv	peak particle velocities
PVC	polyvinyl chloride
PWTP	Pittsburg Water Treatment Plant

## **Q**

Qaf	Artificial Fill
Qc	Colluvium

## **R**

RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
ROG	reactive organic gas
RPS	Renewable Portfolio Standard
RS-4	Single-Family Residential District–4,000 Square Foot Minimum Lot Size
RS-6	Single Family Residential District–6,000 Square Foot Minimum Lot Size
RTDIM	Regional Transportation Development Impact Mitigation
RWF	Recycled Water Facility
RWQCB	Regional Water Quality Control Board

## **S**

SB	Senate Bill
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
SFBAAB	San Francisco Bay Area Air Basin
SF <sub>6</sub>	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SOI	Sphere of Influence
SR	State Route
SSSC	side-street stop-control
SWRCB	State Water Resources Control Board

## **T**

TAC	Toxic Air Contaminant
TCM	transportation control measures
TIS	Traffic Impact Study
Tkm	Markley Formation
TMF	traffic mitigation fee

tons/yr	tons per year
TSM	Transportation Systems Management
Tsp	San Pablo Group
TWLTL	two-way left turn lane

## **U**

UBC	Uniform Building Code
UFP	Ultrafine particles
ULL	Urban Limit Line
UNFCCC	United Nations Framework Convention on Climate Change
USACE	U.S. Army Corps of Engineers
USBR	United States Bureau of Reclamation
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan

## **V**

V/C	volume to capacity ratio
VCM	Vinyl Chloride
VMT	vehicle miles traveled
VOC	volatile organic compound

## **W**

WB	Westbound
WGCEP	Working Group on California Earthquake Probabilities
WPCGMP	Western Placer County Groundwater Management Plan
WSA	Water Supply Assessment
WWTP	Delta Diablo Wastewater Treatment Plant





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## 1. INTRODUCTION AND SCOPE OF EIR

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# 1

## INTRODUCTION AND SCOPE OF EIR

### 1.1 INTRODUCTION

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This Draft Environmental Impact Report (EIR) was prepared in accordance with the California Environmental Quality Act of 1970, Pub. Res. Code §21000 et seq., as amended (CEQA), and the Guidelines for Implementation of the California Environmental Quality Act, Cal. Code Regs. title 14, §15000 et seq. (CEQA Guidelines). The City of Pittsburg is the lead agency for the environmental review of the Faria Annexation project evaluated herein and has the principal responsibility for approving the project. As required by Section 15121 of the CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public generally, of the significant environmental effect of a project, (b) identify possible ways to minimize the significant effects, and (c) describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency.

### 1.2 PROJECT DESCRIPTION

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The proposed Faria/Southwest Hills Annexation Project (proposed project) is located just southwest of the municipal boundary of the City of Pittsburg, within the Southwest Hills planning subarea of the Pittsburg General Plan. The project includes approximately 606 acres. The project site is generally bounded by vacant rolling hills with Bailey Road just beyond to the east, the Concord City Limits and the closed Concord Naval Weapons Station (CNWS) to the south and west, and existing residential development (San Marco and Vista Del Mar subdivisions) to the north and northeast with State Route (SR) 4 beyond.

The proposed project would require the following approvals from the City of Pittsburg, as well as the Contra Costa Local Agency Formation Commission (LAFCo) and other responsible agencies:

- Certification of the EIR;
- Annexation into the City of Pittsburg City Limits, the Contra Costa Water District (CCWD) service area and the sanitation district Delta Diablo (DDSD) service area;
- Reclassification of site from HPD (Hillside Planned Development) and OS (Open Space) rezoning districts to RS-4P and OS-P rezoning with a Master Plan overlay district in order to provide project- and site-specific policies and development standards for implementation through future development applications;
- Approval of a General Plan Amendment (GPA) to introduce new goals and policies relevant to the project site, remove an existing General Plan goal and several policies, and change the existing General Plan land use patterns for the project site to match the proposed Faria SW Hills Master Plan Map;
- Approval of the Draft Faria/Southwest Hills Master Plan (Draft Master Plan); and
- Development Agreement.

The purpose of the Draft Master Plan (Appendix A) is to define the potential development of the 606-acre project site as part of the request for annexation and rezoning of the site. The Draft Master Plan includes a Master Plan Overlay District, a Land Use Map, development regulations, design review guidelines, and a definition of the proposed circulation system. For purposes of this CEQA analysis, the maximum buildout for the proposed project is assumed to include 1,500 single-family units.

### **1.3 PURPOSE OF THE EIR**

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As provided in the CEQA Guidelines Section 15021, public agencies are charged with the duty of avoiding or minimizing environmental damage where feasible. When considering a proposed project, the public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term *project* refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the proposed project, the City has determined that, within the definition of CEQA, the proposed annexation is a *project* that has the potential for resulting in significant environmental effects.

An EIR is an informational document that appraises decision-makers and the general public of the potential significant environmental effects of a proposed project. An EIR must identify feasible measures to minimize any significant effects and describe a reasonable range of potentially feasible alternatives to the project. The City of Pittsburg is the lead agency for this project and is required to consider the information in the EIR in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, alternatives, growth-inducing impacts, and cumulative impacts.

### **1.4 TYPE OF DOCUMENT**

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The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. In general, the Draft EIR has been prepared as a program-level EIR. The program-level EIR analysis, prepared pursuant to CEQA Guidelines Section 15168, evaluates the potential environmental impacts associated with buildout of the proposed project. The CEQA requires the preparation of a program-level EIR to discuss a series of actions, rather than an individual action, that can be characterized as one large project. A program-level analysis allows for (a) exhaustive consideration of effects and alternatives beyond the format typically set for an individual action, (b) consideration of cumulative impacts, and (c) broad effect on applicable policy during the early stages of the project, when the lead agency has more flexibility to deal with basic problems or cumulative impacts. The program-level analysis in this EIR will identify potential impacts due to the maximum buildout potential and will identify mitigation measures that would need to be implemented with future development applications. While the Draft EIR has been prepared as a program-level EIR, where sufficient information is available, the Draft EIR includes project level analysis to the extent feasible.

## **1.5 EIR PROCESS**

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In November 2005, the voters of the City of Pittsburgh approved a ballot initiative entitled “Measure P (City of Pittsburgh Voter Approved Urban Limit Line and Rezoning Act)”, which established a new Urban Limit Line (ULL) for the City and rezoned certain properties. Included in these properties was the entire 606-acre project site. On May 3, 2006, the City entered into a Memorandum of Understanding (MOU) with Altec Homes, Inc., Albert D. Seeno, III, and Albert D. Seeno, Jr., which called for the City to conduct a General Plan Study in order to, among other things, establish guidelines for the development of a permanent greenbelt buffer along the inner edges of the voter approved ULL. The City Council, on January 16, 2007, adopted Resolution No. 07-10700, which included a new General Plan policy, 2-P-91 to ensure that a greenbelt buffer would be established on the project site in accordance with the terms of Measure P and the MOU.

On July 8, 2009, the Contra Costa LAFCo approved an extension of the Pittsburgh Sphere of Influence (SOI) to include the proposed project site. As part of that action, the SOI’s for the DDS and the CCWD were also expanded to include the project site. On September 24, 2010, the property owner submitted an application requesting the City begin processing a request for annexation of the site to bring the property into the City of Pittsburgh City Limits. In addition to the request for annexation, the application included requests for the project site to be annexed to the DDS and CCWD service areas.

In 2010, an Initial Study/Mitigated Negative Declaration was prepared for the proposed project and released for public review. Extensive comments were received by the City, requesting further analysis in an EIR. The City has determined that an EIR should be prepared and, thus, a subsequent Initial Study was prepared to focus the EIR, which was released with the Notice of Preparation (NOP) on March 10, 2014 for a 30-day review. During the NOP review period, 13 written comments were received regarding the scope of the EIR. In addition, a public scoping meeting was held on April 3, 2014 to receive verbal comments.

Following the initial public review period and scoping meeting, refinements were made to the proposed project that altered the scope of the EIR. Such refinements included the preparation of a Draft Master Plan and an associated Land Use Map. The purpose of the Draft Master Plan is to define the potential development of the 606-acre project site as part of the request for annexation and rezoning of the site. Consequently, the City determined that preparation of a new NOP was necessary in order to address changes made to the project and how such changes would be reflected in the EIR. The second NOP (Appendix B), was released on March 8, 2017 for a 30-day review period. During the review period for the new NOP, a public scoping meeting was held on April 4, 2017.

As soon as the Draft EIR is completed, a notice of completion is filed with the State Clearinghouse (SCH) within the Office of Planning and Research (OPR) and a public notice of availability is published to inform interested parties that the Draft EIR is available for agency and/or public review. In addition, the notice provides information regarding location of copies of the Draft EIR available for public review and any public meetings or hearings that are scheduled. The Draft EIR is circulated for a period of 45 days, during which time reviewers may submit comments to the City of Pittsburgh as lead agency. The lead agency must respond to comments in writing, describing

the disposition of any significant environmental issues raised and explaining the reasons for not accepting any specific comments concerning major environmental issues. If significant new information, as defined in CEQA Guidelines Section 15088.5, is added to an EIR after public notice of availability is given but before certification of the EIR, the revised EIR or affected chapters must be recirculated for an additional public review period with related comments and responses.

A Final EIR will be prepared, containing the Draft EIR, or a revision thereof as well as comments and responses to comments on the Draft EIR. Before approving a project, the lead agency certifies that the Final EIR has been completed in compliance with CEQA, has been presented to the decision-making body of the lead agency, has been reviewed and considered by that body, and that the Final EIR reflects the lead agency's independent judgment and analysis.

The findings prepared by the lead agency must be based on substantial evidence in the administrative record and must include an explanation that bridges the gap between evidence in the record and the conclusions required by CEQA. Based on these findings, the lead agency may also prepare a Statement of Overriding Considerations as part of the project approval process. If the decision-making body elects to proceed with a project that would have significant unavoidable impacts, then a Statement of Overriding Considerations explaining the decision to balance the benefits of the project against unavoidable environmental impacts must be prepared.

Future development applications within the annexation area would be processed in conformance with applicable Pittsburg General Plan, Zoning Code, and Draft Master Plan requirements and would be subject to individual project-specific CEQA analyses in order to ensure that potential impacts of those specific projects that could not be reasonably evaluated with this program-level Draft EIR would be identified. The project-level review would also ensure that previously adopted mitigation measures applicable to the development of the site are implemented.

## **1.6 SCOPE OF THE DRAFT EIR**

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State CEQA Guidelines § 15126.2(a) states, in pertinent part:

An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced.

Pursuant to these Guidelines, the scope of this Draft EIR includes specific issues and comments identified as potentially significant in the Initial Study prepared for the proposed project (See Appendix C). Thus, the City determined that the following issues will be addressed in the Draft EIR:

- Aesthetics;
- Agricultural Resources;
- Air Quality and Greenhouse Gas Emissions;

- Biological Resources;
- Cultural and Tribal Resources;
- Geology, Soil, and Seismicity;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Public Services and Utilities; and
- Transportation, Traffic, and Circulation.

The evaluation of effects is presented on a resource-by-resource basis in Chapters 4.1 through 4.12. Each chapter is divided into the following four sections: Introduction, Existing Environmental Setting, Regulatory Context, and Impacts and Mitigation Measures.

## **1.7 COMMENTS RECEIVED ON THE NOP**

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The City of Pittsburg received 13 comment letters during the 30-day NOP comment period for the proposed project from March 8, 2017 to April 7, 2017. In addition, verbal comments were received at the NOP scoping meeting held on April 4, 2017. A copy of each letter is provided in Appendix B of this EIR, as well as a summary of the verbal comments received. The letters were authored by the following representatives of State and local agencies and other interested parties:

### **Public Agencies**

- California Native Plant Society, East Bay Chapter (EBCNPS) – Whitehouse, Karen;
- City of Clayton – Gentry, Mindy;
- City of Concord – Ray Kuzbari;
- Contra Costa County Flood Control & Water Conservation District – Standafer, Craig M.;
- Contra Costa County Public Works Department – Turner, Ed;
- Contra Costa LAFCO – Texeira, Lou Ann;
- Contra Costa Water District – Seedall, Mark;
- East Bay Regional Park District – Holt, Brian; and
- Native American Heritage Commission – Souza, Sharaya.

### **Groups**

- Bike East Bay – Ohlson, Bruce;
- Greenbelt Alliance – Devalcourt, Joel; and
- Save Mount Diablo – King, Winter.

### **Residents**

- Kubeck, David.

The following list, categorized by issue, summarizes the comments expressed in the letters and in the verbal comments:

<b><u>Project Description</u></b> (Chapter 3)	Comments related to: <ul style="list-style-type: none"> <li>• In-depth description of the proposed GPA.</li> <li>• Detailed overview of Draft Master Plan.</li> </ul>
<b><u>Aesthetics</u></b> (Chapter 4.1)	Comments related to: <ul style="list-style-type: none"> <li>• The aesthetics of the hillside, ridgeline and greenbelt open space.</li> <li>• Potential visual impacts to views from Concord (including light and glare).</li> <li>• Potential aesthetic impacts to views of the project site from Bailey Road, Newhall Park, and Willow Pass Road.</li> <li>• Potential aesthetic impacts to views of the Los Medanos Hills from publicly accessible open space areas including Black Diamond Mines Regional Preserve, Briones Regional Park, and Mount Diablo State Park, as well as the planned Concord Hills Regional Park within the former CNWS.</li> </ul>
<b><u>Agricultural Resources</u></b> (Chapter 4.2)	Comments related to: <ul style="list-style-type: none"> <li>• The conversion of agricultural and prime agricultural land, as defined by the Cortese-Knox-Hertzberg Government Reorganization Act.</li> <li>• Consistency with the Contra Costa LAFCo's Agriculture and Open Space Preservation Policy.</li> <li>• Potential conflicts with continued grazing in nearby areas.</li> <li>• Cumulative loss of Farmland.</li> </ul>
<b><u>Air Quality and Greenhouse Gas Emissions</u></b> (Chapter 4.3)	Comments related to: <ul style="list-style-type: none"> <li>• Potential for increased air pollution (including greenhouse gas emissions and other criteria pollutants).</li> <li>• Consistency with regional transportation plans.</li> <li>• Analysis of toxic air contaminants.</li> </ul>
<b><u>Biological Resources</u></b> (Chapter 4.4)	Comments related to: <ul style="list-style-type: none"> <li>• Consistency with the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP).</li> <li>• Potential impacts to wetlands and two federally listed endangered status species (California tiger salamander and California red-legged frog), as well as other special-status species (e.g., burrowing owl, golden eagle, and Alameda whipsnake).</li> <li>• Potential impacts associated with the CNWS Botanical Priority Protection Area (BPPA).</li> <li>• Potential impacts to wildlife corridors.</li> </ul>



<p><b><u>Cultural and Tribal Resources</u></b> (Chapter 4.5)</p>	<p>Comments related to:</p> <ul style="list-style-type: none"> <li>• Compliance with AB 52 and SB 18.</li> <li>• Potential impacts to Tribal Cultural Resources.</li> <li>• Section 106 Historic Property Assessments compliance.</li> </ul>
<p><b><u>Geology, Soils, and Seismicity</u></b> (Chapter 4.6)</p>	<p>Comments related to:</p> <ul style="list-style-type: none"> <li>• Hillside soil stability and grading.</li> <li>• Historic landslide activity on the project site.</li> </ul>
<p><b><u>Hydrology and Water Quality</u></b> (Chapter 4.8)</p>	<p>Comments related to:</p> <ul style="list-style-type: none"> <li>• Potential impacts to local streams and drainage patterns.</li> <li>• Potential impacts of the runoff from the project site to the existing drainage facilities and drainage problems in the downstream areas (specifically Drainage Area 48B, Line A), including those areas outside of the City of Pittsburgh.</li> <li>• Identifying all existing watersheds (including watershed boundaries), watercourses, tributaries, and man-made drainage facilities within the project site that could be impacted by the project.</li> <li>• Addressing the design and construction of storm drain facilities to adequately collect and convey stormwater entering or originating within the development to the nearest adequate man-made drainage facility or natural watercourse, without diversion of the watershed, per Title 9 of the County Ordinance Code.</li> <li>• Compliance with the National Pollutant Discharge Elimination System requirements in the City’s Stormwater Management and Discharge Control Ordinances as well as the C.3 Guidebook.</li> <li>• Potential hydrology impacts for the portions of the site which drain to Mount Diablo Creek through the Concord Reuse Project Area.</li> <li>• Potential hydrologic or water quality impacts associated with development in the upper portions of the Mount Diablo Creek watershed.</li> <li>• Development of a Drainage Master Plan.</li> </ul>
<p><b><u>Land Use and Planning</u></b> (Chapter 4.9)</p>	<p>Comments related to:</p> <ul style="list-style-type: none"> <li>• Addressing current LAFCo policies regarding annexation (e.g., need for and adequacy of services and infrastructure, land use, effects of the project on adjacent areas, etc.).</li> <li>• Compliance with the City of Pittsburgh General Plan – Hillside Protection, the Pittsburgh Municipal Code, Title 18.56 (Hillside Planned District –HPD), the City of Pittsburgh, Complete Streets Plan, and the City of Pittsburgh, Green Building Design Guidelines.</li> <li>• Potential impacts related to the proximity of the CNWS.</li> <li>• Current and future land use of the non-participating property on the project site.</li> </ul>

	<ul style="list-style-type: none"> <li>• Consideration of surrounding land uses and plans, such as the Concord Reuse Project Area Plan for the former CNWS.</li> <li>• Potential impacts associated with proposed GPA.</li> <li>• Level of development anticipated by Pittsburg General Plan.</li> </ul>
<b>Noise</b> (Chapter 4.10)	<p>Comments related to:</p> <ul style="list-style-type: none"> <li>• Analyzing the potential noise impacts both from temporary construction and permanent operations of future development on wildlife and users of the future regional park.</li> </ul>
<b>Public Services and Utilities</b> (Chapter 4.11)	<p>Comments related to:</p> <ul style="list-style-type: none"> <li>• Extension of fire, police, sewer, and water services to the project area.</li> <li>• Proximity to local hiking trails and recreational parks (particularly the Concord Hills Regional Park currently under development within the former CNWS).</li> <li>• Potential impacts to the City wastewater collection systems.</li> <li>• Potential impacts to fire and police protection services.</li> <li>• Potential impacts to schools.</li> <li>• Potential impacts to recreational facilities in the project vicinity.</li> </ul>
<b>Transportation, Traffic, and Circulation</b> (Chapter 4.12)	<p>Comments related to:</p> <ul style="list-style-type: none"> <li>• Potential operational impacts to Bailey Road.</li> <li>• Potential impacts to the following intersections: <ul style="list-style-type: none"> <li>○ Kirkpass Road and Oakhurst Drive/Concord Boulevard intersection;</li> <li>○ Ygnacio Valley Road/Clayton Road intersection;</li> <li>○ Concord Boulevard/Port Chicago Highway;</li> <li>○ Treat Boulevard/Oak Grove Road;</li> <li>○ Willow Pass Road/Diamond Boulevard;</li> <li>○ Willow Pass Road/Galindo Street;</li> <li>○ Bailey Road/Myrtle Drive; and</li> <li>○ Willow Pass Road/Market Street.</li> </ul> </li> <li>• Potential impacts to SR 4.</li> <li>• Potential impacts associated with hauling trips on Bailey Road.</li> <li>• Potential impacts to BART and Tri Delta Transit.</li> <li>• Provision of bike lanes throughout the project site.</li> <li>• Opportunities related to the project's proximity to major mass transit centers as a means to promote mass transit use and reduce regional vehicle miles traveled and traffic impacts on the State highways.</li> <li>• Potential impacts to pedestrians and bicyclists.</li> </ul>
<b>Alternatives</b> (Chapter 6)	<p>Comments related to:</p> <ul style="list-style-type: none"> <li>• A Mixed-Use Alternative within the City's core area should be considered.</li> </ul>

All of the above issues are addressed in this EIR, in the relevant chapters identified in the first column.

## **1.8 ORGANIZATION OF THE DRAFT EIR**

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The Faria/Southwest Hills Annexation Draft EIR includes two volumes. Volume I of the Faria/Southwest Hills Annexation Draft EIR includes chapters one through eight of the Faria/Southwest Hills Annexation Draft EIR as well as Appendices A through C. Volume II of the Faria/Southwest Hills Annexation Draft EIR includes Appendices D through N. Volume I is organized into the following chapters:

### **Chapter 1 – Introduction and Scope of the Draft EIR**

Provides an introduction and overview describing the intended use of the EIR and the review and certification process.

### **Chapter 2 – Executive Summary**

Summarizes the elements of the project and the environmental impacts that would result from implementation of the proposed project, describes proposed mitigation measures, and indicates the level of significance of impacts after mitigation. Acknowledges alternatives that could reduce or avoid significant impacts.

### **Chapter 3 – Project Description**

Provides a detailed description of the proposed project, including location, background information, major objectives, project components, and required approvals.

### **Chapter 4 – Existing Environmental Setting, Impacts, and Mitigation**

Contains a program-level analysis of environmental issue areas associated with the proposed project. The subsection for each environmental issue area contains an introduction and description of the setting of the project site, identifies impacts, and recommends appropriate mitigation measures.

### **Chapter 5 – Statutorily Required Sections**

Provides discussions required by CEQA regarding impacts that would result from the proposed project, including a summary of cumulative impacts, potential growth-inducing impacts, significant and unavoidable impacts, energy conservation, and significant irreversible changes to the environment.

### **Chapter 6 – Alternatives Analysis**

Provides a comparative analysis of the alternatives to the proposed project, their comparative respective environmental effects, and a determination of the environmentally superior alternative.

### **Chapter 7 – References**

Provides bibliographic information for all references and resources cited.

## **Chapter 8 – EIR Authors and Persons Consulted**

Lists report authors and persons consulted who provided technical assistance in the preparation and review of the EIR.

### **Appendices**

All appendices to the Faria/Southwest Hills Annexation Draft EIR will be available for download and review on the City of Pittsburg's website.

Volume I of the Faria/Southwest Hills Annexation Draft EIR contains the following appendices:

- Appendix A Draft Faria/Southwest Hills Master Plan;
- Appendix B Notice of Preparation (NOP) and NOP Comment Letters; and
- Appendix C Initial Study.

Volume II of the Faria/Southwest Hills Annexation Draft EIR contains the following appendices:

- Appendix D CalEEMod Modeling Results
- Appendix E Biological Evaluation Report (Pacific Biology)
- Appendix F Biological Resources Assessment (Moore Biological)
- Appendix G Cultural Resource Assessment Report;
- Appendix H Preliminary Geologic Hazard and Geotechnical Report (ENGEO) including Peer Review (Kleinfelder);
- Appendix I Phase I Environmental Site Assessment;
- Appendix J General Plan Policy Table;
- Appendix K Faria Annexation Environmental Noise Assessment;
- Appendix L Water Supply Assessment for Faria/Southwest Hills Annexation EIR;
- Appendix M Faria Property Sanitary Sewer System Technical Memorandum; and
- Appendix N Traffic Impact Study.

## **1.9 ENVIRONMENTAL REVIEW**

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Consistent with CEQA, this Draft Environmental Impact Report is a public information document for use by government agencies and the public to identify and evaluate potential environmental consequences of the proposed project and to recommend mitigation measures and/or standard conditions of approval to lessen or eliminate adverse impacts.

This Draft EIR will be available for public review for forty-five days during which time written comments on the Draft EIR may be submitted to:

Joan Lamphier, Consulting Planner  
Re: Faria Southwest Hills Annexation EIR  
City of Pittsburg  
Planning Division  
65 Civic Avenue  
Pittsburg, CA 94565

Email comments should be sent to Joan Lamphier, Consulting Planner:

[JLamphier@ci.pittsburg.ca.us](mailto:JLamphier@ci.pittsburg.ca.us)



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## 2. EXECUTIVE SUMMARY

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## 2

## EXECUTIVE SUMMARY

### 2.1 INTRODUCTION

The Executive Summary chapter of the EIR provides an overview of the Faria/Southwest Hills Annexation Project (proposed project) and summarizes the conclusions of the environmental analysis provided in Chapters 4.1 through 4.12. The chapter also reviews the alternatives to the proposed project that are described in Chapter 6, Alternatives Analysis, and identifies the Environmentally Superior Alternative. Table 2-1, found at the end of this chapter, provides a summary of the environmental effects of the proposed project, which are identified in each technical chapter of the EIR. Table 2-1 also contains the potential environmental impacts associated with the proposed project, the significance of the impacts, the proposed mitigation measures for the impacts, and the significance of the impacts after implementation of the mitigation measures.

### 2.2 PROJECT LOCATION AND DESCRIPTION

The City of Pittsburg is located along the Sacramento River in eastern Contra Costa County, and is bordered by Concord to the west, Antioch to the east, and is located north of Clayton (see Figure 3-1, Regional Location Map). The northern portion of the City is relatively flat, increasing in elevation as it expands into the southern hills. The hills form the northern tip of the Diablo Range, which extends from Contra Costa County to Santa Clara County. The Black Diamond Mines Regional Preserve abuts the southeastern limits of the Planning Area.

The proposed project is located just southwest of the municipal boundary of the City of Pittsburg and within the Southwest Hills planning subarea of the Pittsburg General Plan. With the exception of two isolated single-family residences and a small agricultural operation, the site consists primarily of open expanses of undeveloped hilly terrain covered with grasslands, with elevations ranging from approximately 435 feet at the lowest point to approximately 1,000 feet at the highest. The project is identified as Assessor's Parcel Numbers (APNs) 097-180-006, 097-200-002, 097-230-006, 097-240-002, and a portion of 097-190-002. The proposed project site consists of approximately 606 acres of grazing land and is currently rezoned for residential and open space uses under the City of Pittsburg Zoning Code.

The northeast portion of the site is bordered by existing residential development (San Marco and Vista Del Mar subdivisions), while the remainder of the site is bordered primarily by undeveloped areas. The western boundary of the site is directly adjacent to the City of Concord city limits. Bailey Road is located to the east of the site, and the recently closed Concord Naval Weapons Station (CNWS) is located to the south. State Route (SR) 4 is situated to the north of the site. Immediately west of the project site (within the CNWS), is land designated for open space and habitat protection in the adopted CNWS Reuse Plan and certified Final EIR. The CNWS Reuse Plan precludes development within the City of Concord eastern hillsides.

## 2.3 ENVIRONMENTAL IMPACTS AND REQUIRED MITIGATION

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Under the California Environmental Quality Act (CEQA), a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the existing physical conditions within the area affected by the project, including land, air, water, mineral, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Mitigation measures must be implemented as part of the proposed project to reduce potential adverse impacts to a less-than-significant level. Such mitigation measures are noted in this EIR and are found in the following chapters: Aesthetics; Agricultural Resources; Air Quality and Greenhouse Gas Emissions; Biological Resources; Cultural and Tribal Resources; Geology, Soils, and Seismicity; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; Public Services and Utilities; and Transportation, Traffic, and Circulation. Where an impact identified in the EIR remains significant after implementation of all feasible mitigation measures, the impact is considered significant and unavoidable.

Table 2-1 includes the level of significance of each impact addressed in this EIR, any mitigation measures required for each impact, and the resulting level of significance after implementation of mitigation measures for each impact. The mitigation measures presented in this EIR will form the basis of the Mitigation Monitoring and Reporting Program.

## 2.4 SUMMARY OF PROJECT ALTERNATIVES

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The following section presents a summary of the evaluation of the alternatives considered for the proposed project, which include the:

- No Project (No Build) Alternative;
- Mixed-Use Alternative;
- Clustered Development Alternative; and
- Reduced Intensity Alternative.

### No Project (No Build) Alternative

CEQA requires the evaluation of the comparative impacts of the “No Project Alternative” (CEQA Guidelines Section 15126.6(e)). The No Project Alternative may be defined either as the “no action taken on the proposed project” or a “no build” on the project site.

The No Project (No Build) Alternative to the proposed project is defined as the continuation of the existing conditions of the project site, which is currently occasionally grazed, mostly vacant land, with two existing residential structures. The No Project (No Build) Alternative would not meet any of the project objectives. Because development of the site would not occur, land disturbance and any associated physical environmental impacts would not occur as a result of the No Project (No Build) Alternative. Therefore, implementation of the No Project (No Build) Alternative would result in fewer overall impacts compared to that of the proposed project in every resource area other than Land Use and Planning, for which the possibility exists that impacts would be greater.

### **Mixed-Use Alternative**

The Mixed-Use Alternative would include approximately 50,000 square feet (sf) of commercial building floor area on approximately 15 acres, which would include one grocery store and several smaller flexible commercial spaces. The residential unit count would be up to 1,250 units. Development of the Mixed-Use Alternative would generally be located in the same development areas as indicated in the Draft Master Plan and shown in Figure 3-5 of the Project Description chapter of this EIR. The Mixed-Use Alternative would partially achieve the objectives of the proposed project.

The Mixed-Use Alternative would result in fewer impacts related to Aesthetics, Air Quality and GHG Emissions, Geology, Soils, and Seismicity, Noise, and Transportation, Traffic, and Circulation. With the exception of Hazards and Hazardous Materials, which would be greater for the Mixed-Use Alternative than the proposed project, the Mixed-Use Alternative would result in similar impacts related to all other remaining resource areas when compared to the proposed project. It should be noted that the significant and unavoidable impacts identified for the proposed project related to Aesthetics, Air Quality and GHG Emissions, Public Services and Utilities, and Transportation, Traffic, and Circulation would remain under the Mixed-Use Alternative.

### **Clustered Development Alternative**

The Clustered Development Alternative would include the construction of 750 single-family residences; however, the units would be clustered such that the area of development would reduce from what would occur under the proposed project to approximately 300 acres focused in the low-lying areas of the site. The additional open space provided would allow development to shift away from locations where geologic instability poses a significant and unavoidable risk to potential development. In addition, the Alternative would not require General Plan text amendments to alter or remove existing goals and policies related to hillside development. The Clustered Development Alternative would achieve all of the proposed project's objectives.

Compared to the proposed project, the Clustered Development Alternative would result in fewer impacts related to all impact areas except for Agricultural Resources, for which the Clustered Development Alternative would result in similar impacts. The significant and unavoidable impacts identified for the proposed project related to Aesthetics, Air Quality and GHG Emissions, Public Services and Utilities, and Transportation, Traffic, and Circulation would remain under the Clustered Development Alternative.

### **Reduced Intensity Alternative**

The Reduced Intensity Alternative would include the construction of 1,000 single-family residences in the same development areas as indicated in the Draft Master Plan and shown in Figure 3-5 of the Project Description chapter of this EIR. The Reduced Intensity Alternative would achieve most of the proposed project's objectives.

The Reduced Intensity Alternative would result in fewer impacts related to Aesthetics, Air Quality and GHG Emissions, Hazards and Hazardous Materials, Noise, and Public Services and Utilities, and Transportation, Traffic, and Circulation. The Reduced Intensity Alternative would result in

similar impacts related to all other resource areas when compared to the proposed project. It should be noted, however, that the significant and unavoidable impacts identified for the proposed project related to Aesthetics, Air Quality and GHG Emissions, Public Services and Utilities, and Transportation, Traffic, and Circulation would remain under the Reduced Intensity Alternative.

### **Environmentally Superior Alternative**

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126(e)(2) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states, “If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” Generally, the environmentally superior alternative is the one that would result in the fewest environmental impacts as a result of project implementation.

A comparison of the proposed project to the aforementioned alternatives is illustrated in Chapter 6, Alternatives Analysis, of this EIR. Aside from the No Project (No Build) Alternative, the development alternatives would meet the proposed project’s objective. All of the remaining alternatives considered would result in similar and/or fewer impacts in all resource areas when compared to the proposed project, with the exception of the Mixed-Use Alternative, which would result in greater impacts than the proposed project related to Hazards and Hazardous Materials. The Clustered Development Alternative would result in fewer impacts in the most resource areas when compared to the other alternatives considered.. For the aforementioned reasons, the Clustered Development Alternative would be considered the environmentally superior alternative.

## **2.5 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

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A summary of the identified impacts in the technical chapters of the EIR is presented in Table 2-1. In Table 2-1, the proposed project impacts are identified for each chapter (Chapters 4.1 through 4.12) in the EIR. In addition, Table 2-1 includes the level of significance of each impact, any mitigation measures required for each impact, and the resulting level of significance after implementation of mitigation measures for each impact.

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.1 Aesthetics</b>			
<b>4.1-1</b> A substantial adverse effect on a scenic vista.	LS	<i>None required.</i>	N/A
<b>4.1-2</b> Substantial degradation of the existing visual character or quality of the project site and/or the site's surroundings.	S	<i>None feasible.</i>	SU
<b>4.1-3</b> Creation of new sources of substantial light or glare that would adversely affect day or nighttime views in the area.	S	<p><i>4.1-3 In conjunction with the submittal of any development applications for future development on the project site, the applicant shall prepare and submit a detailed lighting plan showing that light would not trespass onto adjacent properties to the City of Pittsburg Community Development Department for review and approval as part of the development review process. The lighting plan shall include, but not necessarily be limited to, the following provisions:</i></p> <ul style="list-style-type: none"> <li><i>• Shield or screen lighting fixtures to direct the light downward and prevent light from spilling onto adjacent properties;</i></li> <li><i>• Place and shield or screen flood and area lighting needed for construction activities and/or security so as not to disturb adjacent residential areas and passing motorists;</i></li> </ul>	LS

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> <li>For public lighting, prohibit the use of light fixtures that are of unusually high intensity or brightness (e.g., harsh mercury vapor, low-pressure sodium, or fluorescent bulbs) or that blink or flash; and</li> <li>Use appropriate building materials (such as low-glare glass, low-glare building glaze or finish, neutral, earth-toned colored paint and roofing materials), shielded or screened lighting, and appropriate signage to prevent light and glare from adversely affecting motorists on nearby roadways.</li> </ul>	
<b>4.1-4</b> Long-term changes in visual character or quality of the region associated with cumulative development of the proposed project in combination with future buildout of the City of Pittsburg, as well as other reasonably foreseeable projects in the region.	LS	None required.	N/A
<b>4.2 Agricultural Resources</b>			
<b>4.2-1</b> Convert Prime Farmland, Unique Farmland, or Farmland of Statewide	LS	None required.	N/A

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Importance, as shown on the FMMP maps, to non-agricultural use, or involve other changes in the existing environment which, due to their location or nature, could individually result in loss of Farmland to non-agricultural use.			
<b>4.2-2</b> Conflict with Contra Costa LAFCo's AOSPP.	LS	<i>None required.</i>	N/A
<b>4.2-3</b> Involve other changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use.	LS	<i>None required.</i>	N/A
<b>4.3 Air Quality and Greenhouse Gas Emissions</b>			
<b>4.3-1</b> Generation of short-term construction-related criteria air pollutant emissions in excess of 54 lbs/day for ROG, NOX, and PM2.5 and 82 lbs/day for PM10.	S	<b>4.3-1</b> Prior to issuance of a grading permit, the project applicant shall show on the grading plans via notation that the contractor shall ensure that all off-road heavy-duty diesel-powered equipment larger than 100 horsepower (e.g., rubber tired dozers, excavators, graders, scrapers, pavers, paving equipment, and cranes) to be used for each phase of construction of the project (i.e., owned, leased, and subcontractor vehicles) shall	SU

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.3-2 Generation of operational criteria air pollutant emissions in excess of 54 lbs/day for ROG, NOX, and PM2.5 and 82 lbs/day for PM10 and conflict with or obstruct implementation of the 2017 Clean Air CAP, and/or the 2001 Ozone Attainment Plan.	S	<p>4.3-2 In conjunction with the submittal of each application for any development within the proposed project area, a project-level, detailed air quality analysis shall be performed. The analysis shall include, but not be limited to, quantification of operational criteria air pollutant emissions, a determination of operational air quality impacts, and identification of mitigation measures necessary to reduce any significant impacts. Mitigation measures shall be developed in coordination with the BAAQMD and shall include, but would not be limited to, BAAQMD's recommended mitigation measures as follows:</p> <ul style="list-style-type: none"> <li>• Use zero-VOC paints, finishes, and adhesives only;</li> <li>• Use of cool roof materials;</li> <li>• Plant shade trees;</li> <li>• Orient buildings to maximize passive solar heating;</li> <li>• Install smart meters and programmable thermostats;</li> <li>• Improve bike and pedestrian network (complete sidewalks, connection to adjacent areas, connection to bike network, etc.);</li> </ul>	SU

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> <li>• Implement bicycle and pedestrian facilities such as bike lanes, routes, and paths, bike parking, sidewalks, and benches;</li> <li>• Promote ridesharing, transit, bicycling, and walking for work trips;</li> <li>• Extend transit service into project site;</li> <li>• Participate in bike sharing programs;</li> <li>• Implement programs that offer residents free or discounted transit passes to encourage transit use;</li> <li>• Subsidize residential transit passes;</li> <li>• Promote use of public electric vehicle charging infrastructure;</li> <li>• Provide charging stations and preferential parking spots for electric vehicles;</li> <li>• Provide traffic calming features;</li> <li>• Minimize use of cul-de-sacs and incomplete roadway segments;</li> <li>• Install energy star appliances;</li> <li>• Install solar water heating;</li> <li>• Exceed minimum CALGreen standards (e.g., adopt Tier 1 or Tier 2 voluntary measures);</li> <li>• Pre-wire homes for photovoltaic systems;</li> <li>• Provide community composting facilities or curb-side food waste services;</li> </ul>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> <li>• Use water efficient landscapes and native/drought-tolerant vegetation; and</li> <li>• Provide electrical outlets outside of homes to allow for use of electrically powered landscaping equipment.</li> </ul> <p>The above mitigation measures are mandatory to reduce any significant impacts unless the applicant demonstrates that the measures are not feasible.</p> <p>If off-site mitigation measures are proposed, the applicant must be able to show that the emission reductions from identified projects are real, permanent through the duration of the project, enforceable, and are equal to the pollutant type and amount of the project impact being offset. BAAQMD recommends that off-site mitigation projects occur within the nine-county Bay Area in order to reduce localized impacts and capture potential co-benefits. If BAAQMD has established an off-site mitigation program at the time a development application is submitted, as an off-site mitigation measure, the applicant may choose to enter into an agreement with BAAQMD and pay into the established off-site mitigation program fund, where BAAQMD would commit to reducing the type and amount of emissions identified in the agreement.</p>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<i>The analysis and proposed mitigation measures shall be reviewed as part of the development review process.</i>	
<b>4.3-3</b> Exposure of sensitive receptors to substantial levels of pollutant concentrations.	LS	<i>None required.</i>	N/A
<b>4.3-4</b> Generation of cumulative criteria air pollutant emissions in excess of 10 tons/year for ROG, NOX, and PM2.5 and 15 tons/yr for PM10.	S	4.3-4 Implement Mitigation Measure 4.3-2.	SU
<b>4.3-5</b> Generation of a cumulatively considerable contribution to GHG emissions in excess of 1,100 MTCO2e/yr or 4.6 MTCO2e/SP/yr by 2020, 660 MTCO2e/yr or 2.76 MTCO2e/SP/yr by 2030, or an 80 percent reduction from 1990 levels by 2050.	S	4.3-5(a) Implement Mitigation Measure 4.3-2.  4.3-5(b) The project-level air quality analysis required by Mitigation Measure 4.3-2 shall include an analysis of project-level GHG emissions. Such future analyses shall include, but not be limited to, quantification of GHG emissions, as well as determination of operational GHG emission impacts based on existing statewide climate change laws in effect at the time of analysis. The project-level GHG emissions shall be reduced through the implementation of the mitigation measures identified in Mitigation Measure 4.3-2 designed to reduce operational GHG emissions.	SU
<b>4.4 Biological Resources</b>			
<b>4.4-1</b> Have a substantial adverse effect, either directly or	S	4.4-1(a) Prior to the issuance of grading or construction permits for each phase of development of the project, the	LS

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
through habitat modifications, on special-status plant species.		<p>applicant shall pay the applicable ECCC HCP/NCCP per-acre Development Fee in effect for Zone II in compliance with Section 15.108.070 of the Pittsburg Municipal Code. The Development Fee will cover the development of habitat that primarily includes annual grassland. At the discretion of the East Contra Costa County Habitat Conservancy, the fee may also be required for the 72.9 acres of Open Space that would be temporarily disturbed by grading. Payment of the Development Fee would address the loss of potential habitat of special-status plant species associated with grasslands. The fees would be used in part to protect these affected special-status plant species by bringing existing populations of the species under protection.</p> <p>Alternately, the project applicant may, in accordance with the terms of Pittsburg Municipal Code Chapter 15.108, offer to dedicate land or create and restore wetlands in lieu of some or all of the mitigation fees. All applicable mitigation fees shall be paid, or an “in-lieu-of fee” agreement executed, prior to the issuance of a grading permit for the project.</p> <p>The Pittsburg Community Development Department and the Contra Costa County Conservancy shall approve the final method of compliance with the ECCC HCP/NCCP provisions.</p>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>4.4-1(b) <i>Prior to the issuance of grading or construction permits for each phase of development of the project, additional rare plant surveys shall be conducted for bent-flowered fiddleneck, big tarplant, round-leaved filaree, Mt. Diablo fairy-lantern, Mt. Diablo buckwheat, fragrant fritillary, Diablo helianthella, Brewer's western flax, showy golden madaia, Mt. Diablo cottonweed, woodland woollythreads, adobe navarretia, shining navarretia, and rock sanicle. The surveys shall be appropriately timed and shall cover all potentially suitable on-site habitats. If none of the species occurs in the project development area, further mitigation is not required.</i></p> <p>4.4-1(c) <i>If any of the above species occurs in the project development area, future development plans shall be designed to avoid such species, to the maximum extent feasible. If avoidance of the identified species is unavoidable, the project applicant shall notify the East Contra Costa County Habitat Conservancy of the construction schedule so as to allow the East Contra Costa County Habitat Conservancy the option to salvage the population(s) in accordance with HCP/NCCP Conservation Measure 3.10 (Plant Salvage when Impacts are Unavoidable) described below. In addition, the project applicant shall confirm with the East Contra Costa County Habitat Conservancy that the take limits of</i></p>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>the HCP/NCCP for the species identified in Impact 4.4-1 have not been breached (at the time of writing this EIR, the take limits have not been breached for the special-status plant species in question).</i></p> <p><u>Perennial Covered Plants</u></p> <p><i>Where removal of covered plant species cannot be avoided by approved covered activities, such as construction activities associated with development of the project site, the East Contra Costa County Habitat Conservancy has the option of salvaging the covered plants. Salvage methods for perennial species shall be tested for whole individuals, cuttings, and seeds. Salvage measures shall include the evaluation of techniques for transplanting as well as germinating seed in garden or greenhouse and then transplanting to suitable habitat sites in the field. Techniques shall be tested for each species, and appropriate methods shall be identified through research and adaptive management. Where plants are transplanted or seeds distributed to the field they shall be located in preserves in suitable habitat to establish new populations. Field trials shall be conducted to evaluate the efficacy of different methods and determine the best methods to establish new populations. New populations shall be located such that they constitute separate populations and do not become part of an</i></p>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>existing population of the species, as measured by the potential for genetic exchange among individuals through pollen or propagule (e.g., seed, fruit) dispersal. Transplanting within the preserves shall only minimally disturb existing native vegetation and soils. Supplemental watering may be provided as necessary to increase the chances of successful establishment, but must be removed following initial population establishment. See also All Covered Plants below.</p> <p><u>Annual Covered Plants</u></p> <p>For annual covered plants, mature seeds shall be collected from all individuals for which removal cannot be avoided (or if the population is large, a representative sample of individuals). If storage is necessary, seed storage studies shall be conducted to determine the best storage techniques for each species. If needed, studies shall be conducted on seed germinated and plants grown to maturity in garden or greenhouse to propagate larger numbers of seed. Seed propagation methods shall ensure that genetic variation is not substantially affected by propagation (i.e., selection for plants best adapted to cultivated conditions). Field studies shall be conducted through the Adaptive Management Program to determine the efficacy and best approach to dispersal of seed into suitable habitat. Where seeds are distributed to the field,</p>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>they shall be located in preserves in suitable habitat to establish new populations. If seed collection methods fail (e.g., due to excessive seed predation by insects), alternative propagation techniques will be necessary. See also All Covered Plants below.</i></p> <p><u>All Covered Plants</u></p> <p><i>All salvage operations shall be conducted by the East Contra Costa County Habitat Conservancy. To ensure enough time to plan salvage operations, project proponents shall notify the East Contra Costa County Habitat Conservancy of their schedule for removing the covered plant population.</i></p> <p><i>The East Contra Costa County Habitat Conservancy may conduct investigations into the efficacy of salvaging seeds from the soil seed bank for both perennial and annual species. The soil seed bank may add to the genetic variability of the population. Covered species may be separated from the soil through garden/greenhouse germination or other appropriate means. Topsoil taken from impact sites shall not be distributed into preserves because of the risk of spreading new nonnative and invasive plants to preserves For salvage operations, the East Contra Costa County Habitat Conservancy shall transplant new populations such that they constitute</i></p>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>separate populations and do not become part of an existing population of the species, as measured by the potential for genetic exchange among individuals through pollen or propagule (e.g., seed, fruit) dispersal. Transplanting or seeding “receptor” sites (i.e., habitat suitable for establishing a new population) should be carefully selected on the basis of physical, biological, and logistical considerations (Fiedler and Laven 1996); some examples of these are listed below.</i></p> <ul style="list-style-type: none"> <li>• <i>Historic range of the species;</i></li> <li>• <i>Soil type;</i></li> <li>• <i>Soil moisture;</i></li> <li>• <i>Topographic position, including slope and aspect;</i></li> <li>• <i>Site hydrology;</i></li> <li>• <i>Mycorrhizal associates (this may be important for Mount Diablo manzanita);</i></li> <li>• <i>Presence or absence of typical associated plant species; and</i></li> <li>• <i>Presence or absence of herbivores or plant competitors. Site accessibility for establishment, monitoring, and protection from trampling by cattle or trail users.</i></li> </ul>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.4-2</b> Have a substantial adverse effect, either directly or through habitat modifications, on special-status bird species, including those covered under the East Contra Costa County HCP/NCCCP, such as Swainson's hawk, tricolored blackbird, burrowing owl, and golden eagle.	S	<p><i>Golden Eagle</i></p> <p>4.4-2(a) Implement Mitigation Measure 4.4-1(a).</p> <p>4.4-2(b) The project shall implement the following avoidance measures for potential effects on golden eagles during construction:</p> <ul style="list-style-type: none"> <li>Based on the potential for active nests, prior to implementation of construction activities, including tree removal, a qualified biologist shall conduct a pre-construction survey to establish whether an active golden eagle nest is present on the project site. If an active nest is not present, further mitigation is not required. If an occupied nest is present, minimization requirements and construction monitoring shall be required, as detailed below.</li> <li>Construction activities shall be prohibited within 0.5 mile of active nests. Nests can be built and active at almost any time of the year, although mating and egg incubation occurs late January through August, with peak activity in March through July. If site-specific conditions or the nature of the construction activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be</li> </ul>	LS

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>appropriate or that a larger buffer should be implemented, the East Contra Costa County Habitat Conservancy shall coordinate with CDFW/USFWS to determine the appropriate buffer size.</p> <ul style="list-style-type: none"> <li>Construction monitoring shall ensure that no construction activities occur within the buffer zone established around an active nest. Construction monitoring shall ensure that direct effects to golden eagles are avoided.</li> </ul>	
		Swainson's Hawk	
		4.4-2(c) Implement Mitigation Measure 4.4-1(a).	
		4.4-2(d) The project applicant shall implement the following avoidance measures for potential effects on Swainson's hawk nests during construction:	
		<ul style="list-style-type: none"> <li>Prior to ground disturbing activities during the nesting season (March 15 through September 15), a qualified biologist shall conduct a pre-construction survey no more than one month prior to construction to establish whether occupied Swainson's hawk nests occur on or within 1,000 feet of the area of proposed</li> </ul>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>construction. If occupied nests are not found, then further mitigation is not required.</p> <ul style="list-style-type: none"> <li>If occupied nests are found, project construction activity shall not occur within a 1,000-foot buffer zone distance from the nest unless a lesser buffer zone is approved by the City in consultation with CDFW. During the nesting season, construction activities shall be avoided within the established buffer zone to prevent nest abandonment. Construction monitoring shall be required to ensure that the established buffer zone is adhered to. If young fledge prior to September 15, construction activities can proceed normally without a buffer zone. If an active nest site is present but shielded from view and noise by other development or other features, the City may waive this avoidance measure (establishment of a buffer zone) if approved by the CDFW.</li> </ul>	
		<p><i>Burrowing Owl</i></p> <p>4.4-2(e)    <i>Implement Mitigation Measure 4.4-1(a).</i></p> <p>4.4-2(f)    <i>The project applicant shall implement the following measures to avoid or minimize impacts to western burrowing owl:</i></p>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> <li>No more than 14 days prior to initiation of ground disturbing activities, the project applicant shall retain a qualified burrowing owl biologist to conduct a take avoidance survey of the proposed project site, any off-site improvement areas, and all publicly accessible potential burrowing owl habitat within 500 feet of the project construction footprint. The survey shall be performed in accordance with the applicable sections of the March 7, 2012, CDFW's Staff Report on Burrowing Owl Mitigation guidelines. If the survey does not identify any nesting burrowing owls on the proposed project site, further mitigation is not required. The take avoidance survey shall be submitted to the City of Pittsburg Community Development Department for review. The survey periods and number of surveys are identified below:               <ul style="list-style-type: none"> <li>If construction related activities commence during the non-breeding season (1 September to 31 January), a minimum of one take avoidance survey shall be conducted of that phase and all publicly accessible potential burrowing</li> </ul> </li> </ul>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>owl habitat within 500 feet of the construction footprint of that phase.</p> <ul style="list-style-type: none"> <li>○ If construction related activities commence during the early breeding season (1 February to 15 April), a minimum of one take avoidance survey shall be conducted of that phase and all publicly accessible potential burrowing owl habitat within 500 feet of the construction footprint of that phase.</li> <li>○ If construction related activities commence during the breeding season (16 April to 30 August), a minimum of three take avoidance surveys shall be conducted of that phase and all publicly accessible potential burrowing owl habitat within 500 feet of the construction footprint of that phase. If construction related activities commence after 15 June, at least one of the three surveys shall be completed after 15 June.</li> <li>○ Because the owls are known to occur nearby and may take up occupancy on a site under construction, the take avoidance survey shall be conducted prior to the start of any new phase, and/or if construction-related activity is</li> </ul>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>delayed or suspended for more than 30 days.</i></p> <ul style="list-style-type: none"> <li><i>If active burrowing owl dens are found within the survey area in an area where disturbance would occur, the project applicant shall implement measures consistent with the applicable portions of the March 7, 2012, CDFW's Staff Report on Burrowing Owl Mitigation guidelines. If needed, as determined by the biologist, the formulation of avoidance and minimization approaches would be developed in coordination with the CDFW. The avoidance and minimization approaches would likely include burrow avoidance buffers during the nesting season (February to August). For burrowing owls present on-site, outside of the nesting season, passive exclusion of owls from the burrows could be utilized under a CDFW-approved burrow exclusion plan.</i></li> </ul>	
		<p><b>4.4-2(g)</b> <i>If active owl burrows are present and the project would impact active burrows, the project applicant shall provide compensatory mitigation for the permanent loss of burrowing owl habitat at a ratio of 2.5 acres of higher quality owl habitat for every one acre of suitable owl habitat disturbed. The calculation of habitat loss may exclude acres currently occupied by hardscape or</i></p>	

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		<p><i>structures. Such mitigation may include the permanent protection of land that is deemed to be suitable burrowing owl habitat through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation mission, or the purchase of burrowing owl conservation bank credits from a CDFW-approved burrowing owl conservation bank. A record of the compensatory mitigation provided by the project applicant shall be submitted to the City of Pittsburg Community Development Department prior to initiation of ground disturbing activities.</i></p> <p><i>Tricolored Blackbird and Other Special-Status Avian Species</i></p> <p><b>4.4-2(h)</b> <i>Implement Mitigation Measure 4.4-1(a).</i></p> <p><b>4.4-2(i)</b> <i>If construction activities commence anytime during the nesting/breeding season of native bird species potentially nesting on or near the project site (typically February through August in the project region), a pre-construction survey for nesting birds shall be conducted by a qualified biologist within two weeks of the commencement of construction activities.</i></p> <p><i>If active nests are found in areas that could be directly affected or are within 500 feet of construction and would be subject to prolonged construction-related noise, a no-</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>disturbance buffer zone shall be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them shall be a minimum of 500 feet for raptors, and a minimum of 50 feet for other species, and may be enlarged by taking into account factors such as the following:</i></p> <ul style="list-style-type: none"> <li><i>Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity;</i></li> <li><i>Distance and amount of vegetation or other screening between the construction site and the nest; and</i></li> <li><i>Sensitivity of individual nesting species and behaviors of the nesting birds.</i></li> </ul>	
<b>4.4-3</b> Have a substantial adverse effect, either directly or through habitat modifications, on special-status mammals, including San Joaquin kit fox, San Joaquin pocket mouse, American badger, and special-status bats.	S	<p><i>San Joaquin Kit Fox, San Joaquin Pocket Mouse, and American Badger</i></p> <p><i>4.4-3(a) Implement Mitigation Measure 4.4-1(a).</i></p> <p><i>San Joaquin Kit Fox</i></p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>4.4-3(b) <i>The project shall implement the following avoidance measures for potential effects on San Joaquin kit fox during construction:</i></p> <ul style="list-style-type: none"> <li>• <i>Prior to any ground disturbance, a USFWS/CDFW-qualified biologist shall conduct a pre-construction survey within the proposed disturbance footprint and a surrounding 250-foot radius. The survey shall establish the presence or absence of San Joaquin kit foxes and/or suitable dens and evaluate use by kit foxes in accordance with USFWS survey guidelines (USFWS 1999). The pre-construction survey shall be conducted no more than 30 days prior to ground disturbance. On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 250-foot radius from the perimeter of the proposed footprint to identify San Joaquin kit foxes and/or suitable dens. Adjacent parcels under different land ownership are not required to be surveyed. The status of all surveyed dens shall be determined and mapped. Written results of pre-construction surveys shall be submitted to USFWS within 5 working days after survey completion and before the start of ground disturbance. Concurrence is not required prior to ground disturbance.</i></li> </ul>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> <li>• <i>If San Joaquin kit foxes and/or suitable dens are identified in the survey area, the measures described below shall be implemented.</i> <ul style="list-style-type: none"> <li>○ <i>If a San Joaquin kit fox den is discovered in the proposed development footprint, the den shall be monitored for 3 days by a USFWS/CDFW-qualified biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.</i></li> <li>○ <i>Unoccupied dens shall be destroyed immediately to prevent subsequent use.</i></li> <li>○ <i>If a natal or pupping den is found, USFWS and CDFW shall be notified immediately. The den shall not be destroyed until the pups and adults have vacated and then only after further consultation with USFWS and CDFW.</i></li> <li>○ <i>If kit fox activity is observed at the den during the initial 3-day monitoring period, the den shall be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged.</i></li> </ul> </li> </ul>	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident animal can easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of the biologist, it is temporarily vacant (i.e., during the animal's normal foraging activities).</i></p> <ul style="list-style-type: none"> <li><i>If dens are identified in the survey area outside the proposed disturbance footprint, exclusion zones around each den entrance or cluster of entrances shall be demarcated. The configuration of exclusion zones should be circular, with a radius measured outward from the den entrance(s). Ground disturbance activities shall not occur within the exclusion zones. Exclusion zone radii for potential dens shall be at least 50 feet and shall be demarcated with four to five flagged stakes. Exclusion zone radii for known dens shall be at least 100 feet and</i></li> </ul>	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>shall be demarcated with staking and flagging that encircles each den or cluster of dens but does not prevent access to the den by kit fox.</i></p> <p><i>San Joaquin Pocket Mouse</i></p> <p><i>4.4-3(c) Grading and vegetation clearing activities shall be conducted in a uniform direction to allow mobile animals, such as San Joaquin pocket mouse, the ability to escape the disturbance area into adjacent undisturbed habitat, and to prevent creating fragmented islands of habitat that would eventually be cleared/graded. The language of this mitigation shall be included, via notation, on any grading plans approved within the Draft Master Plan development area.</i></p> <p><i>American Badger</i></p> <p><i>4.4-3(d) A pre-construction survey for potential den sites shall be conducted by a qualified biologist no more than four weeks before commencement of initial ground disturbance activities. If an occupied den is found (and if young are not present), then any badgers present shall be removed from the den either by trapping or the use of exclusionary devices. Prior to implementation, the removal method shall be approved by CDFW. If trapped, the badgers shall be moved to other suitable habitat. Once</i></p>	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.4-4 Have a substantial adverse effect, either directly or through habitat modifications, on California tiger salamanders.</b>	S	<p>any badgers are trapped or excluded, the dens shall be excavated by hand and refilled to prevent reoccupation. Exclusion shall continue until the badgers are successfully excluded from the site, as determined by a qualified biologist. Badgers shall not be relocated if it is determined by the biologists that young are or may be present.</p> <p>4.4-4(a) Implement Mitigation Measure 4.4-1(a).</p> <p>4.4-4(b) Prior to any ground disturbance, a USFWS/CDFW-approved biologist shall identify potential breeding habitat for CTS. If the project fills or surrounds suitable breeding habitat, the project proponent shall notify USFWS, CDFW, and the East Contra Costa County Habitat Conservancy of the presence and condition of potential breeding habitat, as described below. Preconstruction surveys are not required.</p> <p>Written notification to USFWS, CDFW, and the East Contra Costa County Habitat Conservancy, including photos and breeding habitat assessment, is required prior to disturbance of any suitable breeding habitat. The project proponent shall also notify these parties of the approximate date of removal of the breeding habitat at least 30 days prior to this removal to allow USFWS or CDFW staff to translocate individuals, if requested. USFWS or CDFW must notify the project proponent of</p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<i>their intent to translocate CTS within 14 days of receiving notice from the project proponent. The applicant must allow USFWS or CDFW access to the site prior to construction if they request it. Restrictions under this Plan on the nature of the disturbance or the date of the disturbance do not exist unless CDFW or USFWS notify the project proponent of their intent to translocate individuals within the required time period. In this case, the project proponent must coordinate the timing of disturbance of the breeding habitat to allow USFWS or CDFW to translocate the individuals. USFWS and CDFW shall be allowed 45 days to translocate individuals from the date the first written notification was submitted by the project proponent (or a longer period agreed to by the project proponent, USFWS, and CDFW).</i>	
<b>4.4-5</b> Have a substantial adverse effect, either directly or through habitat modifications, on California red-legged frogs.	S	4.4-5 <i>Implement Mitigation Measure 4.4-1(a).</i>	LS
<b>4.4-6</b> Have a substantial adverse effect, either directly or through habitat modifications, on western pond turtle.	S	4.4-6 <i>Implement Mitigation Measure 4.4-1(a).</i>	LS
<b>4.4-7</b> Have a substantial adverse effect, either directly or through habitat modifications, on vernal pool invertebrates.	LS	<i>None required.</i>	N/A

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.4-8</b> Have a substantial adverse effect, either directly or through habitat modifications, on Western bumble bee.	S	4.4-8 Implement Mitigation Measure 4.4-1(a).	LS
<b>4.4-9</b> Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.	LS	None required.	N/A
<b>4.4-10</b> Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to marshes, vernal pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	LS	None required.	N/A
<b>4.4-11</b> Substantially interfere with movement of native, resident, or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.	LS	None required.	N/A

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4-12 Indirect impacts on adjacent lands.	S	<p>4.4-12(a) <i>Implement Mitigation Measure 4.1-3.</i></p> <p>4.4-12(b) <i>Prior to Improvement Plan approval, the project applicant shall prepare a list of recommended and prohibited landscaping plants for homes and common areas within the project site. The list shall be subject to review and approval by the City of Pittsburgh Community Development Department. The list shall include a plant palette composed of non-invasive species and shall list invasive plant species that residents may not plant on the project site. The list of prohibited plants shall be compiled in cooperation with a qualified restoration specialist and distributed to future occupants of the project site as part of the Covenants, Conditions, and Restrictions (CC&amp;R) applicable to future residential development.</i></p>	LS
		4.4-12(c) <i>In deed disclosures, the project applicant shall notify all property owners/buyers of the potential interactions that may occur between pets and native wildlife. The disclosures shall discuss the presence of native animals (e.g., coyote, bobcat, mountain lion) that could prey on pets, and state that the property owners and/or residents shall not take any actions against native animals should they prey on pets that are allowed outdoors (unless danger of attacks on humans is present). The property owners shall be informed of the importance of keeping</i>	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<i>pets inside or within fenced yards for the pet's protection, as well as to protect nearby sensitive biological resources. The property owners shall also be informed of the importance of properly storing trash and not feeding wildlife so as not to attract non-native wildlife that could prey on native species.</i>	
<b>4.4-13</b> Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LS	<i>None required.</i>	N/A
<b>4.4-14</b> Conflict with an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.	S	<i>4.4-14 Implement Mitigation Measure 4.4-1(a).</i>	LS
<b>4.4-15</b> Cumulative loss of biological resources.	S	<i>4.4-15 Implement Mitigation Measures 4.4-1(a) through 4.4-14.</i>	LS
<b>4.5 Cultural Resources</b>			
<b>4.5-1</b> Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	LS	<i>None required.</i>	N/A
<b>4.5-2</b> Cause a substantial adverse change in the significance of a	S	<i>4.5-2(a) In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil</i>	LS

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unique archaeological resource pursuant to Section 1564.5, directly or indirectly destroy a unique paleontological resource or unique geologic features, or disturb any human remains, including those interred outside of formal cemeteries.		(“midden”), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during earth-moving activities, all work within 100 feet of the resource shall be halted, and the applicant shall consult with a qualified archeologist. Representatives of the City and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation.	
		4.5-2(b) If a human bone or bone of unknown origin is found during earth-moving activities, all work shall stop within 100 feet of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.	
		4.5-2(c) If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives.	

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		<p><i>If a Native American archeological, ethnographic, or a spiritual resource is discovered, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and are Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.</i></p> <p><i>In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.</i></p> <p><i>4.5-2(d) The applicant shall retain the services of a professional paleontologist/archaeologist to educate the construction crew that will be conducting grading and excavation at the project site. The education shall consist of an introduction to the geology of the project site and the kinds of fossils, archeological, and/or Native American resources that may be encountered, as well as what to do in case of a discovery.</i></p>	

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		<p><i>Should any paleontological resources be unearthed by the construction crew, such as vertebrate fossils (e.g., teeth, bones), an unusually large or dense accumulation of intact invertebrates, or well-preserved plant material (e.g., leaves), then ground-disturbing activity shall be diverted to another part of the project site and the paleontologist shall be called on-site to assess the find and, if significant, recover the find in a timely matter. Finds determined significant by the paleontologist shall then be conserved and deposited with a recognized repository, such as the University of California Museum of Paleontology. The alternative mitigation would be to leave the significant finds in place, determine the extent of significant deposit, and avoid further disturbance of the significant deposit. Proof of the construction crew awareness training shall be submitted to the City's Community Development Department in the form of a copy of training materials and the completed training attendance roster.</i></p>	
<b>4.5-3</b> Directly or indirectly disturb or destroy a unique tribal cultural resource, such as a site, feature, place, cultural landscape, sacred place or object with cultural value to a	S	<p>4.5-3 Implement Mitigation Measures 4.5-2(a) through 4.5-2(d).</p>	LS

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California Native American tribe.			
<b>4.5-4</b> Cumulative loss of cultural and tribal resources.	LS	<i>None required.</i>	N/A
<b>4.6 Geology, Soils, and Seismicity</b>			
<b>4.6-1</b> The project site is subject to seismic risks including fault rupture, strong ground shaking, and liquefaction that could adversely affect future development.	S	<p><i>4.6-1 As part of any future development application, the project applicant shall undertake a design-level geotechnical report that will include a subsurface exploration of soil borings and/or cone penetration tests within the development areas and laboratory soil testing to provide data for preparation of specific recommendations regarding grading, foundations, and drainage for the proposed construction. A California Registered Civil Engineer or Geotechnical Engineer shall produce a design-level geotechnical engineering report subject to prior review and written approval by the City Engineer. The report shall address the following:</i></p> <ol style="list-style-type: none"> <li><i>1. The magnitude of remedial grading needed for the site;</i></li> <li><i>2. Construction of high cut slopes and relatively deep fills;</i></li> <li><i>3. The existence of adverse bedrock bedding;</i></li> <li><i>4. The potential presence of artificial, undocumented fills;</i></li> </ol>	LS

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		<p>5. <i>The potential presence of compressible alluvial soils;</i></p> <p>6. <i>The liquefaction potential within alluvial-filled valley areas;</i></p> <p>7. <i>The anticipated effects of local groundshaking on the proposed development; and</i></p> <p>8. <i>Identification of the extent of liquefaction and lateral spreading in the potential development area.</i></p> <p><i>Furthermore, the design-level geotechnical engineering report shall include project design measures and engineering techniques to avoid risks to people and structures from identified liquefaction and lateral spreading; address structures, structural foundations, and grading practices consistent with the CBC and any applicable City building and grading standards; and address both construction and operation of the project, as applicable. Design measures and engineering techniques may include, at a minimum, the following:</i></p> <ul style="list-style-type: none"> <li><i>• Recommendations for strengthened foundations to resist excessive differential settlement associate with seismically-induced liquefaction;</i></li> <li><i>• Removal and replacement of potentially liquefiable soils; and/or</i></li> </ul>	

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		<ul style="list-style-type: none"> <li>Densify potentially liquefiable soils with an in-situ ground improvement technique.</li> </ul> <p>The Design Level Geotechnical Report shall identify the portions of the project site that cannot be graded and developed to meet CBC standards. Development shall not be allowed within those areas. The report shall be completed by a consultant selected and hired by the City of Pittsburg. The developer shall be responsible for the full cost of the report. Prior to the issuance of any Grading Permit and approval of a Tentative Map, the City Engineer shall review the Design Level Geotechnical Report and determine that the proposed grading conforms to the CBC.</p> <p>Prior to issuance of building permits, the City shall site-inspect to ensure that construction is in accordance with the approved plans and incorporates all required design measures and engineering techniques, and that such measures perform as identified in the design-level geotechnical engineering report and conforms to the standards of the CBC.</p>	
<b>4.6-2 Implementation of the project could result in substantial erosion or loss of topsoil.</b>	S	4.6-2 As part of any future development application, the project applicant shall submit an erosion control plan subject to prior review and written approval by the City Engineer to limit the erosion effects during construction of the proposed project. Measures shall be identified to limit	LS

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		<p><i>and control the amount of erosion, and the transport of soils or sediment off of the construction site. Measures could include, but are not limited to:</i></p> <ul style="list-style-type: none"> <li>• <i>Hydro-seeding exposed soils;</i></li> <li>• <i>Placement of erosion control measures within drainageways and ahead of drop inlets;</i></li> <li>• <i>The temporary lining (during construction activities) of drop inlets with “filter fabric” (a specific type of geotextile fabric);</i></li> <li>• <i>The placement of straw wattles along slope contours and back-of-curb prior to installation of landscaping;</i></li> <li>• <i>Directing subcontractors to a single designation “wash-out” location (as opposed to allowing them to wash-out in any location they desire);</i></li> <li>• <i>The use of siltation fences; and</i></li> <li>• <i>The use of sediment basins and dust palliatives.</i></li> </ul>	
<b>4.6-3 Implementation of the project could result in risks to people and structures associated with compressible soil, undocumented fill, expansive soils, and/or corrosive soil.</b>	S	<p><b>4.6-3</b> <i>The design-level geotechnical engineering report required by Mitigation Measure 4.6-1 shall address the potential for compressible soil, undocumented fill, corrosive soil, and expansive soil on the project site and shall identify engineering techniques to reduce any identified impacts to less than significance. The techniques shall include but not be limited to the following:</i></p>	LS

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		<ul style="list-style-type: none"> <li>• <i>Undocumented fill - the over-excavation of a minimum of three feet of soil to remove existing non-engineered fill in order to place engineered fill;</i></li> <li>• <i>Corrosive soil – If on-site soil is found to be corrosive to concrete, preventative measures such as protective treatment of concrete surfaces or the use of corrosion resistant materials shall be included in site design; and</i></li> <li>• <i>Expansive soil – The use of post-tensioned concrete mat foundations or similarly stiffened foundations systems which are designed to resist the deflections associated with soil expansion.</i></li> </ul> <p><i>The Design Level Geotechnical Report shall identify the portions of the project site that cannot be graded and developed to meet CBC standards. Development shall not be allowed within those areas. The report shall be completed by a consultant selected and hired by the City of Pittsburgh. The developer shall be responsible for the full cost of the report. Prior to the issuance of any Grading Permit and approval of a Tentative Map, the City Engineer shall review the Design Level Geotechnical Report and determine that the proposed grading conforms to the CBC.</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.6-4 Implementation of the project could result in risks to people and structures associated with landslides.</b>	S	<p><i>Prior to issuance of building permits, the City shall site-inspect to ensure that construction is in accordance with the approved plans and incorporates all required design measures and engineering techniques, and that such measures perform as identified in the design-level geotechnical engineering report to address compressible soil, undocumented fill, corrosive soil, and expansive soil impacts and conforms to the CBC.</i></p> <p><i>The design-level geotechnical engineering report required by Mitigation Measure 4.6-1 shall address the existing landslides and the potential for landslides to occur throughout the project site. In addition, the design-level geotechnical engineering report shall include and address the following:</i></p> <ol style="list-style-type: none"> <li><i>1. Characterization and remediation of existing large-scale landslides;</i></li> <li><i>2. Description of the proximity of the project site and development areas to existing graded parcels;</i></li> <li><i>3. Settlement and deflection of deep fills; and</i></li> <li><i>4. Potential erosion of high cut slopes and fill slopes.</i></li> </ol> <p><i>Furthermore, the design-level geotechnical engineering report shall include design measures to reduce the risks</i></p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>from landslides, which may include, but are not limited to, the following techniques:</i></p> <ul style="list-style-type: none"> <li>• <i>Graded cut and fill slopes over 15 feet in vertical height should be no steeper than 3H:1V (Horizontal:Vertical). Cut and fill slopes up to 15 feet in vertical height may be constructed at slope gradients no steeper than 2H:1V;</i></li> <li>• <i>Graded cut and fill slopes exceeding 30 feet in height may be provided with intermediate benches on the slope surface spaced no greater than 30 feet vertically. Benches should be at least at 8 feet wide with a concrete-lined J or V-ditch to intercept surface runoff;</i></li> <li>• <i>Mass grading should begin with construction of toe keys and subdrains. All fills should be adequately keyed into firm natural materials unaffected by shrinkage cracks. Recommended keyway sizes and locations will be determined by the Geotechnical Engineer and will be approximately shown in the final remedial grading plans. Additionally, where fills are placed along slopes, subexcavated benches should be planned above toe keys as filling progresses. The Geotechnical Engineer will determine the actual size of the keyways during plan review and supplemental recommendations</i></li> </ul>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>provided during grading. Toe keyways should also be used along where debris benches are recommended in design-level geotechnical studies; and</i></p> <ul style="list-style-type: none"> <li><i>A Geotechnical Engineer shall prepare all grading and slope stability plans.</i></li> </ul> <p><i>The Design Level Geotechnical Report shall identify the portions of the project site that cannot be graded and developed to meet CBC standards. Development shall not be allowed within those areas. The report shall be completed by a consultant selected and hired by the City of Pittsburgh. The developer shall be responsible for the full cost of the report. Prior to the issuance of any Grading Permit and approval of a Tentative Map, the City Engineer shall review the Design Level Geotechnical Report and determine that the proposed grading conforms to the CBC.</i></p> <p><i>Prior to issuance of building permits, the City shall site-inspect to ensure that construction is in accordance with the approved plans and incorporates all required design measures and engineering techniques, and that such measures perform as identified in the design-level geotechnical engineering report to address landsliding and slope stability impacts and compliance with the CBC.</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

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		4.6-4(b) <i>The project applicant shall establish a GHAD encompassing the area within a 1,000-foot radius of the area affected by the 2007 landslide south of Vista Del Mar. Establishment of the GHAD shall ensure that potential future development or grading activity conducted within the vicinity includes proper mitigation techniques to ensure long-term stability of the area and reduce potential impacts related to slope instability. Specific grading techniques to ensure slope stability may include, but are not limited to the techniques outlined in Mitigation Measure 4.6-4(a) of this EIR.</i>	
4.6-5 Cumulative increase in the potential for geological related impacts and hazards.	S	4.6-5 Implement Mitigation Measures 4.6-1(a), and 4.6-3, 4.6-4(a), and 4.6-4(b).	LS
<b>4.7 Hazards and Hazardous Materials</b>			
4.7-1 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.	S	Asbestos-Containing Materials  4.7-1(a) <i>Prior to issuance of a demolition permit for any on-site structures, the project applicant shall provide a detailed assessment to the City Planning Department pertaining to the potential presence of asbestos-containing materials in existing on-site structures to be demolished. If asbestos-containing materials are not detected, further mitigation is not required. If asbestos-containing materials are detected, the applicant shall prepare and implement an asbestos abatement plan consistent with federal, State,</i>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>and local standards, subject to review and approval by the Bay Area Air Quality Management District and the City Planning Department.</i></p> <p><i>Lead-Based Paint</i></p> <p><i>4.7-1(b) Prior to issuance of a demolition permit for any on-site structures, the project applicant shall provide a detailed assessment to the City Planning Department pertaining to the potential presence of lead-based paint in existing-on-site structures to be demolished. If lead-based paint is not detected, further mitigation is not required. If lead-based paint is found, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with federal, State, and local regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint in accordance with federal, State, and local regulations subject to review and approval by the Bay Area Air Quality Management District and the City Planning Department.</i></p>	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<i>Above-Ground Storage Tanks</i>	
		<p>4.7-1(c) Prior to issuance of any grading permits, the applicant shall hire a qualified geotechnical engineer to remove and abandon the two on-site ASTs in accordance with federal, State, and local guidelines, pursuant to review and approval by the City Engineer and the Contra Costa Health Services Department. In addition, an evaluation of the area surrounding the storage tanks for unusual odors, visible discoloration, or other indications of soil contamination shall be conducted. If soils suspected of being contaminated are encountered, they shall be stockpiled on plastic sheeting. Stockpiled soils shall be sampled in accordance with the San Francisco Bay Regional Water Quality Control Board guidelines, and the findings forwarded to the San Francisco Bay Regional Water Quality Control Board for review. Further remediation, if necessary, and disposal of the soils shall be conducted in accordance with State and federal guidelines.</p>	
		<i>On-Site Water Supply Wells</i>	
		<p>4.7-1(d) Prior to initiation of any ground disturbing activities within 50 feet of a well on the project site, the applicant shall hire a licensed well contractor to obtain a well abandonment permit from the Contra Costa Health</p>	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>Services Department, and properly abandon the on-site wells in accordance with regional and local standards, pursuant to review and approval by the City Engineer and the Contra Costa Health Services Department.</i></p> <p><i>On-Site Septic Systems</i></p> <p><i>4.7-1(e) Prior to initiation of any ground disturbing activities within 50 feet of a septic tank on the project site, the applicant shall hire a qualified geotechnical engineer to obtain a septic system abandonment permit from the Contra Costa Health Services Department, and properly abandon the on-site septic systems, pursuant to review and approval by the City Engineer and the Contra Costa Health Services Department.</i></p> <p><i>4.7-2 Implement Mitigation Measures 4.7-1(a-e).</i></p>	LS
<b>4.7-2</b> Emit hazardous emissions or handle hazardous materials within one-quarter mile of a school.	S	<i>None required.</i>	N/A
<b>4.7-3</b> Impair implementation of or physically interfere with an adopted emergency response or evacuation plan.	LS		LS
<b>4.7-4</b> Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where	S	<i>Development of the proposed project shall include the installation of fire suppression systems (e.g., fire hydrants, fire sprinklers, smoke detectors) and be designed in accordance with the latest requirements of the</i>	LS

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wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.		<p><i>California Fire Code. All project development plans shall be subject to review by the Contra Costa County Fire Protection District as part of the future discretionary development applications and Building Permit review processes to ensure the provisions of the California Fire Code are included in the plans. Fire-resistant roof construction, fire-resistant attachments, vegetative buffer zones, and other fire-safe measures may be required as part of their review.</i></p> <p><i>4.7-4(b) The Master Plan shall include the following language under Section 2(A)(4):</i></p> <p><i>e) Defensible space in accordance with the guidelines of the California Fire Protection Standards shall be maintained in all portions of the Master Plan Area adjacent to open space areas. If the required defensible space distances cannot be attained, structures within the defensible space shall be constructed with fire-resistant materials and practices.</i></p>	
<b>4.7-5</b> Cumulative increase in the number of people who could be exposed to potential hazards associated with potentially contaminated soil and groundwater and an increase	LS	<i>None required.</i>	N/A

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
in the transport, storage, and use of hazardous materials from development of the proposed project in combination with other reasonable foreseeable projects in the region.			
<b>4.8 Hydrology and Water Quality</b>			
<b>4.8-1</b> Substantially alter the existing drainage pattern of the site or area, or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.	S	<p><i>4.8-1 As part of any development application, the applicant shall submit a site-specific drainage study which shall identify site design measures, source controls, and stormwater treatment and flow control measures showing that the project runoff will not exceed the capacity of existing and planned stormwater drainage systems and will not result in flooding on- or off-site. The study shall include, but not be limited to, the following:</i></p> <ul style="list-style-type: none"> <li>• <i>Calculations of pre-development runoff conditions and post-development runoff conditions, using appropriate engineering methods;</i></li> <li>• <i>An assessment of downstream drainage and City storm-water facilities impacted by potential</i></li> </ul>	LS

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>project runoff in accordance with General Plan Policy 9-P-21, which requires the following:</i></p> <ul style="list-style-type: none"> <li>○ <i>Calculate potential sedimentation and runoff based on the maximum storm event and determine necessary capacity of the downstream drainage system. If the project presents potential downstream sedimentation, runoff, or flooding issues, the drainage study shall require additional mitigation including, but not limited to, limitations on grading, construction only in dry seasons, and funding for downstream improvements, maintenance, and repairs;</i></li> <li>• <i>Assessment of existing drainage facilities within the project area and an inventory of necessary upgrades, replacements, redesigns, and/or rehabilitation in order to accommodate the proposed project;</i></li> <li>• <i>Recommendation of appropriate design measures required to meet C.3 requirements, and relevant requirements from Chapter 13.28 of the City's Municipal Code; and</i></li> <li>• <i>A proposed maintenance program for the on-site drainage system.</i></li> </ul>	

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.8-2</b> Violate any water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality through erosion during construction.	S	<p>4.8-2 Prior to issuance of grading permits, the contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The developer shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of Best Management Practices (BMPs). Construction BMPs included in the SWPPP may include, but are not limited to, the following measures:</p> <ul style="list-style-type: none"> <li>• Silt fencing;</li> <li>• Fiber Rolls;</li> <li>• Vehicle washout areas and trackout control;</li> <li>• Desilting Basins;</li> <li>• Gravel Bag Berms; or</li> <li>• Storm Drain inlet protection.</li> </ul> <p>The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements</p>	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<i>to reduce pollutants in stormwater discharges to the maximum extent practicable.</i>	
<b>4.8-3</b> Violate any water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality during operations.	S	<b>4.8-3</b> Implement Mitigation Measure 4.8-1.	LS
<b>4.8-4</b> Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).	LS	<i>None required.</i>	N/A
<b>4.8-5</b> Cumulative impacts to hydrology and water quality within the City of Pittsburg.	LS	<i>None required.</i>	N/A

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
<b>4.9 Land Use and Planning</b>			
<b>4.9-1</b> Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect.	S	<i>4.9-1 Prior to approval of the first tentative map for the project site, the Land Use Map for the proposed project shall be revised to remove development from all areas with elevations in excess of 900 feet. All areas within the project site with elevations in excess of 900 feet shall be designated as Open Space, and, with the exception of areas designated for development of a future water tank, future development shall not be allowed to occur in any areas of the project site with elevations exceeding 900 feet. The revised Land Use Map shall be subject to review and approval by the City of Pittsburgh Community Development Department.</i>	LS
<b>4.9-2</b> Result in cumulative conflicts with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect.	LS	<i>None required.</i>	N/A
<b>4.10 Noise</b>			
<b>4.10-1</b> Cause a substantial permanent increase in ambient noise levels in the project vicinity above	LS	<i>None required.</i>	N/A

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
existing levels without the project.			
<b>4.10-2</b> Expose persons to or generate noise levels in excess of standards established in the General Plan.	S	4.10-2 As part of any development application, the applicant shall submit a site-specific noise study with an analysis of traffic and any other significant noise generators and recommended measures to reduce the exterior and interior noise levels at all future residences or other sensitive receptors to below 65 dB Ldn and 45 dB Ldn, respectively. Potential measures could include, but would not be limited to, inclusion of noise buffers in site design, restriction of two-story homes, or incorporation of noise-insulating building materials such as windows with a sound transmission class rating of 35-38 and resilient channels for walls.	LS
<b>4.10-3</b> Construction of the project could cause a substantial temporary increase in ambient noise levels.	S	4.10-3(a) In compliance with Section 18.82.040 of the City's Municipal Code, construction hours shall be restricted to 8:00 AM to 5:00 PM. In addition, construction shall not occur on City-observed holidays. Such restrictions shall be noted on grading plans and other construction plans for the review and approval of the City of Pittsburgh Community Development Department.  4.10-3(b) Prior to issuance of any grading permit, the project contractor shall ensure that all equipment to be used in the construction of the project (i.e., owned, leased, and subcontractor vehicles) shall be fitted with factory equipped mufflers and in good working order, subject to	LS

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>review and approval by the City Engineer. The aforementioned requirements shall be noted on the grading plans.</i></p> <p><i>4.10-3(c) If the project is constructed in phases, construction staging areas and construction activities shall be located as far from prior phases as feasible, as determined by the City Engineer. Such restrictions shall be noted on grading plans and other construction plans for the review and approval of the City of Pittsburgh Community Development Department.</i></p>	
<b>4.10-4</b> Expose persons to, or generate, excessive groundborne vibration or groundborne noise levels.	LS	<i>None required.</i>	N/A
<b>4.10-5</b> Cumulative impacts on traffic noise-sensitive receptors.	LS	<i>None required.</i>	N/A
<b>4.11 Public Services and Utilities</b>			
<b>4.11-1</b> Result in insufficient water supply available to serve the project from existing entitlements and resources, or require the construction of new water delivery, collection, or treatment facilities or	S	<i>4.11-1(a) The developer shall provide all necessary documentation required by the CCWD for its application for inclusion of the project site in the CVP. No grading or building permits shall be issued until the project site has been annexed into the CCWD service area and the developer provides the City with a "Will Serve" letter from the</i>	LS

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
expansion of existing facilities, the construction of which could cause significant environmental effects.		<p><i>CCWD verifying that the project site has been included in the CVP.</i></p> <p><i>4.11-1(b) Prior to final subdivision map approval, per SB 221 (Government Code Section 66473.7), the water supplier (the City of Pittsburgh) shall provide a written verification that the water supply for the proposed project is sufficient, to the satisfaction of the CCWD.</i></p>	
<b>4.11-2</b> Exceed wastewater treatment requirements of the applicable RWQCB, require the construction of new wastewater delivery, collection, or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, or require sewer service that may not be available by the area's wastewater treatment provider.	S	<p><i>4.11-2(a) The developer shall provide all necessary documentation required by the DDS for its application for inclusion of the project site in the DDS's service area. No grading or building permits shall be issued until the project site has been annexed into the DDS service area and the developer provides the City with a "Will Serve" letter from the DDS.</i></p> <p><i>4.11-2(b) In conjunction with the first development application within the Draft Master Plan area, the developer shall provide to the City confirmation from the DDS that adequate trunk sewer system capacity exists to serve the proposed project.</i></p>	LS
<b>4.11-3</b> Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs or	LS	<i>None required.</i>	N/A

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fail to comply with federal, State, and local statutes and regulations related to solid waste.			
<b>4.11-4</b> Result in substantial adverse physical impacts associated with the provisions of new or physically altered fire protection facilities, and/or the need for new or physically altered fire protection 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 facilities.	S	4.11-4 Prior to recordation of a Final Map for any portion of the proposed project site, the project applicant shall provide proof, to the City of Pittsburg Community Development Department, that the proposed project site has been annexed into CFD 2017-1.	SU
<b>4.11-5</b> Result in substantial adverse physical impacts associated with the provisions of new or physically altered police protection facilities, and/or the need for new or physically altered police protection facilities, the construction of	LS	None required.	N/A

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection facilities.			
<b>4.11-6</b> Result in substantial adverse physical impacts associated with the provisions of new or physically altered school facilities, and/or the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for school facilities.	LS	<i>None required.</i>	N/A
<b>4.11-7</b> Result in substantial adverse physical impacts associated with the provisions of new or physically altered park facilities, and/or the need for new or physically altered park	LS	<i>None required.</i>	N/A

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios or other performance objectives for park facilities.			
<b>4.11-8</b> Result in substantial adverse physical impacts associated with the provisions of new or physically altered library facilities, and/or the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for library facilities.	LS	<i>None required.</i>	N/A
<b>4.11-9</b> Result in substantial adverse physical impacts associated with the provisions of new or physically altered electricity and natural gas facilities, and/or the need for new or	LS	<i>None required.</i>	N/A

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
physically altered electricity and natural gas facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for electricity and natural gas facilities.			
<b>4.11-10</b> Development of the proposed project, in combination with future buildout in the City of Pittsburg, would increase demand for additional public services and utilities.	S	<i>None feasible.</i>	SU
<b>4.12 Transportation, Traffic, and Circulation</b>			
<b>4.12-1</b> Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system during construction.	LS	<i>None required.</i>	N/A
<b>4.12-2</b> Conflict with an applicable plan, ordinance or policy establishing measures of	S	<i>4.12-2(a) As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Capital Improvement</i>	SU

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Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
effectiveness for the performance of the study intersections under Existing Plus Project Conditions.		<p><i>Program for the 2015 Update to the Contra Costa CMP (Project 1028). Such improvements would include, but would not necessarily be limited to, the following:</i></p> <ul style="list-style-type: none"> <li><i>The EB SR-4 Ramps/Willow Pass Road intersection shall be signalized, a southbound left turn lane shall be added, the shared southbound through-left lane shall be restriped to be a through lane, and the eastbound approach shall be restriped to be an eastbound left turn lane and a shared eastbound through-right lane; and</i></li> <li><i>The WB SR-4 Ramps/Willow Pass Road shall be signalized, a northbound left turn lane shall be added, the northbound shared through-left turn lane shall be restriped to be a through lane, and the westbound approach shall be restriped to be two westbound left turn lanes and a shared westbound through-right lane.</i></li> </ul> <p><i>Proof of payment shall be submitted to the City of Pittsburg Community Development Department.</i></p>	
	4.12-2(b)	<p><i>As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP (Project ST-7) to the City of Pittsburg Community Development Department. Such improvements would include, but</i></p>	

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		<p>would not necessarily be limited to, optimization of cycle lengths/intersection timing splits at the following intersections:</p> <ul style="list-style-type: none"> <li>• W. Leland Road and San Marco Boulevard (Intersection #6);</li> <li>• Willow Pass Road and Loftus Road (Intersection #11);</li> <li>• Leland Road and Bailey Road (Intersection #18);</li> <li>• Leland Road and Jacqueline Drive (Intersection #24);</li> <li>• Leland Road and Crestview Drive (Intersection #29).</li> </ul> <p>Proof of payment shall be submitted to the City of Pittsburg Community Development Department.</p> <p>4.12-2(c) As part of future development applications, the project applicant shall show that the westbound left turn and eastbound left turn movements at W. Leland Road and Chestnut Drive (Intersection #23) would be converted from protected left turn phasing to permitted left turn phasing. Implementation of the required improvements shall be accomplished by way of one of the following methods:</p>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>If the required improvements are not included in the Pittsburgh CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburgh CIP, the project applicant may be subject to fee credits.</i></p> <p style="text-align: center;"><i>Or</i></p> <p><i>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburgh CIP to the City of Pittsburgh Community Development Department.</i></p> <p><i>4.12-2(d) As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Concord CIP (Project 2049). Such improvements would include, but would not necessarily be limited to, the following:</i></p> <ul style="list-style-type: none"> <li><i>• The southbound approach at the Concord Boulevard and Bailey Road intersection shall be widened and restriped to include a southbound left turn lane, a southbound through lane, and a</i></li> </ul>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>southbound right turn lane. In addition, the northbound approach shall be widened to be a northbound left turn lane and a shared through-right turn lane; and</p> <ul style="list-style-type: none"> <li>The Bailey Road and Myrtle Drive intersection shall be signalized, a southbound left turn lane shall be added, and the shared southbound through-left lane shall be restriped to be a through lane.</li> </ul>	
	4.12-2(e)	<p>As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Concord CIP (Project 2144). Such improvements would include, but would not necessarily be limited to, the following:</p> <ul style="list-style-type: none"> <li>The Clayton Road and Treat Boulevard intersection shall be widened for the northbound approach to be two northbound left turn lanes, two northbound through lanes, and a northbound right turn lane. In addition, the northbound and southbound phases shall be changed from split phasing to protected phasing and the intersection timing splits shall be optimized.</li> </ul>	
	4.12-2(f)	<p>Prior to occupancy of the proposed buildings, the project applicant shall optimize the intersection timing splits at</p>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<i>the following City of Concord intersections: Cowell Road and Treat Boulevard (Intersection #41); and Treat Boulevard and Oak Grove Road (Intersection #44).</i>	
<b>4.12-3</b> Conflict with an applicable congestion management program, including, but not limited to, LOS standards, and travel demand measures, or other standards established by a county congestion management agency for designated roadways.	LS	<i>None required.</i>	N/A
<b>4.12-4</b> Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	S	<p><i>4.12-4(a) As part of any future development applications, the project applicant shall demonstrate that the project would include bus turnouts, including shelters and bicycle racks, where appropriate. The turnouts, shelters, and bicycle racks shall be constructed with the roadway improvements consistent with General Plan Policy 7-P-29. The final location and design of the turnouts, shelters, and bicycle racks shall be submitted to the City Engineer for review and approval prior to approval of a future tentative subdivision map.</i></p> <p><i>4.12-4(b) As part of any future development applications, the project applicant shall demonstrate that the project would provide linkages to nearby pedestrian and bicycle facilities consistent with the Design Review Guidelines</i></p>	LS

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<i>provided in the Draft Master Plan. The final location and design of the linkage shall be submitted to the City Engineer for review and approval prior to approval of a future tentative subdivision map.</i>	
<b>4.12-5</b> Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition at a freeway segment under Existing Plus Project Conditions.	LS	<i>None required.</i>	N/A
<b>4.12-6</b> Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition at a freeway ramp under Existing Plus Project Conditions.	LS	<i>None required.</i>	N/A
<b>4.12-7</b> Result in an internal circulation system design that does not meet City standards, substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), or	S	<i>As part of any future development applications, the project applicant shall submit a circulation plan to the City identifying how many units would be constructed before implementation of the proposed secondary access point at Bailey Road. The circulation plan shall comply with all applicable Contra Costa County Fire District standards related to emergency access.</i>	LS

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
result in inadequate emergency access.			
<b>4.12-8</b> Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the study roadway intersections under Long-Term (2035) Plus Project Conditions.	S	<p>4.12-8(a) Prior to occupancy of the proposed buildings, the project applicant shall complete the following improvements at intersections within the City of Concord.</p> <ul style="list-style-type: none"> <li>• The northbound approach at the Avila Road and Willow Pass Road intersection shall be restriped to include one through lane and one right turn lane; and</li> <li>• The intersection timing splits at the following intersections shall be optimized: Cowell Road and Treat Boulevard (Intersection #41); Treat Boulevard and Oak Grove Road (Intersection #44); and Concord Boulevard/Port Chicago Highway (Intersection #48).</li> </ul> <p>4.12-8(b) As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Capital Improvement Program for the 2015 Update to the Contra Costa CMP (Project 1832). Such improvements would include, but would not necessarily be limited to, the following:</p> <ul style="list-style-type: none"> <li>• The southbound right turn lane at the WB SR-4 Ramps and Willow Pass Road intersection shall be converted to a free right turn lane.</li> </ul>	SU

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>Or</i></p> <p><i>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.</i></p> <p><i>4.12-8(c) As part of future development applications, the project improvement plans shall show that an eastbound left turn lane would be added to the Rio Verde Circle and San Marco Boulevard intersection. Implementation of the required improvements shall be accomplished by way of one of the following methods:</i></p> <p><i>If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.</i></p> <p><i>Or</i></p>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburgh CIP to the City of Pittsburgh Community Development Department.</i></p> <p><i>4.12-8(d) As part of future development applications, the project improvement plans shall show that the eastbound approach of the EB SR 4 ramps and San Marco Boulevard intersection would be restriped to be an eastbound left turn lane, a shared left-through-right lane, and an eastbound right turn lane. Implementation of the required improvements shall be accomplished by way of one of the following methods:</i></p> <p><i>If the required improvements are not included in the Pittsburgh CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburgh CIP, the project applicant may be subject to fee credits.</i></p> <p style="text-align: center;"><i>Or</i></p>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.</i></p> <p><i>4.12-8(e) As part of future development applications, the project improvement plans shall show that one of the northbound through lanes at the WB SR-4 Ramps and San Marco Boulevard intersection would be converted to a northbound left turn lane. Implementation of the required improvements shall be accomplished by way of one of the following methods:</i></p> <p><i>If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.</i></p> <p style="text-align: center;"><i>Or</i></p> <p><i>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the</i></p>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable



**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>project applicant shall pay the fair-share fee for the improvements planned in the Pittsburgh CIP to the City of Pittsburgh Community Development Department.</p> <p>4.12-8(f) As part of future development applications, the project improvement plans shall show that the northbound approach at the W. Leland Road and Southwood Drive Intersection would be restriped to be a northbound left turn lane and a northbound right turn lane. Implementation of the required improvements shall be accomplished by way of one of the following methods:</p> <p>If the required improvements are not included in the Pittsburgh CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburgh CIP, the project applicant may be subject to fee credits.</p> <p>Or</p> <p>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the</p>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.</p> <p>4.12-8(g) As part of future development applications, the project improvement plans shall show that a northbound right turn lane at the W. Leland Road and Bailey Road intersection would be striped and the shared northbound through-right lane would be restriped to be through lane. In addition, the project improvement plans shall show that a southbound right turn overlap phase and a westbound right turn overlap phase would be implemented. Implementation of the required improvements shall be accomplished by way of one of the following methods:</p> <p>If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.</p> <p style="text-align: center;">Or</p>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<i>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.</i>	
	4.12-8(h)	<i>Implement Mitigation Measure 4.12-2(c)</i>	
	4.12-8(i)	<i>As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP (Project S-16) to the City of Pittsburg Community Development Department. Such improvements would include conversion of the westbound left turn and eastbound left turn movements from protected left turn phasing to permitted left turn phasing at the W. Leland Road and Jacqueline Drive intersection. Proof of payment shall be submitted to the City of Pittsburg Community Development Department.</i>	
	4.12-8(j)	<i>As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP (Project S-16) to the City of Pittsburg Community Development Department. Such improvements would include optimization of timing splits at the following intersections:</i>	

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> <li>• W. Leland Road and Range Road;</li> <li>• W. Leland Road and Dover Way;</li> <li>• W. Leland Road and Burton Avenue.</li> </ul> <p><i>Proof of payment shall be submitted to the City of Pittsburg Community Development Department.</i></p> <p><i>As part of future development applications, the project improvement plans shall show that the eastbound left turn phase and westbound left turn phase at the W. Leland and Crestview Drive intersection would be changed from protected to permitting phasing. Implementation of the required improvements shall be accomplished by way of one of the following methods:</i></p> <p><i>If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.</i></p> <p style="text-align: center;"><i>Or</i></p>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.</i></p> <p><i>4.12-8(l) As part of future development applications, the project improvement plans shall show that the southbound approach at the Willow Pass Road and Olivera Road intersection would be restriped to be two southbound left turn lanes, a southbound through lane, and a shared southbound through-right turn lane. Implementation of the required improvements shall be accomplished by way of one of the following methods:</i></p> <p><i>If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.</i></p> <p style="text-align: center;"><i>Or</i></p>	

NI = No Impact; N/A = Not Applicable; LS = Less-than-Significant; S = Significant; SU = Significant and Unavoidable

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburgh CIP to the City of Pittsburgh Community Development Department.</i></p> <p><i>4.12-8(m) Implement Mitigation Measure 4.12-2(d).</i></p> <p><i>4.12-8(n) Implement Mitigation Measure 4.12-2(e)</i></p> <p><i>4.12-8(o) As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburgh CIP (Project ST-27) to the City of Pittsburgh Community Development Department. Such improvements would include widening of Bailey Road from two lanes two four lanes. Proof of payment shall be submitted to the City of Pittsburgh Community Development Department.</i></p>	
<b>4.12-9 Impacts related to Central and East County Routes of Regional Significance under Long-Term (2035) Plus Project Conditions.</b>	LS	<i>None required.</i>	N/A
<b>4.12-10 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or</b>	S	<i>Implement Mitigation Measures 4.12-6(a) and 4.12-6(b).</i>	LS

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**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Level of Significance prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
otherwise decrease the performance or safety of such facilities under Long-Term (2035) Plus Project Conditions.			
4.12-11 Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition at a freeway segment under Long-Term (2035) Plus Project Conditions.	LS	<i>None required.</i>	N/A
4.12-12 Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition at a freeway ramp under Long-Term (2035) Plus Project Conditions.	LS	<i>None required.</i>	N/A

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### 3. PROJECT DESCRIPTION

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**3**

**PROJECT DESCRIPTION**

**3.1 INTRODUCTION**

Pursuant to CEQA Guidelines Section 15124, an EIR is required to include a project description that includes the following information: project objectives, project location, a general description of the project’s technical, economic and environmental characteristics, and a statement briefly describing the intended uses of the EIR including a list of agencies expected to use the EIR, a list of permits and other approvals required to implement the project, and a list of related environmental review required by federal, State or local laws, regulations or policies. According to Section 15124 of CEQA Guidelines, the project description is not required to supply, “extensive detail beyond that needed for evaluation and review of the environmental impacts.”

Section 15125 of the CEQA Guidelines requires an EIR to include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation is published, from both a local and regional perspective. Knowledge of the existing environmental setting is critical to the assessment of environmental impacts. Pursuant to CEQA Guidelines Section 15125, the description of the environmental setting shall not be longer than necessary to understand the potential significant effects of the project and its alternatives.

The Project Description chapter of this EIR provides a comprehensive description of the Faria/Southwest Hills Annexation Project (proposed project) in accordance with the CEQA Guidelines. Please note that this chapter provides an overall general description of the existing environmental conditions; however, detailed discussions of the existing setting in compliance with Section 15125 of the CEQA Guidelines, as it relates to each given potential impact area, is included in each technical chapter of this EIR.

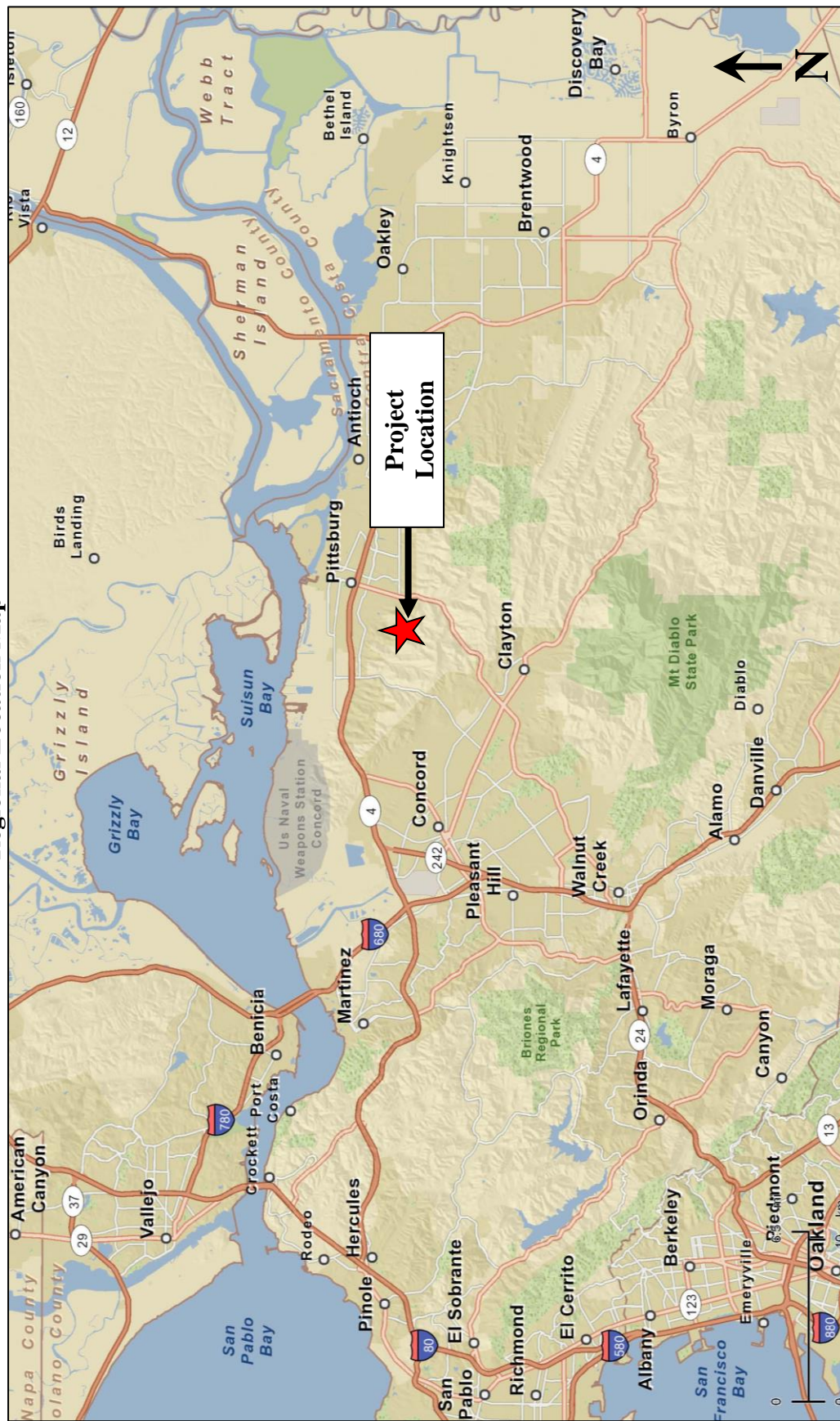
**3.2 PROJECT SETTING AND SURROUNDING USES**

The City of Pittsburg is located along the Sacramento River in eastern Contra Costa County. The City is bordered by the Cities of Concord and Antioch to the west and east, respectively (see Figure 3-1, Regional Location Map). While the northern portion of the City is relatively flat, the southern portion of the City is marked by hilly landscapes and slightly higher elevations. The City’s Planning Area includes 41.1 square miles of land, within which lie both the City’s Sphere of Influence (SOI) and the City limits.

Several geographic features distinguish the Planning Area, including the Sacramento River to the north of the City, as well as the steep, hilly terrain that defines the southern boundary of the City. The Black Diamond Mines Regional Preserve abuts the southeastern limits of the Planning Area.



**Figure 3-1  
 Regional Location Map**





The project site consists of approximately 606 acres of grazing land located immediately southwest of the municipal boundary of the City of Pittsburg and within the Southwest Hills planning subarea of the Pittsburg General Plan. The project site is identified as Assessor's Parcel Numbers (APNs) 097-180-006, 097-200-002, 097-230-006, 097-240-002, and a portion of 097-190-002 (see 3-2, Project Location Map). With the exception of two isolated single-family residences located near the terminus of San Marco Boulevard, the site consists primarily of open expanses of undeveloped hilly terrain covered with grasslands, with elevations ranging from approximately 435 feet at the lowest point to approximately 1,000 feet at the highest. The project site does not include creeks, streams, or other watercourses. The site is currently rezoned for residential and open space uses under the City of Pittsburg Zoning Code (see Figure 3-3). The City's General Plan designates the site as Low Density Residential, Hillside Low Density Residential, and Open Space (see Figure 3-4). It should be noted that a non-participating property located outside of the City of Pittsburg City limits would additionally be included in the annexation component of the proposed project and would not be subject to the provisions of the Draft Faria/Southwest Hills Master Plan (Draft Master Plan).

The northeast portion of the site is bordered by existing residential development (San Marco subdivision and residential neighborhoods associated with the Vista Del Mar mixed-use project), while the remainder of the site is bordered primarily by undeveloped areas. The western boundary of the site is directly adjacent to the City of Concord city limits. Bailey Road is located to the east of the site, and the recently closed Concord Naval Weapons Station (CNWS) is located to the south. State Route (SR) 4 is situated to the north of the site. Immediately west of the project site (within the CNWS), is land designated for open space and habitat protection in the adopted CNWS Reuse Plan and certified Final EIR. The CNWS Reuse Plan precludes development within the City of Concord eastern hillsides.

### **3.3 BACKGROUND**

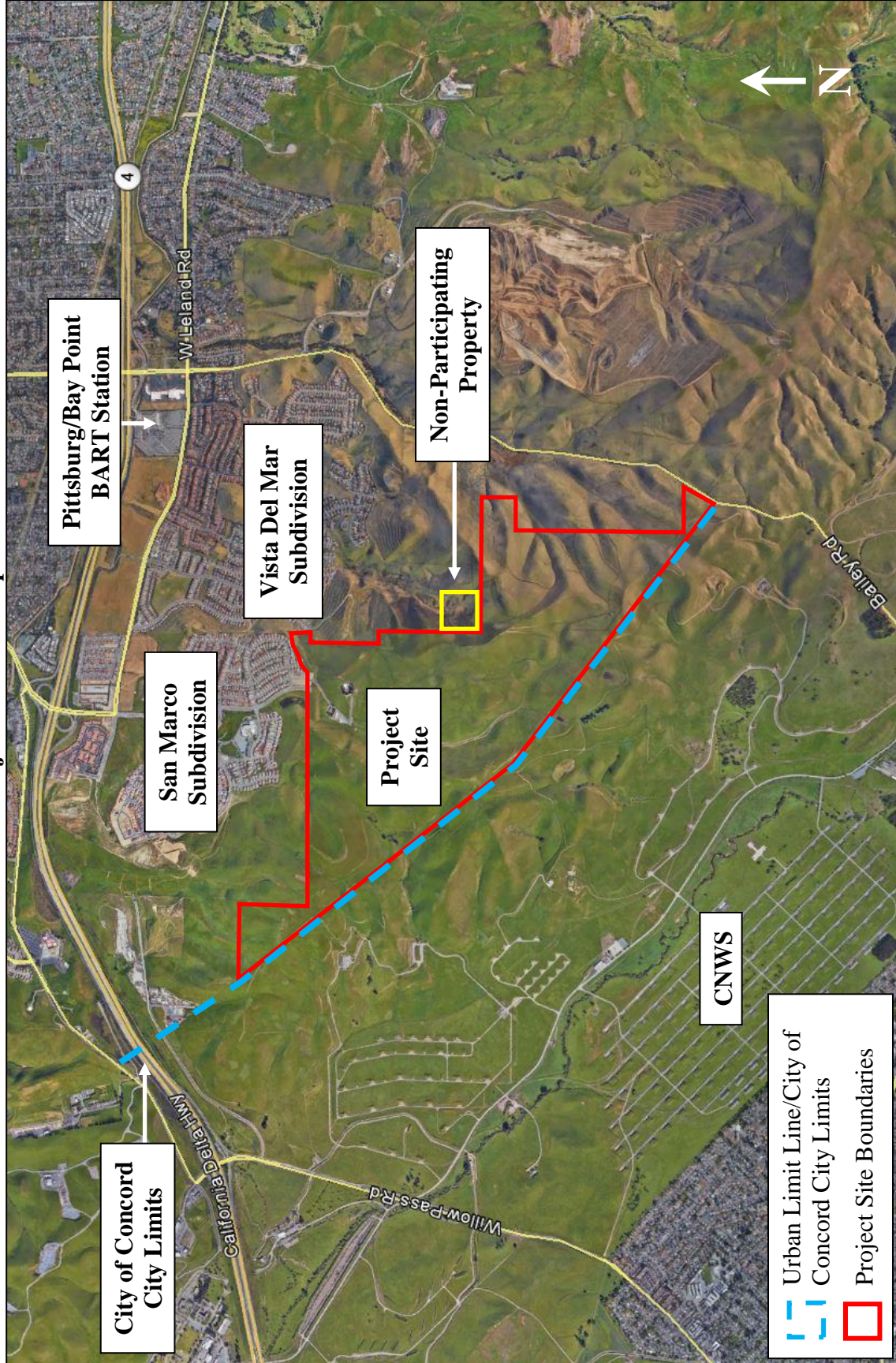
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In November 2005, the voters of the City of Pittsburg approved a ballot initiative entitled "Measure P" (City of Pittsburg Voter Approved Urban Limit Line and Rezoning Act), which established a new Urban Limit Line (ULL) for the City and rezoned certain properties. Included in these properties was the entire approximately 606-acre project site. On May 3, 2006, the City entered into a Memorandum of Understanding (MOU), which called for the City to conduct a General Plan Study in order to, among other things, establish guidelines for the development of a permanent greenbelt buffer along the inner edges of the voter approved ULL. The City Council, on January 16, 2007, adopted Resolution No. 07-10700, which included a new General Plan policy, 2-P-91, to ensure that a greenbelt buffer would be established on the project site as part of the development review process in accordance with the terms of Measure P and the MOU.





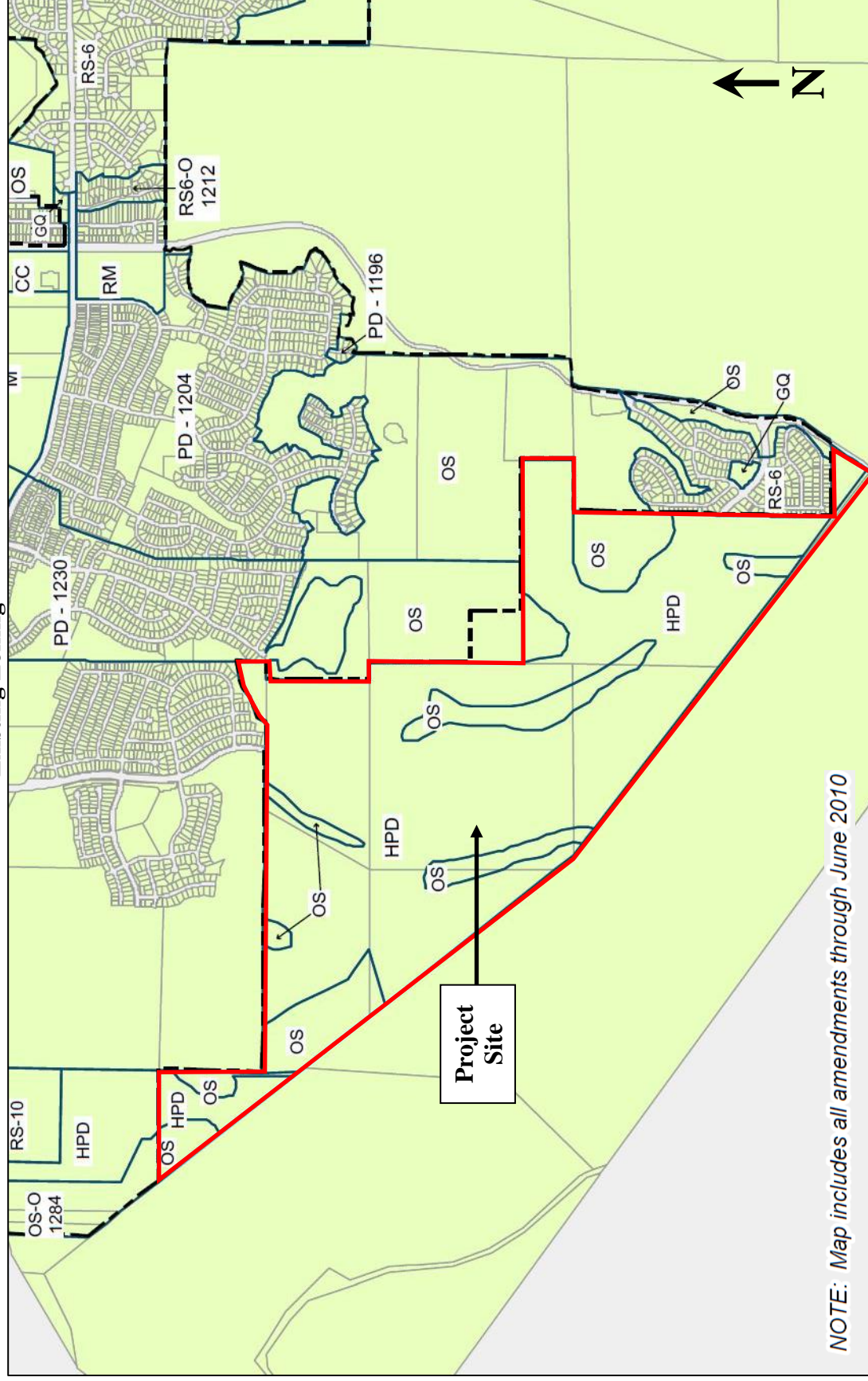
**Figure 3-2**  
**Project Location Map**





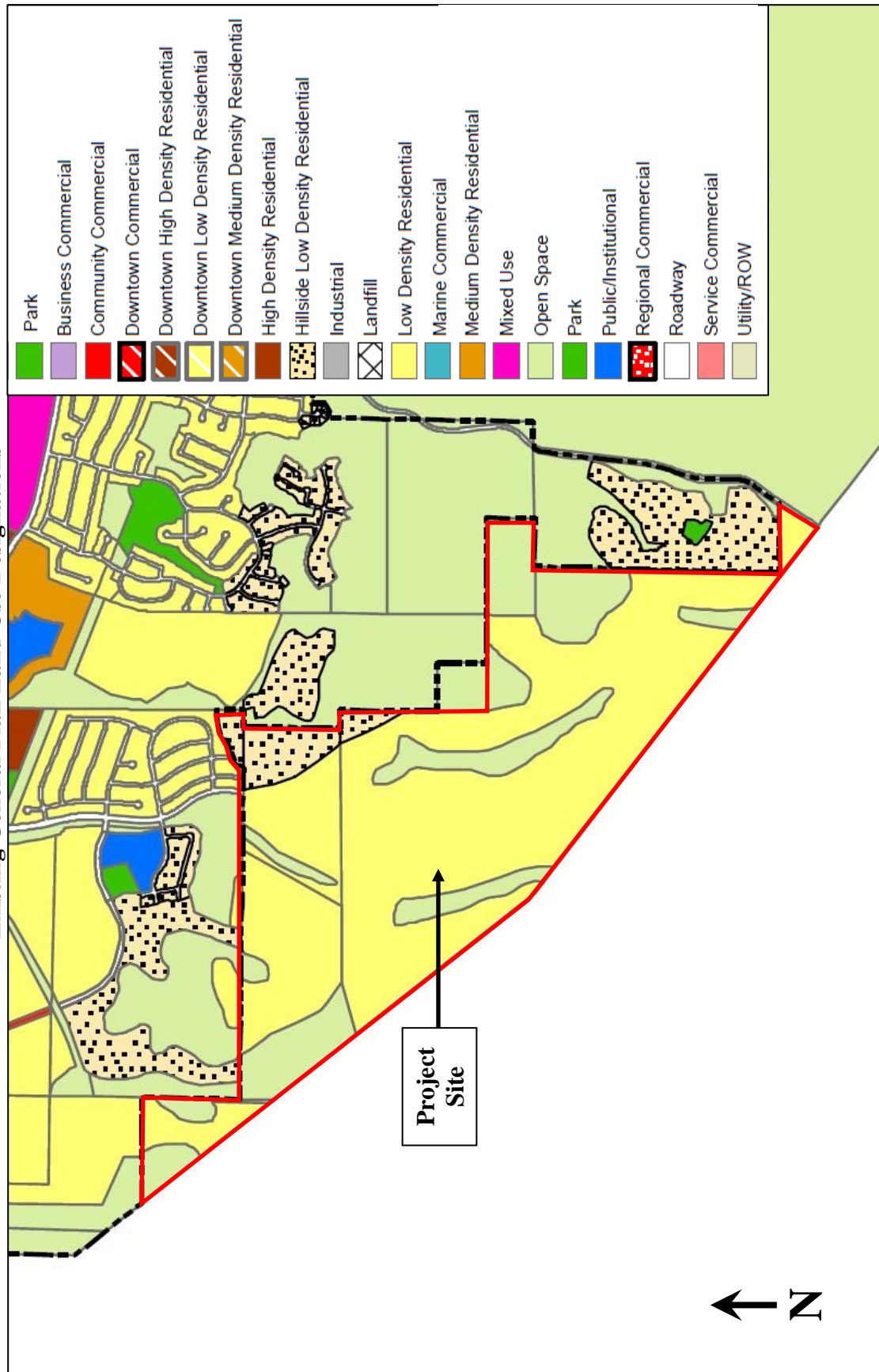


**Figure 3-3  
Existing Zoning**





**Figure 3-4**  
**Existing General Plan Land Use Designations**





On July 8, 2009, the Contra Costa Local Agency Formation Commission (LAFCo) approved an extension of the Pittsburg Sphere of Influence (SOI) to include the proposed project site. As part of that action, the SOI's for the sanitation district Delta Diablo (DDSD) and the Contra Costa Water District (CCWD) were also expanded to include the project site. On September 24, 2010, the property owner submitted an application requesting the City begin processing a request for annexation of the site to bring the property into the City of Pittsburg City Limits. In addition to the request for annexation, the application included requests for the project site to be annexed to the DDSD and CCWD service areas.

In 2010, an Initial Study was prepared for the proposed project and released for public review. Extensive comments were received by the City, requesting further analysis in an EIR. In response, the City determined that preparation of an EIR was necessary. The City of Pittsburg prepared a subsequent Initial Study to focus the EIR, which was released with the Notice of Preparation (NOP) on March 10, 2014 for a 30-day review. During the NOP review period, a public Scoping Meeting was held on April 3, 2014 to receive verbal comments on the scope of the EIR.

In August 2016, refinements were made to the proposed project that altered the scope of the EIR. Such refinements included the preparation of a Draft Master Plan and an associated Land Use Map. Consequently, the City determined that preparation of a new NOP was necessary in order to address changes made to the project, and how such changes would be reflected in the EIR. The second NOP was released on March 8, 2017 for a 30-day review. During the review period for the new NOP, a public Scoping Meeting was held on April 4, 2017.

### **3.4 PROJECT OBJECTIVES**

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Pursuant to CEQA Guidelines Section 15124, a clearly written statement of project objectives shall be included in order to develop a reasonable range of alternatives to evaluate in the EIR and to aid in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives shall include the underlying purpose of the project. The following project objectives have been developed by the applicant:

- Ensure orderly planning for the development of a large, undeveloped area in the City's SOI consistent with the General Plan;
- Maintain an environmental equilibrium consistent with existing vegetation, soils, geology, topography, and drainage patterns;
- Avoid premature or inappropriate development that would result in incompatible uses or create public service demands exceeding the capacity of existing or planned facilities; and
- Encourage sensitive site planning and design.

### **3.5 PROJECT COMPONENTS**

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The proposed project includes the Draft Master Plan. The purpose of the Draft Master Plan is to define the potential development of the approximately 606-acre project site as part of the request for annexation and rezoning of the site. The various components of the Draft Master Plan, as well

as related infrastructure and public services development and the required project entitlements, are discussed below.

It should be noted that annexation component of the proposed project would include a non-participating property that is outside of the City of Pittsburg City limits (see Figure 3-2). The non-participating property would not be subject to the provisions of the Draft Master Plan.

### **Draft Master Plan**

The Draft Master Plan includes a Master Plan Overlay District, a Land Use Map, development regulations, and Design Review Guidelines.

#### Master Plan Overlay District

The Draft Master Plan would include the creation of a Master Plan Overlay District for the entire approximately 606-acre project site. In accordance with Pittsburg Municipal Code (PMC), Chapter 18.72, the purpose of the Master Plan Overlay District is to accomplish the following:

- Ensure orderly planning for the development of a large, unsubdivided area of the City consistent with the City's General Plan;
- Maintain an environmental equilibrium consistent with existing vegetation, soils, geology, topography, and drainage patterns;
- Avoid premature or inappropriate development that would result in incompatible uses or create public service demands exceeding the capacity of existing or planned facilities; and
- Encourage sensitive site planning and design.

#### Land Use

Figure 3-5 provides a summary of the proposed General Plan land use designations for the project site. Consistent with the proposed General Plan land use designations, the Draft Master Plan includes a similar Land Use Map to govern development of the approximately 606-acre project site (see Figure 3-6). As shown in Figure 3-6, a total of approximately 339.1 acres are designated for residential development and approximately 267.2 acres of land are designated to be preserved as open space. In addition to the areas designated for residential development and open space, Figure 3-6 also presents areas within the open space areas that would be graded, but would not be further developed, and, thus, would remain as open space after implementation of the proposed project. Such areas are depicted in Figure 3-6 as gray shaded areas.

As shown in Figure 3-6, the 339.1 acres allocated for residential development would be divided into two areas. The first area would be located in the northern portion of the site, and would comprise 207.4 acres, while the second area would be located in the southern portion of the site and would comprise 131.7 acres. Development densities within the northern area would be restricted to 3-5 dwelling units per acre, while the southern area would be restricted to 1-3 dwelling units per acre; however, overall density of the entire 606-acre site would not exceed a maximum of 3 dwelling units per acre in accordance with General Plan policy 2-P-96.



**Figure 3-5**  
**Proposed General Plan Land Use Designations**

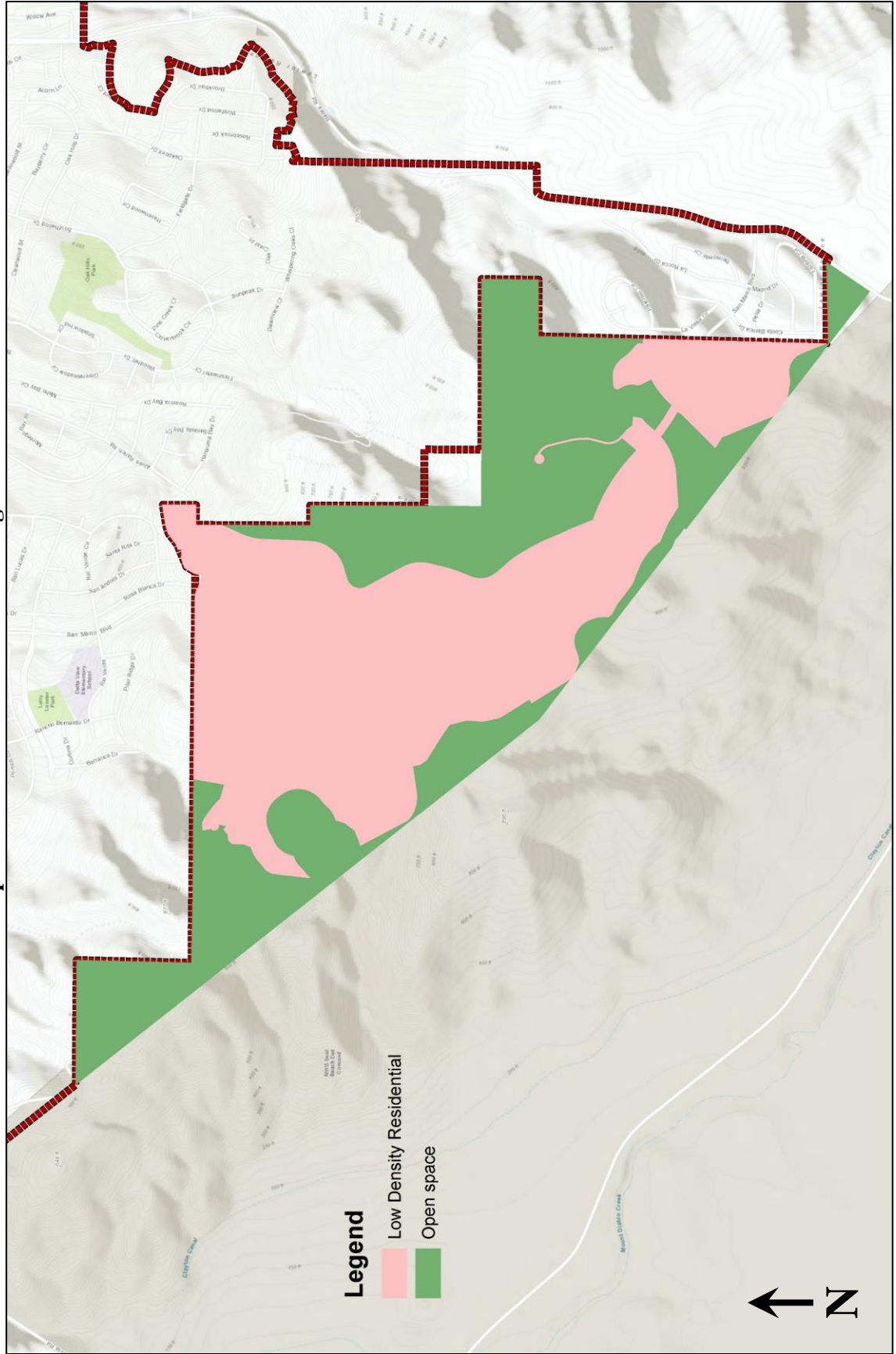
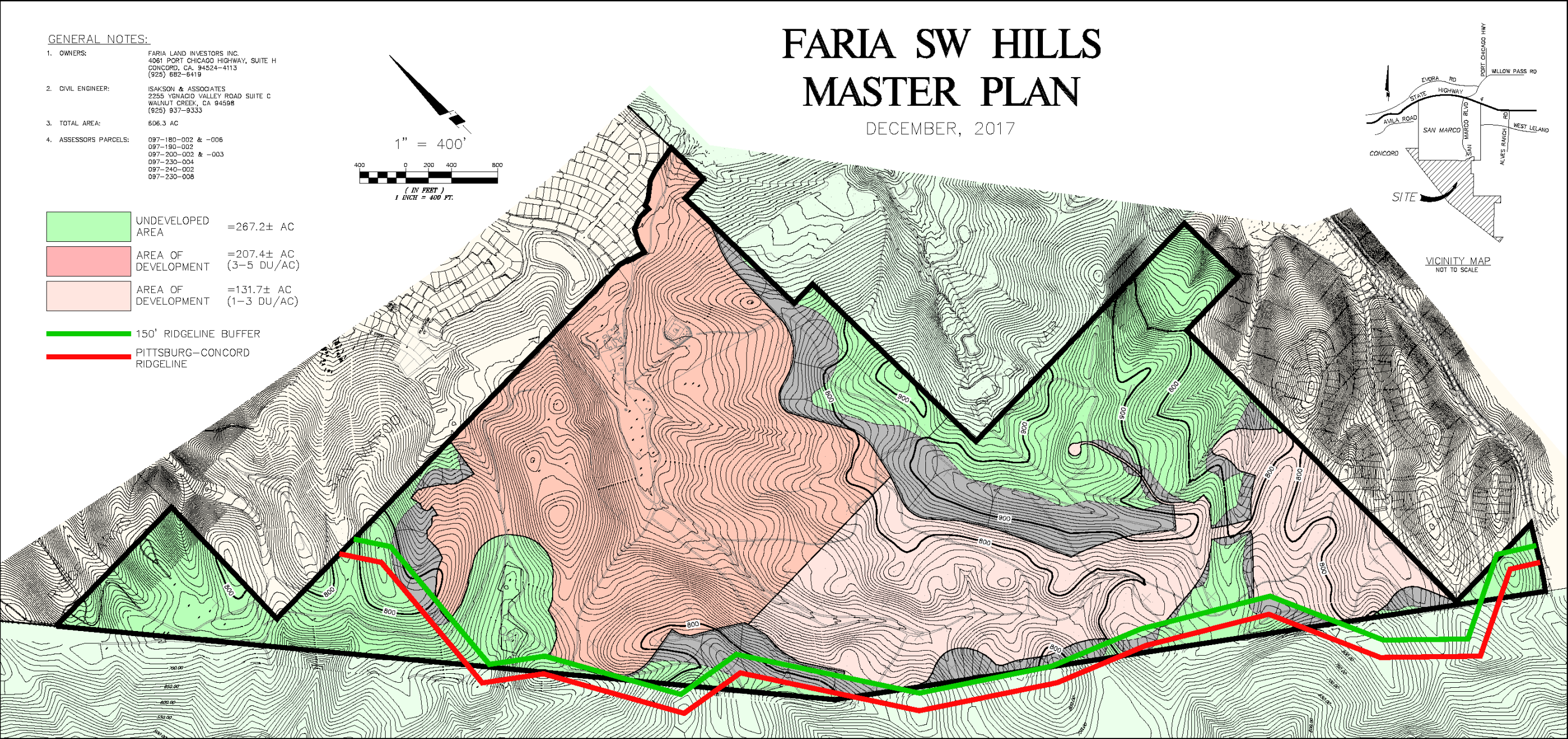






Figure 3-6  
Proposed Draft Master Plan Land Use Map





The proposed land use pattern would allow for higher densities of development in areas closer to the existing San Marco and Vista Del Mar subdivisions and allow for reduced density as the development approaches the steep, hilly landscape found in areas to the south of the City.

As shown in Figure 3-6, open space areas would be located along the hilltops and ridgelines within the project site, including a 150-foot ridgeline buffer, in an attempt to reflect the City's desire to maintain the natural aesthetic value of such areas.

The 267.2 acres of designated Open Space included in the Draft Master Plan Land Use Map represents an increase in designated Open Space from what is currently designated by the City's General Plan (see Figures 3-4 and 3-5 for comparison). Although the proposed project would not include development within the areas designated as Open Space within the project site, some grading activities may be conducted within open space areas to accommodate development within adjacent areas designated for residential development. Such grading activity would not exceed 72.9 acres, or 27.3 percent of the designated Open Space areas. The aforementioned areas are depicted in Figure 3-6 as the gray shaded areas.

### Development Regulations

Development within the project site would be subject to various development regulations specified in the Draft Master Plan, including, but not limited to, density requirements, building height restrictions, flag lots, landscaping requirements, pedestrian access, and outdoor lighting. At the discretion of the City's Planning Division, an updated viewshed analysis may also be prepared in conjunction with any future request for development to ensure impacts from nearby public vantage points, as well as neighboring properties, are considered and minimized where feasible. In addition, the Draft Master Plan specifies that the total number of dwelling units within the project site would not be permitted to exceed 1,500, consistent with Policy 2-P-96 in the City's General Plan. As such, maximum buildout of the proposed project site is assumed to include 1,500 residential units for purposes of this CEQA analysis.

### Design Review Guidelines

The Draft Master Plan provides Design Review Guidelines for the proposed project. The Guidelines are derived from existing General Plan Policies, and are organized into seven main categories: Neighborhood and Subdivision Design, Circulation, Grading Design, Fence and Wall Design, Site Design, Architectural & Building Materials, and Landscaping. The Guidelines are intended to provide a framework for the design of future development within the project site.

### **General Plan Text Amendment**

The purpose of the City's General Plan is to provide an overarching framework for the development of the City, including the project site. The proposed project includes requests for text revisions to the City's General Plan, which would further clarify requirements for development of the project site and similar sites within the upland areas of the City. The proposed text amendments, as well as the location of such amendments within the General Plan, are provided below. Proposed additional text is presented as underlined and deleted text is presented as ~~strikethrough~~.

Goal 4-G-4 Encourage development that preserves unique natural features, such as topography, rock outcroppings, mature trees, creeks, and designated major and minor ridgelines, in the design of hillside-neighborhoods.

Policy 4-P-2 As part of the development review process, require design review of proposed hillside development. Encourage~~Ensure that:~~

- Hillside development that is clustered in small valleys and behind minor ridgelines, to preserve more prominent views of the southern hills.
- Hillside streets that are designed to allow open views by limiting the building of structures or planting of tall trees along the southern edge or terminus of streets.

Policy 4-P-11 Limit grading of hillside areas over 30 percent slope (see Figure 10-1 [of the General Plan]) to elevations less than 900 feet, foothills, knolls, and ridges not classified as major or minor ridgelines (see Figure 4-2 [of the General Plan]), unless deemed necessary for slope stability remedial grading, or installation of City infrastructure. ~~During review of development plans, ensure that necessary grading respects significant natural features and visually blends with adjacent properties.”~~

### *Health and Safety Element*

Goal 10-G-6 Limit development on slopes greater than 30 percent (as delineated on Figure 10-1 [of the General Plan]) to lower elevations, foothills, and knolls, unless it can be demonstrated that appropriate soil stability techniques can be implemented.

In addition to the above revisions, the proposed text amendments would include removal of the following General Plan goal and policies:

- Goal 2-G-33 Maintain the general character of the hill forms.
- Policy 4-P-10 Minimize grading of the hillsides. Amend the City’s Zoning Ordinance to allow density bonuses of 10 percent (maximum) for new hillside development that preserves 40 percent of natural hill contours.
- Policy 4-P-12 Encourage terracing in new hillside development to be designed in small incremental steps. Extensive flat pad areas should be limited.
- Policy 4-P-14 Preserve natural creeks and drainage courses as close as possible to their natural location and appearance.



- Policy 4-P-20 Discourage lot orientation that fronts onto the cross-slope of street segments on steep grades.
- Policy 4-P-22 Discourage placement of lots that allow the rear of homes to be exposed to lower elevation views.
- Policy 4-P-25 During development review, encourage residential rooflines that are oriented in the same direction as the natural hillside slope.
- Policy 4-P-26 Reflect the predominant colors and textures within the surrounding landscape in selection of building materials for hillside development. Roof colors should tend toward darker earth tones, so that they are less visible from adjacent or upslope properties.

### **Infrastructure and Public Services**

In order to serve future development of the proposed project site, in adherence to LAFCo policies and City policies and standards, the project site would require roadway access, water supply, and wastewater infrastructure. In addition, the project would require off-site improvements, as well as fire and police protection services.

#### Site Access

San Marco Boulevard, located at the northern boundary of the proposed project site, would be extended southward through the site, providing connection to the City's existing circulation system. The extended roadway would link to Bailey Road to the east of the site. It should be noted that specific development plans for extension of the roadway are not included as part of the proposed project. Prior to future development, the developer would be responsible for financing and constructing all local roadways associated with the project site. Final location and design of the roadway improvements would be subject to approval by the City Engineering Department.

#### Water Supply

The project site is located within the CCWD SOI, but is not within the service area. Therefore, annexation to CCWD's service area would be included in the proposed project. The raw water needed for the future development facilitated by the service area boundary change would be supplied by CCWD (subject to the project's inclusion into the Los Vaqueros Project service area and Bureau of Reclamation's Central Valley Project service area), via the installation of pipes connecting to the existing pipes in the existing San Marco subdivision, located to the north of the project site. The water would be treated and conveyed to the site by the City of Pittsburg.

### Wastewater

The project site is located within the DDSD SOI; however, annexation to the DDSD's service area would be required. Currently, wastewater service or development plans for wastewater service, do not exist for the proposed project site. The proposed project site would be connected to the existing City sewer system located to the north, in the existing San Marco subdivision, and the existing sewer system in Bailey Road, to the southeast. Future development within the project site would involve the conveyance of wastewater through the City of Pittsburg wastewater transmission system, to the DDSD wastewater treatment plant, where treatment of wastewater would be under the jurisdiction of the DDSD.

### Project Implementation Timeline

Should the necessary City approvals be granted for the proposed project, tentative maps and improvement plans for development of the project site could subsequently be brought forward. Development of the project site would likely begin two to three years after the approval of initial tentative maps for development within the project site. Buildout of the project area would be driven by market demand, once proper approvals have been granted. Future market conditions are speculative at this time, and, thus, the total construction period and final buildout date for the proposed project is not currently known.

### **Entitlements**

The proposed project includes the following discretionary actions by the City of Pittsburg:

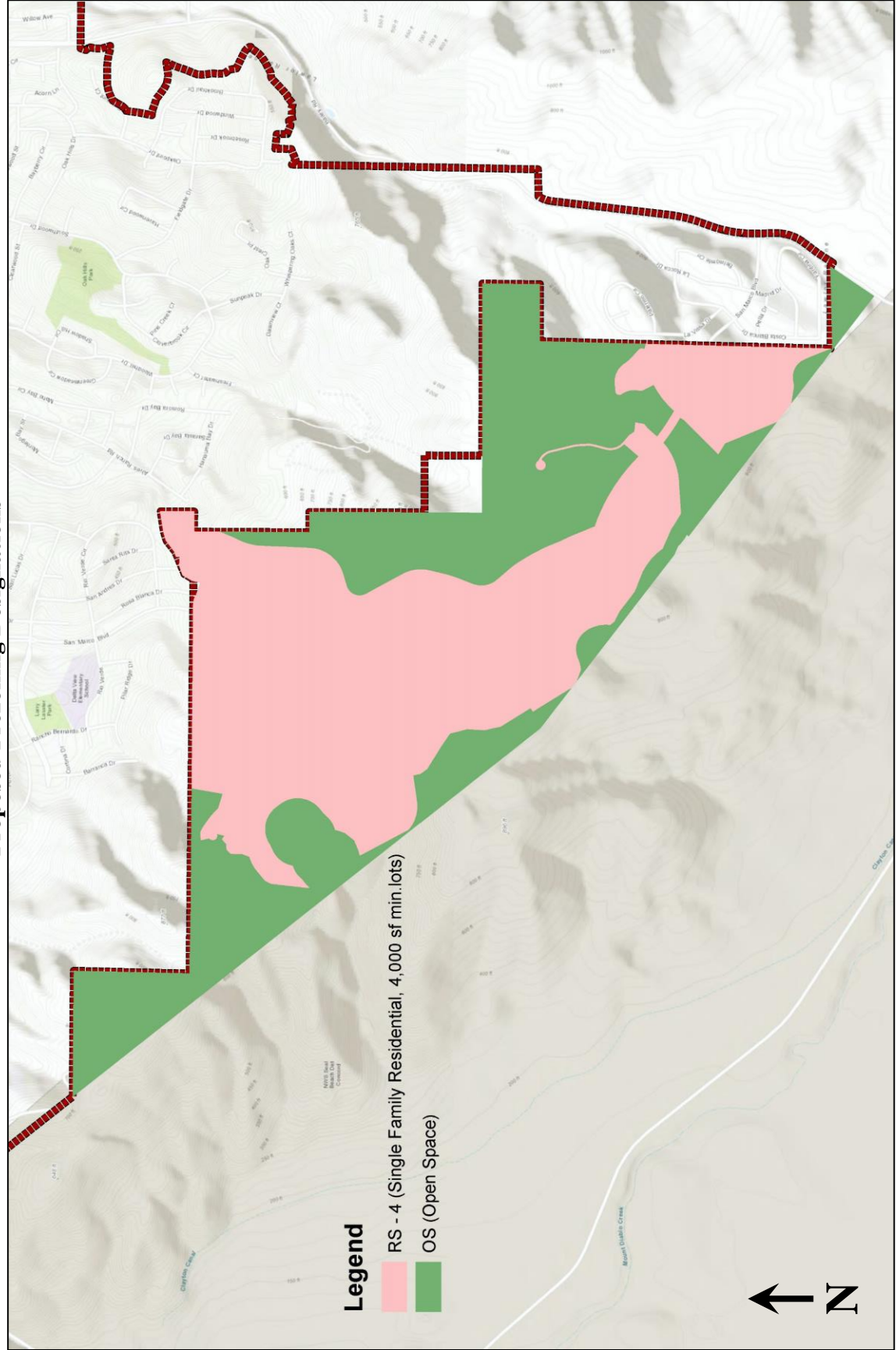
- Certification of the EIR;
- Initiation of annexation proceedings into the City of Pittsburg City Limits;
- Reclassification of site from HPD (Hillside Planned Development) and OS (Open Space) rezoning districts to RS-4P and OS-P rezoning (see Figure 3-7) with a Master Plan overlay district in order to provide project- and site-specific policies and development standards for implementation through future development applications;
- Approval of a General Plan Amendment (GPA) to change the existing General Plan land use patterns for the project site to match the proposed Faria SW Hills Master Plan Map;
- Approval of a GPA to modify the text of certain goals and policies, as outlined in the project description;
- Approval of the Draft Master Plan; and
- Development Agreement.

Prior to development of the project site, the City would require the following subsequent approvals:

- Tentative Maps;
- Design Review; and
- Subsequent Environmental Analysis (as needed).



**Figure 3-7**  
**Proposed Prezoning Designations**





In addition, the following agency permits and approvals may be required in order to implement the proposed project:

- Bay Area Air Quality Management District (BAAQMD) – The Air District would approve construction permits;
- 
- California Department of Fish and Wildlife (CDFW) – The CDFW would approve any Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) in-lieu fee;
- Contra Costa Local Agency Formation Commission (LAFCo) – Contra Costa LAFCo approval would be required for the annexation to the City of Pittsburg, as well as annexation to the CCWD and DDSO service boundaries;
- Contra Costa Water District (CCWD) – Annexation to the CCWD and amendment of service boundaries would require approval by LAFCo in conjunction with the CCWD. In addition, inclusion into the CCWD’s contractual service area for Central Valley Project (CVP) water would require approval by CCWD through the U.S. Bureau of Reclamation;
- Delta Diablo (DDSD) – Annexation to the DDSD and amendment of service boundaries would require approval by LAFCo in conjunction with the DDSD;
- Regional Water Quality Control Board (RWQCB) – The RWQCB would approve Waste Discharge Requirements, as well as an National Pollutant Discharge Elimination System (NPDES) permit required during construction operations;
- United States Bureau of Reclamation - Approval of the application for inclusion into the CCWD’s contractual service area for Central Valley Project (CVP) water would be required through this federal agency; and
- United States Department of Fish and Wildlife (FWS) – The FWS would approve any HCP/NCCP in-lieu fee.
- United States Army Corps of Engineers (USACE) – The USACE would approve the required Section 404 of the Clean Water Act permit should there be any impacts to any on-site wetlands.



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## 4. EXISTING ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

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## 4.0 INTRODUCTION TO THE ANALYSIS

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## 4.0

## INTRODUCTION TO THE ANALYSIS

### 4.0.1 INTRODUCTION

The technical chapters of this EIR include the analysis of the potential impacts of buildout of the proposed project on a range of environmental issue areas. Chapters 4.1 through 4.12 describe the focus of the analysis, references and other data sources for the analysis, the environmental setting related to each specific issue area, project-specific impacts and mitigation measures, and the cumulative impacts of the project for each issue area. The format of each of the technical chapters is described at the end of this chapter.

### 4.0.2 DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial or potentially substantial adverse change in the environment (Public Resources Code §21068). The CEQA Guidelines require that the determination of significance be based on scientific and factual data. The specific criteria for determining the significance of a particular impact are identified within in each technical chapter, and are consistent with significance criteria set forth in the CEQA Guidelines or as based on the professional judgment of the EIR preparers.

### 4.0.3 ENVIRONMENTAL ISSUES DISMISSED IN THE INITIAL STUDY

The Initial Study prepared for the proposed project (Appendix C) includes a detailed environmental checklist addressing a range of technical environmental issues. For each technical environmental issue, the Initial Study identifies the level of impact for the proposed project. The Initial Study identifies the environmental effects as “no impact,” “less than significant,” “less than significant with mitigation incorporated,” and “potentially significant.”

Impacts identified in the Initial Study as less than significant or no impact are presented below. All remaining issues identified in the Initial Study as potentially significant are discussed in the subsequent technical chapters of this EIR.

- *Aesthetics (b):* According to the California Department of Transportation, State scenic highways are not located within, or within view of, the project site, and the project would not damage any scenic resources. Because the project would not damage any scenic resources within the vicinity of a State scenic highway, a ***less-than-significant*** impact would result.
- *Agriculture and Forest Resources (b, c, d):* According to the California Department of Conservation, Williamson Act contract lands do not exist within the project area. The site is currently zoned for agricultural uses under the Contra Costa County zoning code; however, the site was prezoned by the Pittsburg voters in 2005 as Hillside Planned

Development (HPD) and Open Space (OS). In addition, forest lands are not located within the project area. Therefore, a ***less-than-significant*** impact related to agriculturally zoned land, and ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning, would occur. Therefore, the proposed project would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission General Policy Statement and Policy (e), as discussed in Appendix J of this EIR.

- *Air Quality (e)*: Typical sources of objectionable odor include industrial or intensive agricultural uses, which are not proposed as part of the project, nor are such uses located near the project site. Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, future construction of the project site would be temporary, and permanent sources of odor are not currently present or proposed on the project site. Therefore, the proposed project is not likely to create objectionable odors affecting a substantial number of people, and a ***less-than-significant*** impact would occur.
- *Geology and Soils (e)*: The proposed project would not utilize a septic tank system. Therefore, ***no impact*** associated with soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems would occur.
- *Hazards and Hazardous Materials (a, d, e, f)*: The proposed project would not result in new sources of, or the generation of, hazardous materials. Residential land uses are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future residents may use common household cleaning products on-site, which could contain potentially hazardous chemicals; however, due to the regulations of such products and the amount utilized on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

According to the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, the annexation area is not located on a site which is included on a list of hazardous materials sites compiled; therefore, ***no impact*** would occur.

Public or private airports are not located within the City of Pittsburg, and public airports are not located within two miles of the City limits. Buchanan Airfield, the closest airport to the City of Pittsburg, is approximately 3.5 miles west of the westernmost edge of the project site. Because the project site is not located within two miles of any public airports or private airstrips and does not fall within an airport land use plan area, ***no impact*** would occur.

- *Hydrology and Water Quality (g, h, i, j)*: According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) of the project area, the project is located in FEMA Zone X, which is defined as an area outside of the 0.2 percent

annual chance floodplain (i.e., 100-year flood hazard area). In addition, the project site is not located within a dam failure inundation hazard area, as defined by the Association of Bay Area Governments. As a result, the project would not place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map or expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. Therefore, **no impact** would result.

The project site is located within the southwestern hills of Pittsburg, not along or near the waterfront or a large contained water body; therefore, the potential for damage from a seiche or tsunami would not occur. Given that the site does not contain streams, creeks, or other waterways, mudflows associated with such features would not be anticipated to occur. Therefore, a **less-than-significant** impact would occur related to inundation by seiche, tsunami, or mudflow.

- *Land Use (a):* Annexation of the undeveloped project area would involve the annexation of land designated for residential use adjacent to existing and approved residential development. Given the site's immediate vicinity, the project would have **no impact** related to the physical division of an established community.
- *Mineral Resources (a, b):* According to Chapter 12.3 of the Existing Conditions Report for the City's General Plan, available information does not indicate that regionally or locally important mineral resources exist within or adjacent to the project site. Therefore, **no impact** to mineral resources or recovery sites would occur as a result of development of the proposed project.
- *Noise (e, f):* The project area is not located within the vicinity of a public airport or a private airstrip and is not within an airport land use plan. Therefore, the proposed project would not be exposed to excessive air traffic noise, and **no impact** would occur.
- *Population and Housing (b, c):* Substantial numbers of housing would not be displaced as part of the proposed project. In addition, future development occurring within the project site would provide additional housing opportunities for the City of Pittsburg. Therefore, the project would have **no impact** related to the displacement of substantial numbers of existing housing or people and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (a) and (l), as discussed in Appendix J of this EIR.
- *Transportation and Circulation (c):* The proposed project is not located near an airport, and does not include any improvements to airports or a change in air traffic patterns. Because the proposed project would not result in a change in air traffic patterns, including either an increase in air traffic levels or a change in location that results in substantial safety risks, **no impact** would occur.

In addition to the above issue areas, the Initial Study previously dismissed cultural resource impacts as less than significant. However, in light of comments received during the NOP comment

period, as well as new requirements related to evaluation of tribal cultural resources, the City has decided to provide a focused analysis of cultural and tribal resources in this EIR. All cultural resources mitigation measures included in the Initial Study have been pulled forward to the relevant chapters of this EIR.

#### 4.0.4 ENVIRONMENTAL ISSUES ADDRESSED IN THIS EIR

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The Initial Study identified several environmental impacts as potentially significant, requiring further analysis. This EIR provides the additional analysis necessary to address the technical environmental impacts not fully resolved in the Initial Study. Consistent with the conclusions of the Initial Study, the following environmental issues are addressed in separate technical chapters of this EIR:

- Aesthetics;
- Agricultural Resources;
- Air Quality and Greenhouse Gas Emissions;
- Biological Resources;
- Cultural and Tribal Resources;
- Geology, Soils, and Seismicity;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Public Services and Utilities; and
- Transportation, Traffic, and Circulation.

Chapter 5.0 of the EIR presents a discussion and comprehensive list of all significant and unavoidable impacts identified in Chapters 4.1 through 4.12.

#### 4.0.5 CHAPTER FORMAT

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Each technical chapter addressing a specific environmental issue begins with an **introduction** describing the purpose of the chapter. The introduction is followed by a description of the project's **existing environmental setting** pertaining to that particular environmental issue. The setting description is followed by the **regulatory context** and the **impacts and mitigation measures** discussion. The discussion contains the **standards of significance**, followed by the **method of analysis**. The standards of significance section includes references to the specific Initial Study checklist questions consistent with Appendix G of the CEQA Guidelines. The **impacts and mitigation measures** discussion includes impact statements prefaced by a number in bold-faced type. An explanation of each impact and an analysis of the impact's significance follow each impact statement (see below), followed by all mitigation measures pertinent to each individual impact. The degree of relief provided by identified mitigation measures is also evaluated. An example of the format is shown below.

#### 4.x-1 Statement of Impact

Discussion of impact for the proposed project in paragraph format.

Statement of *level of significance* of impact without implementation of mitigation is included at the end of each impact discussion. The following levels of significance without implementation of mitigation will be utilized in the EIR: less than significant and significant. If an impact is determined to be significant, mitigation will be included in order to reduce the specific impact to the maximum extent feasible. Impacts that cannot be reduced to a less-than-significant level with implementation of all feasible mitigation would be considered to remain significant and unavoidable.

##### Mitigation Measure(s)

Statement of *level of significance* of impact with implementation of mitigation is included immediately preceding the mitigation measures.

4.x-1(a)      *Required mitigation measure(s) presented in italics and listed in consecutive order.*

4.x-1(b)      *etc., etc.*



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## 4.1 AESTHETICS

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## 4.1

## AESTHETICS

### 4.1.1 INTRODUCTION

The Aesthetics chapter of the EIR describes the existing visual resources of the proposed project site and vicinity. In addition, an evaluation is provided of the potential aesthetic impacts of the project with respect to urbanization of the area. The CEQA Guidelines describe the concept of aesthetic resources in terms of scenic vistas, scenic resources (such as trees, rock outcroppings, and historic buildings), State scenic highways, visual character or quality of the project site, and light and glare impacts. The following impact analysis is based on information drawn from the Pittsburg Municipal Code, as well as the Pittsburg General Plan<sup>1</sup> and associated EIR.<sup>2</sup>

### 4.1.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides an overview of the existing visual setting of the project site and the surrounding area.

#### Regional Setting

The proposed project site is located immediately southwest of the municipal boundary of the City of Pittsburg, within the Southwest Hills planning subarea of the Pittsburg General Plan Planning Area. The City of Pittsburg is located along the Sacramento River in eastern Contra Costa County, and is bordered by Concord to the west, Antioch to the east, and is located north of Clayton. The northern portion of the City is relatively flat, increasing in elevation towards the southern hills. The hills form the northern tip of the Diablo Range, which extends from Contra Costa County to Santa Clara County.

Pittsburg's Planning Area includes 41.1 square miles of land. Several geographic features distinguish the Planning Area, including the Sacramento River that forms the northern boundary, steep hills that reach an elevation of almost 1,900 feet and provide a distinctive backdrop to the south, and the Black Diamond Mines Regional Preserve to the southeast.

#### Project Site Setting

The 606-acre project site is generally characterized by vacant rolling hills covered with ruderal grasses. The elevation of the site ranges from approximately 435 feet at the lowest point to approximately 1,000 feet at the highest. According to Figure 4-2 of the Pittsburg General Plan (see Figure 4.1-1), the project site does not contain designated major or minor ridgelines. However,

<sup>1</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

<sup>2</sup> City of Pittsburg. *Pittsburg 2020: A Vision for the 21st Century, City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January 2001.

several undesignated ridgelines traverse portions of the site. The following section describes the surrounding uses in the vicinity of the proposed project site, sensitive receptors with views of the site, and the existing visual character and quality of the site.

### Surrounding Uses

The northeast portion of the site is bordered by existing residential development (San Marco and Vista Del Mar subdivisions), while the remainder of the site is bordered primarily by undeveloped areas. The western boundary of the site is directly adjacent to the City of Concord city limits. Bailey Road is located to the east of the site, and the recently closed Concord Naval Weapons Station (CNWS) is located to the south. State Route (SR) 4 is situated to the north of the site. Immediately west of the project site (within the CNWS), is land designated for open space and habitat protection in the adopted CNWS Reuse Plan<sup>3</sup> and associated certified Final EIR.<sup>4</sup>

### Sensitive Viewers

The proposed project site is currently visible to motorists travelling along SR 4 to the north of the project site, as well as motorists, bicyclists, and pedestrians travelling along local public roadways such as Bailey Road to the east and Leland Road, Barranca Drive, San Marco Boulevard, and Ramora Bay Drive to the north. The aforementioned motorists, bicyclists and pedestrians would be considered sensitive to any changes to the aesthetic character of the project site occurring as a result of the proposed project.

### Existing Visual Character

Figure 4.1-1 provides an aerial view of the proposed project site and describes the locations of various vantage points from which sensitive receptors could potentially view future development occurring on the site. Existing views from such vantage points are depicted in Figure 4.1-7 through Figure 4.1-9. Views from the project site, from the area roadways to the north and east of the site, and from SR 4 are discussed in further detail below.

#### *Views from Area Roadways North of the Site*

Figure 4.1-3 through Figure 4.1-6 below provide examples of typical views of the proposed project site from the roadways providing access to the San Marco and Vista Del Mar subdivisions.

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<sup>3</sup> City of Concord. *Concord Community Reuse Plan*. Revised February 23, 2010.

<sup>4</sup> City of Concord. *Concord Community Reuse Plan Final Environmental Impact Report, State Clearinghouse # 2007052094*. January 2010.





**Figure 4.1-2**  
**Location and Orientation of Figure 4.1-3 through Figure 4.1-9**





**Figure 4.1-3**  
**Existing View from the Barranca Drive and Cortina Drive Intersection Facing Southwest**  
**(View #1)**



**Figure 4.1-4**  
**Existing View from the Rio Verde Circle and San Marco Boulevard Intersection Facing Southwest (View #2)**



**Figure 4.1-5**  
**Existing View from Romora Bay Drive Facing Southeast (View #3)**



**Figure 4.1-6**  
**Existing View from Romora Bay Drive Facing West (View #4)**





**Figure 4.1-7**  
**Existing View from Bailey Road Facing Northwest (View #5)**



**Figure 4.1-8**  
**Existing View of Southwest Hills from SR 4 Looking East (View #6)**



**Figure 4.1-9**  
**Existing View of Southwest Hills from SR 4 Looking South (View #7)**



As is shown in the figures, the distinctive rolling hills that characterize the project site are clearly visible to motorists, bicyclists, and pedestrians travelling on the roadways. The hills effectively block any views of the areas to the south and west of the project site, and partially obstruct views of the interior of the site.

*Views from Area Roadways East of the Site*

Figure 4.1-7 provides an example of typical views of the project site from Bailey Road, which runs in a north-south direction adjacent to the eastern boundary of the site. As shown in the figure, motorists travelling along the roadway have views of the rural hillsides directly east of the project site; however, most of the project site is obscured from view due to the steeply sloping topography of the area.

*Views from SR 4*

Figure 4.1-8 depicts the proposed project site as viewed from the portion of SR 4 to the west of the project site, within the City of Concord city limits. As shown in the figure, the project site is entirely blocked from view by the hillsides on the southern portion of the site.

As shown in Figure 4.1-9, motorists travelling along the segment of SR 4 to the north of the proposed project site are afforded views of the developed areas of the City of Pittsburg, including



the San Marco and Vista Del Mar subdivisions. In addition, the ridgelines of the hills within the project site are partially visible in the background. However, the lower elevations of the site are obscured from view by the existing residential development.

#### **4.1.3 REGULATORY CONTEXT**

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Applicable federal and State laws or regulations pertaining to the visual quality of the project area do not exist. The applicable goals and policies established in the Pittsburg General Plan and Pittsburg Municipal Code are listed below.

##### **City of Pittsburg General Plan**

The following are the local government environmental goals and policies relevant to the CEQA review process with respect to aesthetic resources.

##### City of Pittsburg General Plan

The following are applicable goals and policies from the Pittsburg General Plan.

##### *General Land Use*

Goal 2-G-8    Ensure that hillside development enhances the built environment, improves safety through slope stabilization, is respectful of topography and other natural constraints, and preserves ridgelines and viewsheds.

Goal 2-G-33    Maintain the general character of the hill forms.<sup>5</sup>

Policy 2-P-91    Ensure as part of the development review process that any future subdivision in the southwest hills that is adjacent to the 2005 Pittsburg voter approved urban limit line, establishes a greenbelt buffer within the City's urban limit line between the proposed development and the urban limit line. The greenbelt buffer shall include all land between the City of Concord border and the first set of ridges, including the tops of these same ridges which generally run parallel to the common border. The City will consider, in conjunction with subdivision applications on these properties and related environmental analysis, general plan and/or the transfer of lost development rights as a result of the these greenbelts to other portions of these properties, while not increasing the overall number of units permitted on these properties.

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<sup>5</sup>    Goal 2-G-33 deleted as part of the proposed General Plan Amendment.

*Urban Design Element*

Goal 4-G-3    Ensure that new residential development in the southern hills provides adequate transition between urban and open space uses on the City’s edge.

Policy 4-P-2    As part of the development review process, require design review of proposed hillside development. Ensure that:

- Hillside development is clustered in small valleys and behind minor ridgelines, to preserve more prominent views of the southern hills.
- Hillside streets are designed to allow open views by limiting the building of structures or planting of tall trees along the southern edge or terminus of streets.

Many arterial and collector roadways within the City feature views of rolling, grassy hills. Sensitive layout and design of new and redeveloped sites throughout Pittsburg can retain and enhance views of these tremendous natural features.<sup>6</sup>

Policy 4-P-3    As part of the development review process, limit building heights and massing where views of the hills from adjacent properties and public spaces could be preserved.

Limiting the height and massing of new structures to retain views of ridgelines over the tops of rooflines will ensure that the City’s hillside identity is preserved. These building standards should then be used to ensure views before development approval.

Policy 4-P-4    Develop and implement use of a “Design Review Checklist” for all new hillside development, to ensure that conservation and site layout policies within the General Plan are considered.

Policy 4-P-6    Ensure that developers of new residential projects in the southern hills plant trees and other vegetation along collector and arterial roadways, in order to maintain the sense of “rural” open space at the City’s southern boundary.

Although residential developers should restrict planting of trees and landscaping that will block views of the hills from other areas of the City, or views of Suisun Bay from hillside streets, vegetation along

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<sup>6</sup>    Policy 4-P-2 would be revised as part of the proposed General Plan Amendment.

new roadways will contribute to the goal of retaining a sense of open space.

Policy 4-P-7 Ensure that design treatment of new development at the City's southern boundary retains a rural feel by:

- Discouraging the use of solid walls along these edges (fences must be visually permeable; however, discourage use of chain link in front and side yards);
- Using materials and design to promote a rural feeling (for example, wooden or other rustic materials); and
- Encouraging development at the outer edge of the City to face outwards toward the rural landscape (preventing a solid wall of residential back yard fences).

Goal 4-G-4 Encourage development that preserves unique natural features, such as topography, rock outcroppings, mature trees, creeks, and ridgelines, in the design of hillside neighborhoods.<sup>7</sup>

Goal 4-G-5 Encourage a sense of rural character in the design and construction of hillside development, including extensive landscaping, rooftop terraces, sloping rooflines, and use of natural materials.

Policy 4-P-9 Encourage new hillside development to preserve unique natural features by mapping all natural features as part of development applications, including landforms, mature tree stands, rock outcroppings, creek ways, and ridgelines. During development and design review, ensure that site layout is sensitive to such mapped features.

Policy 4-P-10 Minimize grading of the hillsides. Amend the City's Zoning Ordinance to allow density bonuses of 10 percent (maximum) for new hillside development that preserves 40 percent of natural hill contours.

Extensive grading of hillsides has the potential to destroy their irregular character and increase risk of geologic and landslide hazards. Encourage developers to grade only building pads, and to blend the graded area with adjacent hillside properties.<sup>8</sup>

Policy 4-P-11 Limit grading of hillside areas over 30 percent slope (see Figure 10-1 in Pittsburg General Plan) to elevations less than 900 feet, foothills, knolls, and ridges not classified as major or minor

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<sup>7</sup> Goal 4-G-4 would be revised as part of the proposed General Plan Amendment.

<sup>8</sup> Policy 4-P-10 would be deleted as part of the proposed General Plan Amendment.

ridgelines (see Figure 4-2 in Pittsburg General Plan). During review of development plans, ensure that necessary grading respects significant natural features and visually blends with adjacent properties.<sup>9</sup>

Policy 4-P-12 Encourage terracing in new hillside development to be designed in small incremental steps. Extensive flat pad areas should be limited.<sup>10</sup>

Policy 4-P-13 Revise the City's development permitting requirements to include erosion control and re-vegetation programs as part of grading plans for new hillside development.

Where erosion potential exists, hydro-seeding, silt traps, or other engineering solutions may be required. Using re-vegetation as an erosion control measure also contributes to the aesthetic, natural character of a hillside.

Policy 4-P-14 Preserve natural creeks and drainage courses as close as possible to their natural location and appearance.

"Man-made" streams (manufactured drainage courses designed to simulate natural creeks) draining into natural creeks are preferable to concrete channels for ensuring adequate surface drainage in new hillside development.<sup>11</sup>

Policy 4-P-15 Minimize the visual prominence of hillside development by taking advantage of existing site features for screening, such as tree clusters, depressions in topography, setback hillside plateau areas, and other natural features.

Policy 4-P-19 Encourage lot configuration such that perimeter walls and fences along arterial corridors within the southern hills are not needed.

Policy 4-P-20 Discourage lot orientation that fronts onto the cross-slope of street segments on steep grades.<sup>12</sup>

Policy 4-P-21 Encourage single-loaded streets parallel to steep slopes, with placement of lots on the uphill side of the street, such that homes front down-slope and allow open vistas from the public street.

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<sup>9</sup> Policy 4-P-11 would be revised as part of the proposed General Plan Amendment.

<sup>10</sup> Policy 4-P-12 would be deleted as part of the proposed General Plan Amendment.

<sup>11</sup> Policy 4-P-14 would be deleted as part of the proposed General Plan Amendment.

<sup>12</sup> Policy 4-P-20 would be deleted as part of the proposed General Plan Amendment.

Policy 4-P-22 Discourage placement of lots that allow the rear of homes to be exposed to lower elevation views.<sup>13</sup>

Policy 4-P-24 Building forms should be “stepped” to conform to site topography. Encourage use of rooftop terraces and decks atop lower stories.

Discourage construction of decks elevated on poles over sloped areas; they make buildings seem more massive from downhill lots.

Policy 4-P-25 During development review, encourage residential rooflines that are oriented in the same direction as the natural hillside slope.<sup>14</sup>

Policy 4-P-26 Reflect the predominant colors and textures within the surrounding landscape in selection of building materials for hillside development. Roof colors should tend toward darker earth tones, so that they are less visible from adjacent or upslope properties.

Preferred building materials include wood siding, exposed wooden structural elements, and natural-colored stucco.

Clustering new residential development will retain open space within the southern hills. During design review, encourage open space pockets within the most visible hillside slopes.<sup>15</sup>

Policy 4-P-27 Maximize water conservation, fire resistance, and erosion control in landscape design through use of sturdy, native species. Use irregular planting on graded slopes to achieve a natural appearance.

Policy 4-P-28 Encourage developers to align and construct streets along natural grades. Minimize visibility of streets from other areas within the City (see Figure 4-7 in the Pittsburg General Plan).

Policy 4-P-29 Encourage the construction of split roadways on steep hillsides, where appropriate.

Split roadways allow the integration of natural features, such as mature trees and rock outcroppings, into the street design. Additionally, landscaping is increased and medians can be used to collect drainage flows.

Policy 4-P-30 Ensure that all residential developers provide multi-use trails or trailheads connecting to local schools and parks, commercial

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<sup>13</sup> Policy 4-P-22 would be deleted as part of the proposed General Plan Amendment.

<sup>14</sup> Policy 4-P-25 would be deleted as part of the proposed General Plan Amendment.

<sup>15</sup> Policy 4-P-26 would be deleted as part of the proposed General Plan Amendment.

centers, and regional open spaces.

Because housing will be clustered in hillside areas, the provision of trails through remaining open space areas will provide connections to employment, shopping, and recreation centers within the City's flatlands.

Policy 4-P-31 Provide on-street parking along hillside roads in parking bays where topography allows.

### *Resource Conservation Element*

Goal 9-G-2 Guide development in such a way that preserves significant ecological resources.

Policy 9-P-5 Work with Contra Costa County, the East Bay Regional Park District, and the City of Antioch, to expand the regional open-space system in the southern hills to preserve California annual grasslands habitat.

Policy 9-P-7 During the design of hillside residential projects, encourage clustering of housing to preserve large, unbroken blocks of open space, particularly within sensitive habitat areas. Encourage the provision of wildlife corridors to ensure the integrity of habitat linkages.

Policy 9-P-8 As a condition of approval of new development, ensure re-vegetation of cut-and-fill slopes with native plant species.

In addition, planting on some existing slopes could contribute to Pittsburg's image and would be a justified public cost.

### **Pittsburg Municipal Code**

The Pittsburg Municipal Code ordinances relating to aesthetics that are applicable to the proposed project are presented below.

#### Hillside Planned District

##### *18.56.020 Intent and Purpose*

- D. The city council declares that lands within the hillside areas be placed in a hillside planned development (HPD) district. The following goals are established for the HPD district:
- To encourage and create the means of effectuating desirable future development through regulations and development standards on those lands designated in the city general plan as estate residential and hillside/grazing;

- To protect the public health, safety and welfare in regard to hillside development;
- To protect natural topographic features, aesthetic views, vistas and prominent ridgelines;
- To protect adjacent properties from potential adverse impacts of grading and drainage associated with hillside development;
- To encourage the use of development techniques and alternatives that will be compatible to the terrain of the hillside areas.

#### Master Plan Overlay District

##### *18.72.010 Specific Purposes.*

Per Section 18.72.010 of the Pittsburg Municipal Code (PMC), the specific purpose of the Master Plan Overlay District (\_\_\_-P) is to accomplish the following:

- Ensure orderly planning for the development of large, unsubdivided areas of the city consistent with the general plan;
- Maintain an environmental equilibrium consistent with existing vegetation, soils, geology, topography, and drainage patterns;
- Avoid premature or inappropriate development that would result in incompatible uses or create public service demands exceeding the capacity of existing or planned facilities; and
- Encourage sensitive site planning and design.

#### Residential District

##### *18.50.005 Specific Purposes.*

Per Section 18.50.005(B)(6) of the PMC, the specific purpose of the Single-Family Residential District – 4,000 Square Foot Minimum Lot Size (RS-4) zone is to provide opportunities for attached and detached single-family residences in existing and new neighborhoods, subject to appropriate standards.

#### Open Space District

##### *18.58.010 Specific Purposes.*

Per Section 18.58.010 of the PMC, the specific purpose of the Open Space District (OS) is to accomplish the following:

- Provide a suitable classification for large public or private sites permanently designed for park or open space use;
- Protect public health and safety by limiting land subject to flooding, slides, or other hazards to open space use;
- Allow the planning commission and city council to consider the most appropriate use of a site following discontinuance of a large public or private open space use without the

encumbrance of a base zoning district that may or may not provide appropriate regulations for development of the site.

#### **4.1.4 IMPACTS AND MITIGATION MEASURES**

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The following section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to aesthetic resources. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

##### **Standards of Significance**

In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of this EIR, an impact is considered significant if the proposed project would:

- Have a substantial adverse effect on a scenic vista (Initial Study Question I.a.);
- Substantially degrade the existing visual character or quality of the site and its surroundings (Initial Study Question I.c.); or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Initial Study Question I.d.).

##### **Issues Not Discussed Further**

It should be noted that, as presented in the Introduction to Analysis chapter of this EIR, the Initial Study prepared for the proposed project determined that development of the proposed project would result in a less-than-significant impact related to the following:

- Substantially damage scenic resources, including, but not limited to, trees, rock, outcroppings, and historic buildings within a state scenic highway (Initial Study Question I.b.).

Accordingly, impacts related to the above are not further analyzed or discussed in this EIR chapter.

##### **Method of Analysis**

The proposed project does not include detailed designs to be evaluated, such as a subdivision map or design review request. Therefore, this chapter analyzes buildout of the proposed project site under the Draft Master Plan at a program level. Impacts to the existing environment of the project area are to be determined by the contrast between the area's visual setting before and after buildout of the proposed development. Although few standards exist to singularly define the various individual perceptions of aesthetic value from person to person, the degree of visual change could be measured and described in a reasonably objective manner in terms of visibility and visual contrast, dominance, and magnitude. Public vantage points located to the north and east of the project site would be considered sensitive to the visual and aesthetic alteration of the project area.



A viewshed analysis was conducted for the proposed project in order to evaluate how the proposed project would affect public views in the surrounding region (see Figure 4.1-10). The shaded areas shown in Figure 4.1-10 represent areas that may have views of the project site. Based on the vantage points determined to be sensitive to alteration of the project site, results of the viewshed analysis, and relevant comments received by the City during the public review period for the Notice of Preparation, the vantage points that would best represent sensitive public views of the project site were chosen. Visual simulations representing full buildout of the project site were developed. However, given that specific development plans are not available at this time, the massing, height, and density of future development within the project site was based on the maximum allowable intensities stipulated within the Draft Master Plan and the City of Pittsburgh's Municipal Code. The simulated development was overlaid over photographs taken at the key public vantage points throughout the project region where future on-site development would be visible. The grey overlay included in each of the simulations is not necessarily representative of actual building massing, but is merely an indicator of where development would be visible.

### **Project-Specific Impacts and Mitigation Measures**

The following discussion of impacts is based on the implementation of the proposed project in comparison with the existing conditions and the standards of significance identified above.

#### **4.1-1 A substantial adverse effect on a scenic vista. Based on the analysis below, the impact would be *less than significant*.**

The Pittsburgh General Plan identifies the southern hills, with ridges and rolling topography, rock outcroppings, mature trees, sensitive habitats and views as opportunity areas for the creation of distinctive hillside neighborhoods.<sup>16</sup> However, as stated above, the project site does not contain designated major or minor ridgelines. While the project site provides the City with views of the existing open hillsides, which also represent an important visual resource for communities to the west, the project site is not a designated scenic vista.

The area northeast of the City of Concord limits, including the project site, is commonly known as the Los Medanos Hills. It should be noted that the City of Concord provided a letter to the City of Pittsburgh, dated January 28, 2011, which includes a discussion regarding the Los Medanos Hills Working Group and associated recommendations. In 2008, the Los Medanos Hills Working Group, which consisted of elected officials and staff from both cities, was formed to discuss issues of mutual concern with regard to both the Los Medanos Hills area and the CNWS. The Working Group identified issues and outlined potential solutions to address the cities' concerns to ensure that development in the Los Medanos Hills area would be sensitive to the natural topography and protect viewsheds. The City of Concord conducted an analysis and developed a map showing the City of Concord's preferred open space greenbelt buffer for the southwest hills. The greenbelt buffer location determination was aided by a viewshed analysis from several vantage points throughout Concord.

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<sup>16</sup> City of Pittsburgh. *City of Pittsburgh General Plan Draft Environmental Impact Report (SCH#1999072109)* [pg. 4-10]. January 2001.







The City of Concord requested that the City of Pittsburg incorporate the open space greenbelt buffer into the Master Plan Overlay District. While the City of Concord has shared the preferred open space greenbelt buffer areas within the Los Medanos Hills, it should be noted that the Los Medanos Hills have not been formally designated as a scenic vista by the City of Concord.

Consistent with the City of Concord's request, General Plan Policy 2-P-91, and the terms of Measure P and the May 3<sup>rd</sup> MOU, the proposed project would include a 150-foot greenbelt ridgeline buffer, as shown in Figure 3-5 of the Project Description chapter of this EIR. While development would not be allowed within the greenbelt ridgeline buffer area, grading activity would be required within some areas of the greenbelt ridgeline buffer to allow for development within the areas proposed for development outside of the greenbelt buffer area. Such grading activity would be generally limited to hill slopes facing away from the City of Concord and would not change the overall elevation of the ridgeline; however, some views of the graded hillsides would be available from the City of Concord. Nonetheless, because development of any structures would not occur within the greenbelt ridgeline buffer, based on the analysis conducted by City of Concord, incorporation of the greenbelt buffer in the proposed project would ensure that views of the hillside area from the City of Concord would not be substantially affected by buildout of the proposed project. Therefore, the proposed project would not result in a substantial adverse effect on a scenic vista and a *less-than-significant* impact would occur.

Mitigation Measure(s)

*None required.*

**4.1-2 Substantial degradation of the existing visual character or quality of the project site and/or the site's surroundings. Based on the analysis below, because the project has the potential to substantially degrade the existing visual character or quality of the project site and/or the site's surroundings, and in the absence of feasible mitigation, the impact would be *significant and unavoidable*.**

As discussed above, the site currently provides residents of the City of Pittsburg with views of the existing open hillsides from nearby public vantage points in residential areas and travelers along Bailey Road and SR 4. In addition, the project site's hillside represents an important visual resource for communities to the west including Pleasant Hill, Concord, and Walnut Creek. Thus, the project site would be considered a visual resource.

For the purposes of this CEQA analysis, buildout of the Draft Master Plan would include the construction of 1,500 single-family residences and associated improvements. Such development would include construction of public streets and street lighting, and would alter the existing visual character of the project site from open space to urban development. The Draft Master Plan includes various land use and development regulations that would apply to all future development occurring under buildout of the proposed project site. Such regulations include, but are not limited to, density requirements, building setbacks, and landscaping requirements. As discussed above, the proposed project's incorporation of a ridgeline greenbelt buffer between the proposed development and the urban limit line along



the western project boundary would limit development along the ridgeline. While development would be prohibited along the ridgeline, grading would occur in certain areas of the greenbelt ridgeline buffer area. Such grading activity would be generally limited to north and east facing slopes; however, some grading would be visible from areas south and west of the project site. Grading activity is not anticipated to include alteration of the elevation of existing ridgelines within the project site. As such, public views of the project site from the City of Concord to the west would include future residences and graded hillside slopes.

Future development would be subject to the Design Review Guidelines included in the Draft Master Plan. The Design Review Guidelines are derived from existing General Plan policies, and are intended to provide a framework for the design of future development within the project site. For example, the Neighborhood and Subdivision Design section of the Design Review Guidelines would require clustering of hillside development behind ridgelines to preserve prominent views of the on-site hillsides from the north and to minimize adverse visual effects to the City of Concord to the west.

Changes to the visual character and quality of the project site as viewed from the City of Pittsburg, the City of Concord, and other neighboring areas to the South of the project site are discussed below. Anticipated views of the site are based on full buildout of the site at the maximum allowable intensity (including height limits) per the Draft Master Plan and the City of Pittsburg's Municipal Code. Figure 4.1-11 provides an overview of key vantage points from which sensitive receptors would have views of the proposed development. It should be noted that development would likely occur at a lower density than the maximum allowable per the Draft Master Plan, and building heights would vary throughout the site. As such, the views of the project presented in the figures represent a conservative estimate of future development conditions.

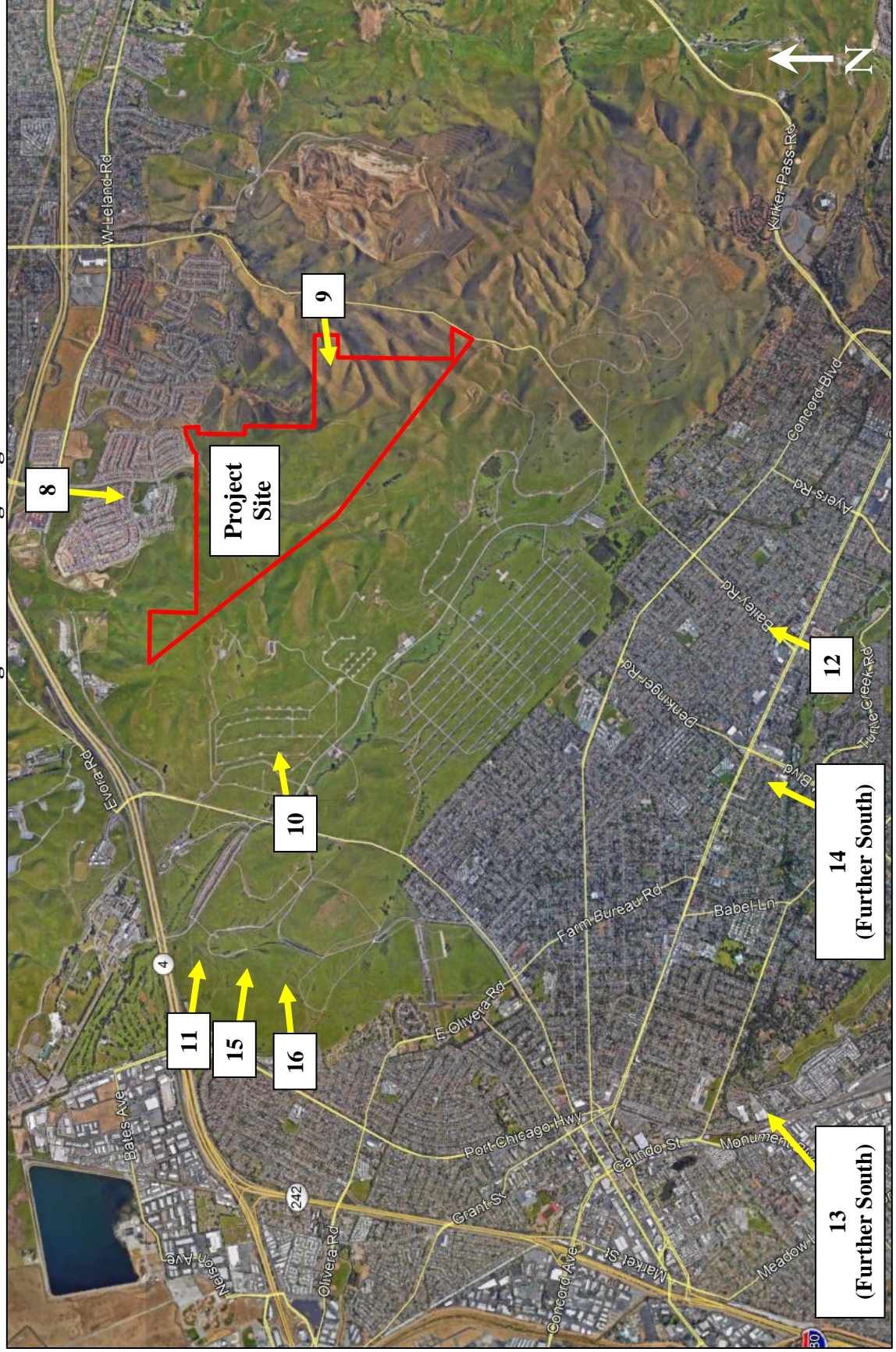
#### Changes to Views of the Project Site from the City of Pittsburg

As shown in Figure 4.1-12 and Figure 4.1-13, future residential development within the proposed project site would be visible from the City of Pittsburg. However, such development would be partially obscured by existing hills to the north and east of the project site. Views would likely be limited to the upper stories of on-site buildings and would occur only at key locations within the City. Furthermore, as shown in Figure 4.1-12, views of on-site development would also include views of existing residential development to the north of the project site. As such, development of the proposed project would not substantially change the existing visual character of the project site as viewed from the City of Pittsburg.

#### Views of Project Site from Concord and Surrounding Areas

As shown in Figure 4.1-14 through Figure 4.1-20, future residential development within the proposed project site would be partially visible from key locations within the City of Concord, as well as from Mt. Diablo further to the south of the project site.

**Figure 4.1-11**  
**Location and Orientation of Figure 4.1- through Figure 4.1-20**





**Figure 4.1-12**  
**Existing View of Project Site from W. Leland Road (View #8)**



**Proposed View of Project Site from W. Leland Road (View #8)**





**Figure 4.1-13**  
**Existing View of Project Site from Bailey Road (View #9)**



**Proposed View of Project Site from Bailey Road (View #9)**





**Figure 4.1-14**  
**Existing View of Project Site from Willow Pass Road (View #10)**



**Proposed View of Project Site from Willow Pass Road (View #10)**



**Figure 4.1-15**  
**Existing View of Project Site from SR 4 (View #11)**



**Proposed View of Project Site from SR 4 (View #11)**





**Figure 4.1-16**  
**Existing View of Project Site from Newhall Community Park (View #12)**



**Proposed View of Project Site from Newhall Community Park (View #12)**



**Figure 4.1-17**  
**Existing View of Project Site from Mt. Diablo (View #13)**



**Proposed View of Project Site from Mt. Diablo (View #13)**

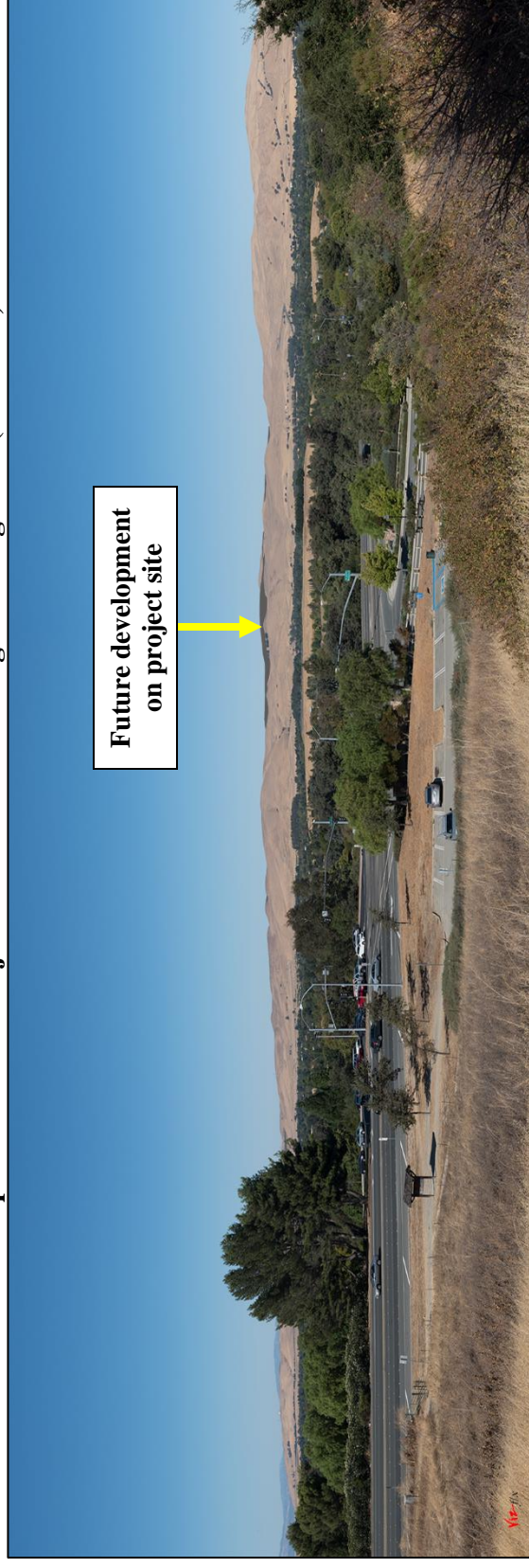




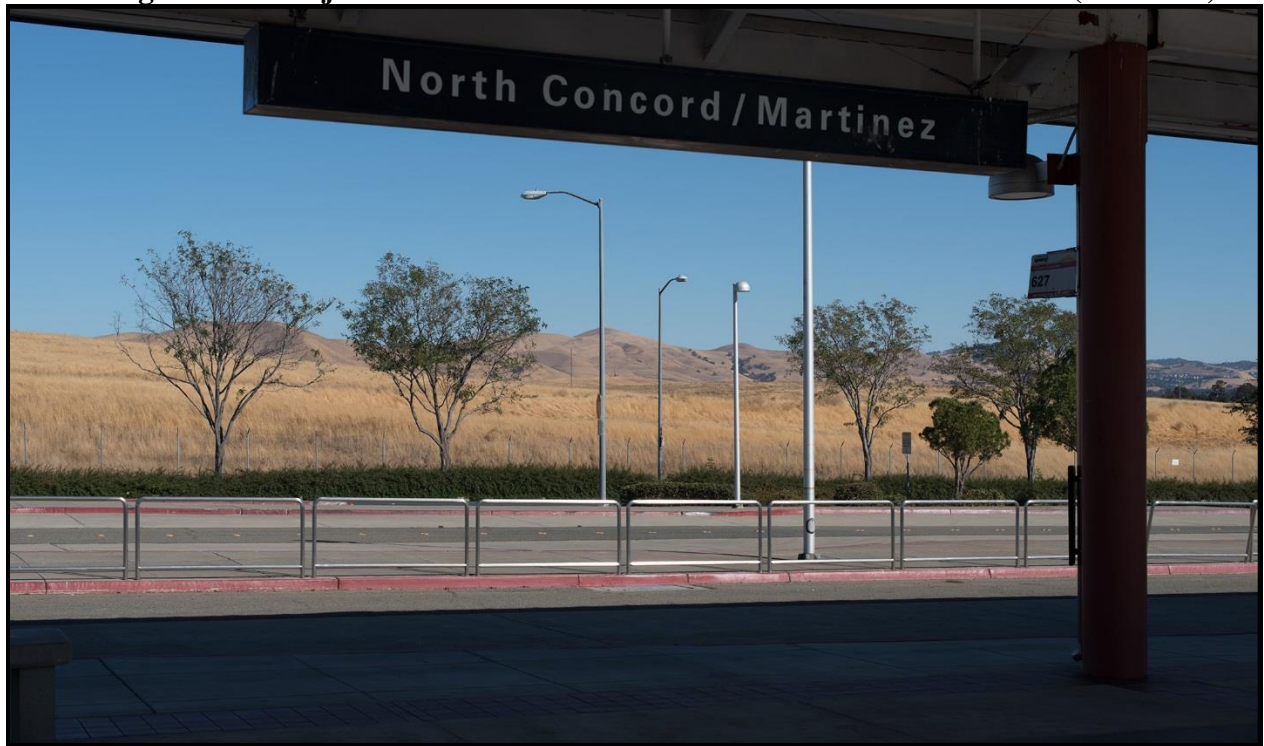
**Figure 4.1-18**  
**Existing View of Project Site from Lime Ridge Parking Area (View #14)**



**Proposed View of Project Site from Lime Ridge Parking Area (View #14)**



**Figure 4.1-19**  
**Existing View of Project Site from North Concord/Martinez BART Station (View #15)**



**Proposed View of Project Site from North Concord/Martinez BART Station (View #15)**





**Figure 4.1-20**  
**Existing View of Project Site from North Concord/Martinez BART Parking Lot (View #16)**



**Proposed View of Project Site from North Concord/Martinez BART Parking Lot  
(View #16)**





However, as noted above, a greenbelt buffer would be established between the proposed development and the urban limit line along the western project boundary to limit development on or directly adjacent to the ridgeline. Development would not be allowed within the greenbelt buffer; however, some limited grading would be anticipated to occur. Thus, as shown in the figures below, views from the south of the project site would likely be limited to the rooftops of two-story buildings and some graded hillsides. Sensitive viewers at Mt. Diablo would be afforded distant views of on-site development (see Figure 4.1-17).

However, given that Mt. Diablo is located a considerable distance south of the project site, views of the project would blend with existing development in the region. Considering that the greater project region, including the Cities of Pittsburg, Concord, and Clayton, has been extensively developed, the future residential development within the project site would not be perceived as a substantial change in the character or quality of the site.

### Conclusion

As discussed above and shown in the figures, views of future on-site development from public viewpoints in the surrounding areas would be relatively limited. The proposed land use and development regulations included in the Draft Master Plan, as well as the standards and policies included in the Design Review Guidelines, would ensure consistency between future on-site development and existing/planned residential developments to the north and east. For example, Design Review Guideline A.5 requires that future development be designed in diverse and distinctive neighborhoods that build upon the patterns of the natural landscape and provide a sense of connection with surrounding uses. In addition, Design Review Guideline D.4 requires buildings to be designed with natural-looking materials that reflect the predominant colors and textures of the surrounding landscape. As discussed in Chapter 4.9, Land Use and Planning, of this EIR, areas within the City of Pittsburg to the north and east of the project site are currently zoned and designated for open space and residential uses.

Furthermore, upon annexation of the proposed project site into the City of Pittsburg, the project applicant would be required to submit a Tentative Subdivision Map and detailed plans for Design Review approval to the City of Pittsburg. Design Review of future development, consistent with Chapter 18.36 of the PMC, would ensure that future development occurring within the project site would comply with the proposed Design Review Guidelines. According to Section 18.36.100 of the PMC, the purpose of the Design Review process is to avoid substandard development, ensure that improvements within residential neighborhoods maintain consistent standards of design, and ensure that development is consistent with criteria adopted under Section 18.36.120 of the PMC.

Despite the above, without detailed site plans, future project design, and, thus, the extent of visual impacts cannot be fully realized. However, substantial grading on the project site would dramatically change the natural topography. Thus, the project could have the potential to substantially degrade the existing visual character or quality of the project site and/or the site's surroundings. In addition, General Plan Policy 4-P-11 is intended to

minimize grading of hillside areas. It should be noted that the proposed project would include a General Plan text amendment to Policy 4-P-11 to allow for grading of hillsides when deemed necessary for slope stability remedial grading or installation of City infrastructure.

Policy 2-G-8 is intended to preserve ridgelines and viewsheds. The proposed project would involve substantial grading of hillside areas, including areas within the greenbelt ridgeline buffer between the City of Pittsburg and the City of Concord. These General Plan policies should be interpreted in the context of other portions of the General Plan including the Land Use Designation of the property for Low Density residential (1-7 dwelling unit per acre). General Plan Policy 2- P-96 is specific to the project site and limits the maximum buildout to 1,500 dwelling units. This designation was made recognizing the topography of the site and therefore it can be assumed that the General Plan Policies related to the preservation of the natural topography are superseded by the General Plan policy related to the density of 1,500 dwelling units on the project site. Due to the extensive grading that can be expected with this density of development, the proposed project could substantially degrade the existing visual character or quality of the project site and/or the site's surroundings and a *significant* impact would occur.

Mitigation Measure(s)

Implementation of the proposed project would include grading activities and residential development that would have the potential to substantially degrade the existing visual character or quality of the project site and/or the site's surroundings. However, feasible mitigation to reduce the alteration of the natural topography of the site is not available at this time. Therefore, the impact would remain *significant and unavoidable*.

**4.1-3 Creation of new sources of substantial light or glare that would adversely affect day or nighttime views in the area. Based on the analysis below and with implementation of mitigation, the impact would be *less than significant*.**

The project site is generally characterized as hillside land that consists of undeveloped vacant grasslands currently used as grazing land. The current primary sources of light in the vicinity of the project site are the existing residences to the north of the project site, and vehicular lights from motorists traveling within the existing neighborhood to the north and along Bailey Road to the east. Glare is typically associated with reflections from windows, building materials, and vehicles.

The proposed project includes the possible future development potential for 1,500 single-family residential units and associated infrastructure in the developable portion of the project site. The new structures would create new sources of light and/or glare on the project site where none currently exist. Such sources of light and glare would include, but not necessarily be limited to, headlights associated with vehicle traffic within the project site, street lighting, exterior lighting on future buildings, light spillage from the interiors of future buildings, and light reflecting off of windows or other reflective surfaces within the project site. Night lighting could be evident to neighboring properties to the north that are not accustomed to development on the site.

However, as discussed above, the Draft Master Plan provides various land use and development regulations, including outdoor lighting regulations, which would apply to all future development occurring under buildout of the proposed project site. Specifically, exterior lighting on buildings would be prohibited from spilling onto adjacent properties, and would be required to be designed and installed in such a manner that the light source would be shielded from view (Regulation C.3.a). In addition, all street lighting would be required to use “full cutoff” luminaries that direct light downward (Regulation C.3.b). Low-level street lighting would be used where possible. Furthermore, future development would be subject to other applicable regulations included in the PMC related to light and glare. For example, Section 18.56.090(I) of the PMC includes regulations requiring redirection and/or shielding of exterior lighting so as to prevent direct illumination of roadways and light spillage onto adjacent properties, while Section 18.56.090(M)(6) requires that street lighting in residential areas be designed to emit the minimum light intensity required to provide public safety.

Nonetheless, given the substantial level of development that could occur under buildout of the Draft Master Plan, the proposed project could create substantial sources of light and glare where none currently exist. Therefore, impacts from light and glare associated with the proposed project could be considered *significant*.

Mitigation Measure(s)

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

4.1-3      *In conjunction with the submittal of any development applications for future development on the project site, the applicant shall prepare and submit a detailed lighting plan showing that light would not trespass onto adjacent properties to the City of Pittsburg Community Development Department for review and approval as part of the development review process. The lighting plan shall include, but not necessarily be limited to, the following provisions:*

- *Shield or screen lighting fixtures to direct the light downward and prevent light from spilling onto adjacent properties;*
- *Place and shield or screen flood and area lighting needed for construction activities and/or security so as not to disturb adjacent residential areas and passing motorists;*
- *For public lighting, prohibit the use of light fixtures that are of unusually high intensity or brightness (e.g., harsh mercury vapor, low-pressure sodium, or fluorescent bulbs) or that blink or flash; and*
- *Use appropriate building materials (such as low-glare glass, low-glare building glaze or finish, neutral, earth-toned colored paint and roofing materials), shielded or screened lighting, and appropriate signage to prevent light and glare from adversely affecting motorists on nearby roadways.*

## Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Some types of impacts to aesthetic resources are localized and not cumulative in nature. For example, the creation of glare or shadows at one location is not worsened by glare or shadows created at another location. Rather, such effects are independent, and the determination as to whether they are adverse is specific to the project and location where they are created. Projects that block a view or affect the visual quality of a site also have localized aesthetic impacts. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site.

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

### **4.1-4 Long-term changes in visual character or quality of the region associated with cumulative development of the proposed project in combination with future buildout of the City of Pittsburg, as well as other reasonably foreseeable projects in the region. Based on the analysis below, the impact would be *less than significant*.**

As discussed in Impact 4.1-1, the proposed project would contribute to the change in visual character and quality of the southwestern hills Planning Area. The proposed annexation does not include any physical development or site- or project-specific plans for development at this time; however, future development of the site could ultimately result in the creation of 1,500 single-family residential units on currently vacant hillside grasslands, which would cause the visual character of portions of the site to be permanently altered to urban, built-up land.

As discussed above, the Draft Master Plan includes land use and development regulations based on existing General Plan policies, including policies related to preservation of aesthetic resources. Implementation of the land use and development regulations, as well as compliance with the PMC and standards and policies included in the proposed Design Review Guidelines, would ensure consistency between future on-site development and existing/planned residential developments to the north and east. Similarly, compliance with the Draft Master Plan land use and development regulations, PMC, and Design Review Guidelines would ensure that future on-site development would reduce the project’s potential to substantially degrade views of the ridgelines and hillsides within the project area.

The General Plan EIR concluded that buildout of the City's Planning Area, including the proposed project site, would result in the grading and subsequent development of the hillsides south of the City, potentially degrading the visual character of such areas and obstructing views of the hills from the north. However, the General Plan EIR determined that with implementation of General Plan policies related to clustering of future residential developments, hillside preservation, and protection of natural features, the impact would be reduced to a less-than-significant level.<sup>17</sup> Given that the Draft Master Plan is consistent with the type and intensity of development previously anticipated for the area per the General Plan and would provide land use and development regulations consistent with existing General Plan policies, the proposed project would not result in cumulative long-term changes in the visual character or quality of the region beyond what has been previously considered in the General Plan EIR.

It should be noted that the General Plan EIR did not analyze buildout of the areas directly to the west and south of the proposed project site, which include the Concord city limits and the recently closed CNWS. However, as discussed above, a greenbelt buffer would be established on the project site in accordance with the terms of Measure P and the May 3<sup>rd</sup> MOU. The greenbelt buffer between the proposed development and the urban limit line along the western project boundary would limit development along the ridgeline, and, thus, urban features such as future residences within the proposed project would not be visible to viewers within the City of Concord and the CNWS area.

Based on the above, cumulative buildout of the proposed project in combination with future buildout of the City of Pittsburg, as well as other reasonably foreseeable projects in the region, would not substantially degrade the visual character of the region. Therefore, a ***less-than-significant*** impact would occur with respect to long-term changes in visual character or quality of the region.

Mitigation Measure(s)

*None required.*

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<sup>17</sup> City of Pittsburg. *Pittsburg 2020: A Vision for the 21st Century, City of Pittsburg General Plan Draft Environmental Impact Report* [pg. 4-22 to 4-26]. January 2001.



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## 4.2 AGRICULTURAL RESOURCES

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## 4.2

## AGRICULTURAL RESOURCES

### 4.2.1 INTRODUCTION

The Agricultural Resources chapter of the EIR summarizes the status of the existing agricultural resources within the boundaries of the proposed project site, including identification of any Prime/Unique Farmland or Farmland of Statewide Importance within the project boundaries. If Prime/Unique Farmland or Farmland of Statewide Importance is determined to be on-site, the analysis will address the conversion of said lands to residential uses. Furthermore, the chapter addresses the project's consistency with the policies and standards of the Contra Costa County Local Agency Formation Commission (LAFCo) regarding agricultural resources and open space. Documents referenced to prepare this chapter include the *Pittsburg General Plan 2020* and associated EIR, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey,<sup>1</sup> the Contra Costa County Important Farmland Map,<sup>2</sup> and the Contra Costa LAFCo *Agricultural and Open Space Preservation Policy* (AOSPP).

### 4.2.2 EXISTING ENVIRONMENTAL SETTING

The following section includes a discussion of the State and local farmland classifications and the proposed project site's conditions related to such, as well as Williamson Act contracts.

#### State Farmland Classifications

The USDA NRCS uses two systems to determine a soil's agricultural productivity: the Soil Capability Classification and the Storie Index Rating System. The "prime" soil classification of both systems indicates the presence of few to zero soil limitations, which if present, would require the application of management techniques (e.g., drainage, leveling, special fertilizing practices) to enhance production. The Farmland Mapping and Monitoring Program (FMMP), part of the Division of Land Resource Protection, California Department of Conservation (DOC), uses the information from the NRCS to create maps illustrating the types of farmland in the area. The following discussion provides an overview of the Soil Capability Classification System, the Storie Index Rating System, and the FMMP.

#### Soil Capability Classification and Storie Index Rating System

The Soil Capability Classification is a system that takes into consideration soil limitations, the risk of damage when soils are used, and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils, which are

<sup>1</sup> United States Department of Agriculture, National Resources Conservation Service. *Web Soil Survey*. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed March 2017.

<sup>2</sup> California Department of Conservation. *Contra Costa County Important Farmland 2014*. Published April 2016.

unsuitable for agriculture. Generally, as the rating of the capability classification system increases, crop yields and profits are difficult to obtain. A general description of soil classification, as defined by the NRCS, is provided in Table 4.2-1.

<b>Table 4.2-1 Soil Capability Classification</b>	
<b>Class</b>	<b>Definition</b>
I	Soils have few limitations that restrict their use.
II	Soils have moderate limitations that reduce the choice of plants, or that require special conservation practices.
III	Soils have severe limitations that reduce the choice of plants, require conservation practices, or both.
IV	Soils have very severe limitations that reduce the choice of plants, require very careful management, or both.
V	Soils are not likely to erode but have other limitations; impractical to remove and limit their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife habitat, or water supply or to aesthetic purposes.
Source: USDA NRCS, <i>Soil Survey of Contra Costa County</i> , 1973.	

The Storie Index Rating System ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating), which do not have limitations or have few limitations for agricultural production, to Grade 6 soils (less than 10), which are not suitable for agriculture. Under the Storie Index Rating System, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definition of the grades, as defined by the NRCS, are provided in Table 4.2-2, Storie Index Rating System.

According to the Web Soil Survey, the project site is made up of the following soils: Altamont-Fontana complex, 30 to 50 percent slopes; Altamont-Fontana complex, 50 to 75 percent slopes; Altamont clay, 15 to 30 percent slopes; Capay clay, two to nine percent slopes; and Lodo-rock outcrop complex. Table 4.2-3 lists the soil capability classification and Storie Index rating of the on-site soils according to the NRCS. Figure 4.2-1 shows the specific locations of the on-site soil types.

The DOC Farmland Mapping and Monitoring Program's Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Contra Costa County lists Capay clay, two to nine percent slopes, as a soil that meets the criteria for Prime Farmland.<sup>3</sup>

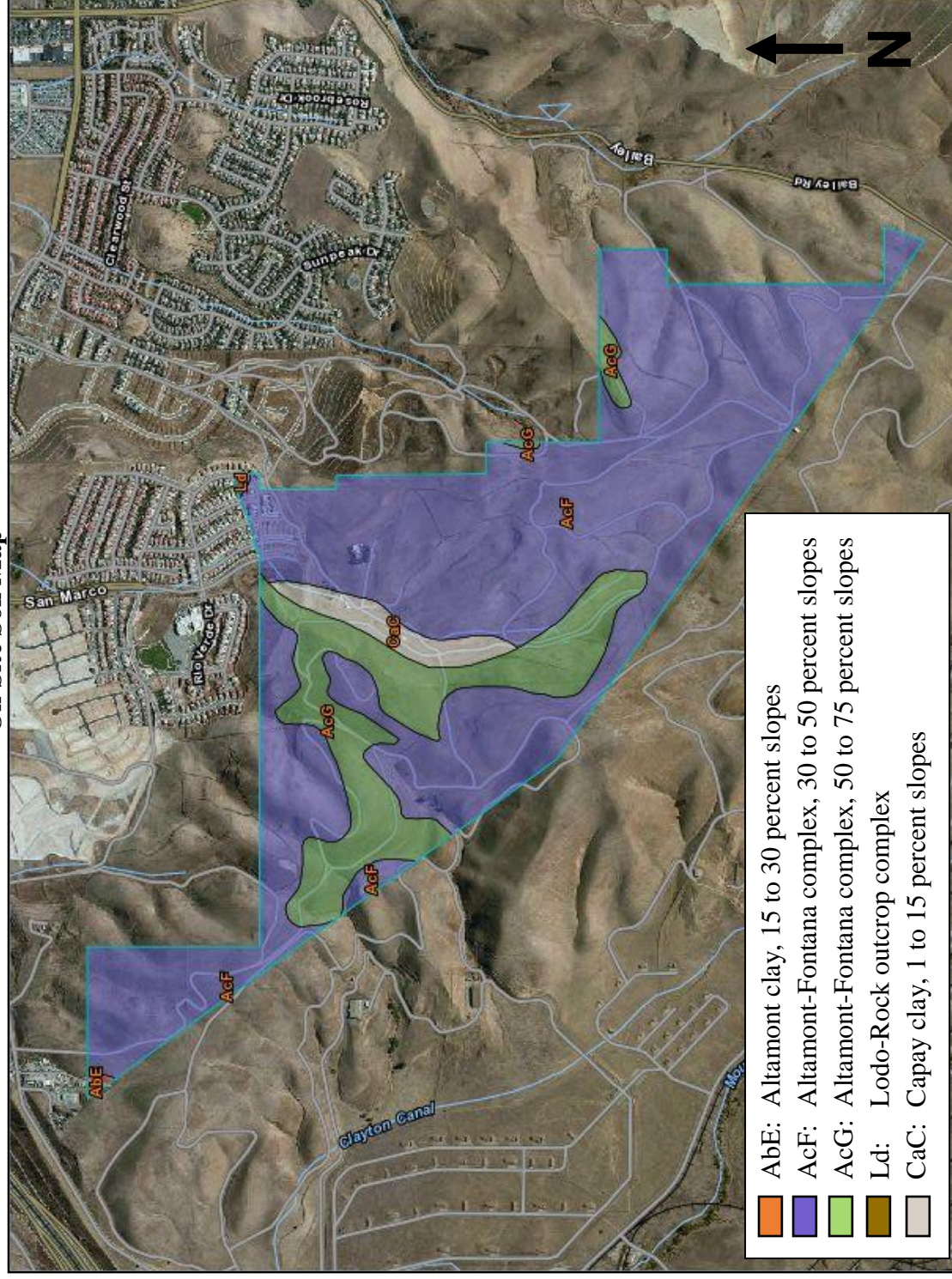
<sup>3</sup> United States Department of Agriculture, Natural Resources Conservation Service. *Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Contra Costa County*. September 1977.

<b>Table 4.2-2 Storie Index Rating System</b>		
<b>Grade</b>	<b>Index Rating</b>	<b>Definition</b>
1 – Excellent	80 through 100	Soils are well suited to intensive use for growing irrigated crops that are climatically suited to the region.
2 – Good	60 through 79	Soils are good agricultural soils, although they may not be so desirable as Grade 1 because of moderately coarse, coarse, or gravelly surface soil texture; somewhat less permeable subsoil; lower plant available water holding capacity, fair fertility; less well drained conditions, or slight to moderate flood hazards, all acting separately or in combination.
3 – Fair	40 through 59	Soils are only fairly well suited to general agriculture use and are limited in their use because of moderate slopes; moderate soils depths; less permeable subsoil; fine, moderately fine or gravelly surface soil textures; poor drainage; moderate flood hazards; or fair to poor fertility levels, all acting alone or in combination.
4 – Poor	20 through 39	Soils are poorly suited. They are severely limited in their agricultural potential because of shallow soil depths; less permeable subsoil; steeper slope; or more clayey or gravelly surface soil texture than Grade 3 soils, as well as poor drainage; greater flood hazards; hummocky micro-relief; salinity; or poor fertility levels, all acting alone or in combination.
5 – Very Poor	10 through 19	Soils are very poorly suited for agriculture, are seldom cultivated and are more commonly used for range, pasture, or woodland.
6 – Non-Agriculture	Less than 10	Soils are not suited for agriculture at all due to very severe to extreme physical limitations, or because of urbanization.
Source: USDA NRCS, <i>Web Soil Survey</i> , 1973.		

<b>Table 4.2-3 On-Site Soil Capability Classification and Storie Index Rating</b>			
<b>Soil Map Symbol and Name</b>	<b>Soil Capability Classification</b>	<b>Storie Index Rating</b>	<b>Grade</b>
Altamont-Fontana complex (AcF), 30 to 50 percent slopes	VIe-1 irrigated, VI, non-irrigated	19	5
Altamont-Fontana complex (AcG), 50 to 75 percent slopes	VIIe-1 irrigated, VII non-irrigated	9	6
Altamont clay (AbE), 15 to 30 percent slopes	IVe-5 irrigated, IV non-irrigated	27	4
Capay clay (CaC), 2 to 9 percent slopes	IIE-5 irrigated, IV non-irrigated	51	3
Lodo-Rock outcrop complex (Ld)	VIIe-1 irrigated, VII non-irrigated	2-13	5-6
Source: USDA NRCS, <i>Web Soil Survey</i> , March 2017.			



**Figure 4.2-1  
On-Site Soil Map**



Source: USDA, NRCS, Web Soil Survey, March 2017.



However, the Capay clay found on the project site has very severe limitations that reduce the choice of plants or require very careful management, or both. For example, the depth to the water table is more than 80 inches, which is an insufficient depth during the cropping season to allow cultivated crops common to the area to be grown. In addition, the portion of the project area that contains Capay clay is not irrigated and a dependable water supply for the production of commonly grown crops is not available. Accordingly, the Capay clay, two to nine percent slopes, is unsuitable for agricultural cultivation per the Soil Capability Classification and the Storie Index Rating System.

### FMMP Mapping

Since 1980, the State of California has assisted the NRCS with completing mapping in the State. The FMMP was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the NRCS. The intent of the NRCS was to produce agriculture maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the NRCS developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria.

The LIM criteria classified the land's suitability for agricultural production; suitability included both the physical and chemical characteristics of soils and the actual land use. The DOC applied a greater level of detail by modifying the LIM criteria for use in California. The LIM criteria in California utilizes the Soil Capability Classification and the Storie Index Rating System, but also considers physical conditions such as dependable water supply for agricultural production, soil temperature range, depth of the groundwater table, flooding potential, rock fragment content and rooting depth.

The California DOC classifies lands into seven agriculture-related categories: Prime Farmland, Farmland of Statewide Importance (Statewide Farmland), Unique Farmland, Farmland of Local Importance (Local Farmland), Grazing Land, Urban and Built-up Land (Urban Land), and Other Land. The first four types listed above are collectively designated by the State as Important Farmlands. Important Farmland maps for California are compiled using the modified LIM criteria and current land use information. The minimum mapping unit is 10 acres unless otherwise specified. Units of land smaller than 10 acres are incorporated into surrounding classifications.

Each of the seven land types are summarized below, based on California DOC's *A Guide to the Farmland Mapping and Monitoring Program*.<sup>4</sup>

#### *Prime Farmland*

Prime Farmland is land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles (a cycle is equivalent to

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<sup>4</sup> California Department of Conservation, Division of Land Resource Protection, *FMMP: A Guide to the Farmland Mapping and Monitoring Program*. Available at: [http://www.consrv.ca.gov/DLRP/fmmp/pubs/fmmp\\_guide\\_2004.pdf](http://www.consrv.ca.gov/DLRP/fmmp/pubs/fmmp_guide_2004.pdf). Accessed March 2017.

two years) prior to the mapping date of 1998 (or since 1994). Prime Farmland must meet all of the following criteria:

- **Water:** The soils have xeric, ustic, or aridic (torric) moisture regimes in which the available water capacity is at least 4.0 inches (10 cm) per 40 to 60 inches (1.02 to 1.52 meters) of soil, and a developed irrigation water supply that is dependable and of adequate quality. A dependable water supply is one which is available for the production of the commonly grown crops in 8 out of 10 years;
- **Soil Temperature Range:** The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50.8 cm), have a mean annual temperature higher than 32°F (0°C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47°F (8°C); in soils that have no O horizon, the mean summer temperature is higher than 59°F (15°C);
- **Acid-Alkali Balance:** The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches (1.02 meters);
- **Water Table:** The soils have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown;
- **Soil Sodium Content:** The soils can be managed so that, in all horizons within a depth of 40 inches (1.02 meters), during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage is less than 15;
- **Flooding:** Flooding of the soil (uncontrolled runoff from natural precipitation) during the growing season occurs infrequently, taking place less often than once every two years;
- **Erodibility:** The product of K (erodibility factor) multiplied by the percent of slope is less than 2.0;
- **Permeability:** The soils have a permeability rate of at least 0.06 inch (0.15 cm) per hour in the upper 20 inches (50.8 cm) and the mean annual soil temperature at a depth of 20 inches (50.8 cm) is less than 59°F (15°C); the permeability rate is not a limiting factor if the mean annual soil temperature is 59°F (15°C) or higher;
- **Rock Fragment Content:** Less than 10 percent of the upper 6 inches (15.24 cm) in these soils consists of rock fragments coarser than 3 inches (7.62 cm); and
- **Rooting depth:** The soils have a minimum rooting depth of 40 inches (1.02 meters).

### *Statewide Farmland*

Farmland of Statewide Importance is land similar to prime farmland, but with minor shortcomings, such as greater slopes or with less ability to hold and store moisture. The land must have been used for the production or irrigated crops at some time during the two update cycles prior to the mapping date (or since 1994).



### *Unique Farmland*

Unique Farmland is land of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been cultivated at some time during the two update cycles prior to the mapping date (or since 1994).

### *Local Farmland*

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by each county's Board of Supervisors and a local advisory committee. Contra Costa County local farmland includes lands which do not qualify as Prime, Statewide, or Unique designation, but are currently irrigated crops or pasture or non-irrigated crops; lands that would meet the Prime or Statewide designation and have been improved for irrigation, but are now idle; and lands that currently support confined livestock, poultry operations and aquaculture.

### *Grazing Land*

Grazing Land is land on which the existing vegetation, whether grown naturally or through management, is suited to the grazing of livestock. The minimum mapping unit for this category is 40 acres.

### *Urban Land*

Urban Land is occupied with structures with a building density of at least one unit to one-half acre. Uses may include but are not limited to, residential, industrial, commercial, construction, institutional, public administration purposes, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes. Highways, railroads, and other transportation facilities are mapped as part of this unit, if they are part of a surrounding urban area.

### *Other Land*

Other Land is land that is not included in any other mapping categories. The following uses are generally included: rural development, brush timber, government land, strip mines, borrow pits, and a variety of other rural land uses.

### *Mapping of On-site Soils*

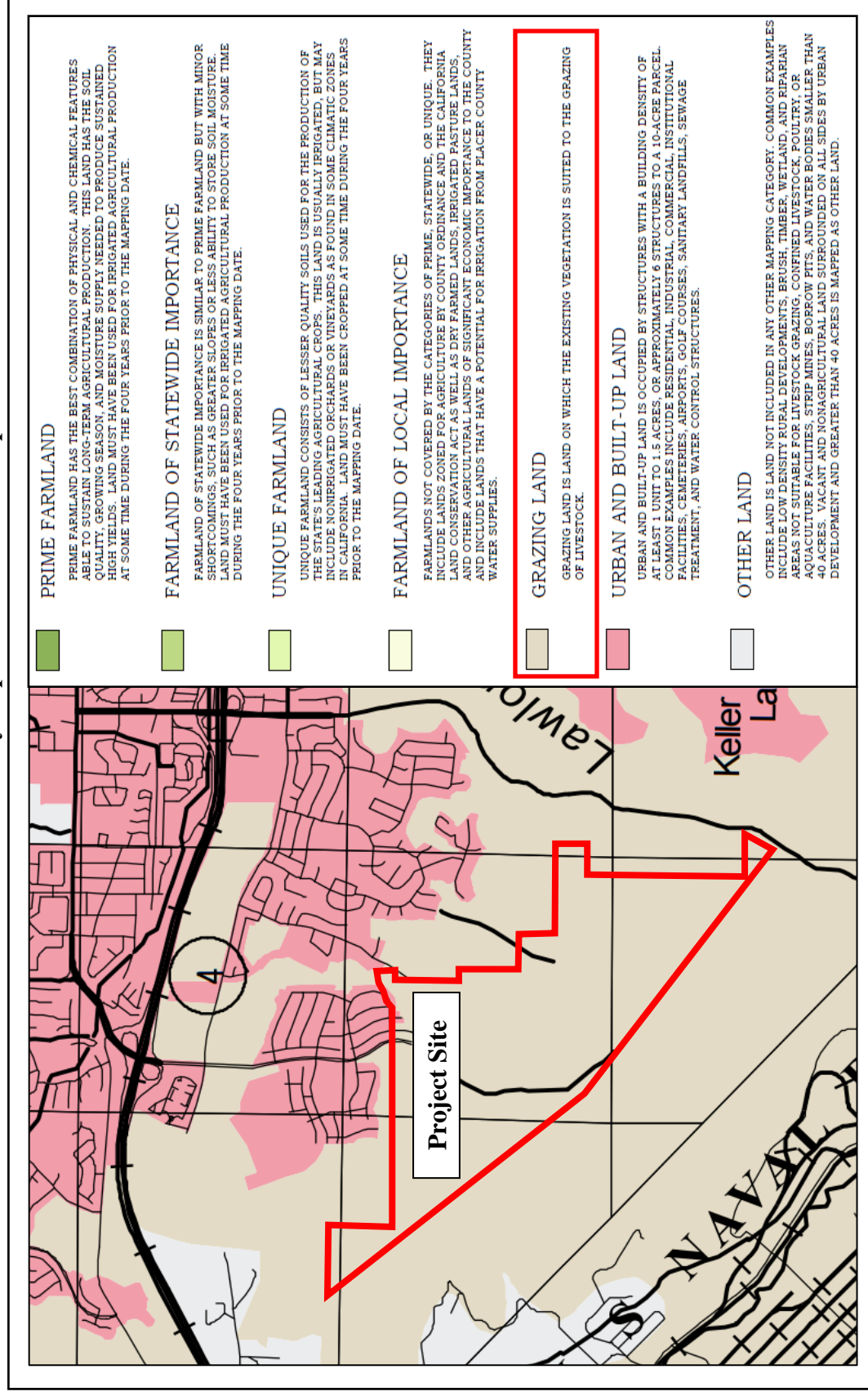
According to the FMMP, the project site is mapped as Grazing Land (see Figure 4.2-2). As discussed above, the DOC Farmland Mapping and Monitoring Program's Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Contra Costa County lists Capay clay, two to nine percent slopes, as a soil that meets the criteria for Prime Farmland.<sup>5</sup>

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<sup>5</sup> United States Department of Agriculture, Natural Resources Conservation Service. *Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Contra Costa County*. September 1977.



**Figure 4.2-2**  
**Contra Costa County Important Farmland Map**



Source: California Department of Conservation. Contra Costa County Important Farmland 2014, March 2017.



However, severe limitations exist, such as depth of the water table and lack of irrigation. Accordingly, the Capay clay, two to nine percent slopes, located on the project site does not meet all of the DOC's criteria for Prime Farmland as listed above. Furthermore, as noted previously, the on-site Capay clay is located in an area on the site which is currently designated as Open Space. None of the on-site soils meet the criteria for Farmland of Statewide Importance or Farmland of Local Importance.

### Local Farmland Classifications

The proposed project includes a request for annexation of the approximately 606-acre project site to the City of Pittsburg, as well as the Contra Costa Water District (CCWD) and the sanitation district Delta Diablo (DDSD) service areas, which ultimately requires the approval of Contra Costa LAFCo. Thus, Contra Costa LAFCo is a responsible agency for the proposed project, and consistency with LAFCo's recently adopted AOSPP and relevant goals and policies related to agricultural resources would be required prior to project approval.

Contra Costa LAFCo uses the following classifications for agricultural land, prime agricultural land, and open space:

**56016. "Agricultural lands"** means land currently used for the purpose of producing an agricultural commodity for commercial purposes, land left fallow under a crop rotational program, or land enrolled in an agricultural subsidy or set-aside program.

**56064. "Prime agricultural land"** means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:

- (a) Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
- (b) Land that qualifies for rating 80 through 100 Storie Index Rating.
- (c) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
- (d) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual bases from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.
- (e) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.

**56059. "Open space"** means any parcel or area of land or water which is substantially unimproved and devoted to an open-space use, as defined in Section 65560."

**65560.** (a) "Local open-space plan" is the open-space element of a county or city general plan adopted by the board or council, either as the local open-space plan or as the interim local open-space plan adopted pursuant to Section 65563.

(b) "Open-space land" is any parcel or area of land or water that is essentially unimproved and devoted to an open-space use as defined in this section, and that is designated on a local, regional, or state open-space plan as any of the following:

(1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays, and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, greenways, as defined in Section 816.52 of the Civil Code, and watershed lands.

(2) Open space used for the managed production of resources, including, but not limited to, forest lands, rangeland, agricultural lands, and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers, and streams that are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open space for outdoor recreation, including, but not limited to, areas of outstanding scenic, historic, and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas that serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, greenways, and scenic highway corridors.

(4) Open space for public health and safety, including, but not limited to, areas that require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs, and areas required for the protection and enhancement of air quality.

(5) Open space in support of the mission of military installations that comprises areas adjacent to military installations, military training routes, and underlying restricted airspace that can provide additional buffer zones to military activities and complement the resource values of the military lands.

(6) Open space for the protection of places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code (i.e., Native American Historical, Cultural and Sacred Sites).

The proposed project site is not currently used for the production of an agricultural commodity, does not include land previously used for crop production, and does not include land enrolled in an agricultural subsidy or set-aside program. As shown in Table 4.2-3, lands within the project site do not qualify for rating as Class I or Class II per the USDA NRCS Capability Classification system. As also shown in Table 4.2-3, the highest Storie Index Rating of any on-site soil is 51, which is well below the 80 to 100 threshold specified by LAFCo. In addition, the site has not been planted with fruit or nut-bearing trees, vines, bushes, or crops, and has not been used for the production of unprocessed agricultural plant products. Based on the above, the project site does not meet the Contra Costa LAFCo's definition of "agricultural lands" or "prime agricultural land". Approximately 129 acres of the project site are designated by the City as Open Space. The land currently designated as Open Space by the City would meet the Contra Costa LAFCo's classification for open space.

## Williamson Act Contracts

Several hundred acres of grazing land within the southwest hills area were removed from Williamson Act contracts within the last decade, including areas within the proposed project site; however, the site does not contain land currently under a Williamson Act contract. The project site is designated in the City of Pittsburg's General Plan EIR for development with low-density residential and open space uses. The site is currently zoned for agricultural uses under the Contra Costa County Zoning Code (current jurisdiction); however, the site is currently pre-zoned for residential and open space uses under the City of Pittsburg Zoning Code, following the passing of Measure P by the City of Pittsburg voters.

### 4.2.3 REGULATORY CONTEXT

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The following is a description of State and local environmental laws and policies that are relevant to the review of agricultural resources under CEQA.

#### State Regulations

The California Land Conservation Act, better known as the Williamson Act, has been the State's premier agricultural land protection program since the act's enactment in 1965. The California legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses.

The Williamson Act creates an arrangement whereby private landowners contract with counties and cities to voluntarily restrict land to agricultural and open space uses. The vehicle for these agreements is a rolling term 10-year contract (i.e., unless either party files a "notice of non-renewal," the contract is automatically renewed annually for an additional year). In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value. The proposed project site is not under a Williamson Act contract.

#### Local Regulations

The following are the local government environmental goals and policies relevant to the CEQA review process with respect to agricultural resources.

#### City of Pittsburg General Plan

The following are applicable goals and policies from the Pittsburg General Plan.

#### *General Land Use*

Goal 2-G-8     Ensure that hillside development enhances the built environment, improves safety through slope stabilization, is respectful of topography and other natural constraints, and preserves ridgelines and viewsheds.

Policy 2-P-3 Allow market forces, the status of agricultural preserve (Williamson Act) contracts, and the availability of urban services to determine the timing of annexation or development expansion into the hillsides.

Policy 2-P-28 During development review, ensure that the design of new hillside neighborhoods minimizes potential land use incompatibilities with any grazing/agricultural activities in the southern hills.

### *Open Space, Youth and Recreation*

Goal 8-G-3 Promote a local trail and linear park system to provide access to regional open space areas, as well as connections between neighborhoods.

Policy 8-P-22 Preserve land under Williamson Act contract in agriculture, consistent with State law, until urban services are available and expansion of development would occur in an orderly and contiguous fashion.

### Contra Costa LAFCo AOSPP

On December 14, 2016, the Contra Costa LAFCo finalized the AOSPP. The purpose of the Contra Costa LAFCo's AOSPP is threefold: 1) to provide guidance to the applicant on how to assess the impacts on prime agricultural, agricultural, and open space lands of applications submitted to LAFCo, and enable the applicant to explain how the applicant intends to mitigate those impacts; 2) to provide a framework for LAFCo to evaluate and process in a consistent manner, applications before LAFCo that involve or impact prime agricultural, agricultural and/or open space lands; and 3) to explain to the public how LAFCo will evaluate and assess applications that affect prime agricultural, agricultural and/or open space lands.

The following goals are included in the AOSPP and help guide LAFCo's decisions regarding prime agricultural, agricultural, and open space lands:

- Goal 1 Minimize the conversion of prime agricultural land and open space land to other land uses while balancing the need to ensure orderly growth and development and the efficient provision of services.
- Goal 2 Encourage cities, the county, special districts, property owners and other stakeholders to work together to preserve prime agricultural, agricultural and open space lands.
- Goal 3 Incorporate agricultural and open space land preservation into long range planning consistent with principles of smart growth at the state, county, and municipal levels.
- Goal 4 Strengthen and support the agricultural sector of the economy.



- Goal 5 Fully consider the impacts an application will have on existing prime agricultural, agricultural and open space lands.
- Goal 6 Preserve areas that sustain agriculture in Contra Costa County.

The following policies support the goals stated above and are used by Contra Costa LAFCo when considering an application that involves prime agricultural, agricultural and/or open space lands:

- Policy 1 The Commission encourages local agencies to adopt policies that result in efficient, coterminous and logical growth patterns within their General Plan, Specific Plans and SOI areas, and that encourage preservation of prime agricultural, agricultural and open space lands in a manner that is consistent with LAFCO's policy.
- Policy 2 Vacant land within urban areas should be developed before prime agricultural, agricultural and/or open space land is annexed for non-agricultural and non-open space purposes.
- Policy 3 Land substantially surrounded by existing jurisdictional boundaries (e.g., islands) should be annexed before other lands.
- Policy 4 Where feasible, and consistent with LAFCO policies, non-prime agricultural land should be annexed before prime agricultural land.
- Policy 5 While annexation of prime agricultural, agricultural and open space lands is not prohibited, annexation of these areas for urban development is not encouraged if there are feasible alternatives that allow for orderly and efficient growth. Large lot rural development that places pressure on a jurisdiction to provide services, and causes agricultural areas to be infeasible for farming or agricultural business, is discouraged.
- Policy 6 The continued productivity and sustainability of agricultural land surrounding existing communities should be promoted by preventing the premature conversion of agricultural land to other uses and, to the extent feasible, minimizing conflicts between agricultural and other land uses. Buffers and/or local right to farm ordinances should be established to promote this policy. Contra Costa County has a Right to Farm ordinance which requires notification of purchasers and users of property adjacent to or near agricultural operations of the inherent potential problems associated with such purchase or residential use.
- Policy 7 Development near agricultural land should minimize adverse impacts to agricultural operations.
- Policy 8 Development near open space should minimize adverse impacts to open space uses.

- Policy 9        The Commission will consider feasible mitigation (found in the following guidelines) if an application would result in the loss of prime agricultural, agricultural and/or open space lands.
- Policy 10       Any mitigations that are conditions of LAFCO's approval of an application should occur close to the location of the impact and within Contra Costa County.

#### **4.2.4      IMPACTS AND MITIGATION MEASURES**

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The section below describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to agricultural resources.

##### **Standards of Significance**

An agricultural impact may be considered to be significant if implementation of the proposed project would do any of the following:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the FMMP maps, to non-agricultural use (Initial Study Question II.a.);
- Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use (Initial Study Question II.e.); or
- Conflict with Contra Costa LAFCo's AOSPP.

##### **Issues Not Discussed Further**

It should be noted that the Initial Study prepared for the proposed project addressed impacts associated with development of the proposed project related to zoning for agricultural and forest uses (Initial Study Questions II.b. and II.c.), Williamson Act contracts (Initial Study Question II.b.), and loss of forest land and timberland (Initial Study Question II.d.), and determined that such impacts would be less than significant. Accordingly, impacts related to zoning for agricultural use, Williamson Act contracts, forest land, and timberland are not further analyzed or discussed in this EIR.

##### **Method of Analysis**

Evaluation of potential impacts of the proposed project on agricultural resources were based on the following: the Pittsburg General Plan; the Pittsburg General Plan EIR; the USDA NRCS Web Soil Survey performed for the project site; the Soil Survey of Contra Costa County; the Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Contra Costa County; and the Contra Costa LAFCo AOSPP. The standards of significance listed above are used to delineate the significance of any potential impacts.

## Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above.

**4.2-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the FMMP maps, to non-agricultural use, or involve other changes in the existing environment which, due to their location or nature, could individually result in loss of Farmland to non-agricultural use. Based on the analysis below, the impact would be *less than significant*.**

According to the FMMP, the proposed project site does not include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (see Figure 4.2-2). Rather, the entirety of the project site is mapped as Grazing Land. With implementation of the proposed project, 339.1 acres of the proposed project site would be developed with residential uses, and, thus, such land would cease to be available for grazing purposes. However, it should be noted that extensive cattle grazing operations are not practiced on the project site, and grazing is primarily conducted on-site for vegetation management.

Because the proposed project site is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, development of the proposed project would not result in the conversion of Farmland to non-agricultural uses, and a *less-than-significant* impact would occur.

Mitigation Measure(s)  
*None required.*

**4.2-2 Conflict with Contra Costa LAFCo's AOSPP. Based on the analysis below, the impact would be *less than significant*.**

As discussed previously, the project site does not meet the Contra Costa LAFCo's definition of agricultural lands or prime agricultural land. However, the lands within the proposed project site that are currently designated as Open Space by the City are consistent with the LAFCo's definition of open space. Thus, the goals and policies included in the AOSPP related to open space would apply to the proposed project.

The Draft Master Plan Land Use Map identifies 267.2 acres of land within the project site as Open Space. While some areas currently designated as Open Space in the City's General Plan would be converted to residential uses, the amount of land identified as Open Space in the Draft Master Plan Land Use Map represents an increase of 138.2 acres beyond the 129 acres currently designated as Open Space by the City. Although areas designated as Open Space in the Draft Master Plan Land Use Map would not be developed as part of the proposed project, approximately 72.9 acres of the Open Space areas would be temporarily disturbed during site grading. Thus, while a portion of the existing Open Space areas on the project site would be converted to urban uses as part of the proposed project, the Draft Master Plan Land Use Map would preserve a correspondingly greater area of Open Space.

Consequently, the project would minimize the conversion of open space land to other uses through incorporation of open space land preservation, consistent with Goal 1 and Goal 3 and Policy 1, respectively, of the Contra Costa LAFCo's AOSPP. By preserving more open space land than currently designated in the project area, the proposed project would minimize adverse impacts to open space uses, consistent with AOSPP Policy 8. In addition, consistent with AOSPP Goal 5, the potential for impacts associated with effects of the project on existing open space land are addressed throughout this EIR.

Because the proposed project site does not contain agricultural lands or prime agricultural land, as defined by Contra Costa LAFCo, and because the proposed project would preserve a greater area of open space lands than what currently exists on the project site, the project would be consistent with the goals and policies included in the Contra Costa LAFCo AOSPP, and a *less-than-significant* impact would occur.

Mitigation Measure(s)  
*None required.*

## **Cumulative Impacts and Mitigation Measures**

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area. The combined effects of cumulative development in the cumulative geographic setting would lead to an impact on agricultural resources primarily where large expanses of agricultural or forest land are converted to non-agricultural uses. Whereas, buildout of vacant parcels scattered throughout the cumulative geographic setting would not be expected to result in additive effects related to the conversion of agricultural or forest land, as such development would primarily occur within infill areas that are not in agricultural use and/or are surrounded by existing development.

### **4.2-3 Involve other changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use. Based on the analysis below, the impact would be *less than significant*.**

As discussed above in Impact 4.2-1, the proposed project would not result in the conversion of Farmland to non-agricultural uses. The Pittsburg General Plan EIR analyzed impacts to agricultural resources associated with the buildout of the entire General Plan and found impacts related to loss of Prime Farmland and Farmland of Statewide or Local Importance

to be less than significant. While the site is currently designated as Grazing Land per the FMMP, the Pittsburg General Plan designates the site as Low Density Residential and Open Space. Accordingly, buildout of the proposed project in conjunction with the other present and probable future projects in the City would result in a ***less-than-significant cumulative impact*** related to loss of Farmland to non-agricultural use.

Mitigation Measure(s)

*None required.*



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## 4.3 AIR QUALITY AND GREENHOUSE GAS EMISSIONS

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## 4.3

## AIR QUALITY AND GREENHOUSE GAS EMISSIONS

### 4.3.1 INTRODUCTION

The Air Quality and Greenhouse Gas Emissions chapter of this EIR describes the effects of the proposed project on local and regional air quality as well as greenhouse gas (GHG) emissions and global climate change. The chapter includes a discussion of the existing air quality and GHG setting, construction-related emissions resulting from grading and equipment, direct and indirect emissions associated with the project, the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts. The chapter is primarily based on information and guidance within the Bay Area Air Quality Management District (BAAQMD) *California Environmental Quality Act Air Quality Guidelines* (CEQA Guidelines),<sup>1</sup> as well as the City of Pittsburg General Plan<sup>2</sup> and associated EIR.<sup>3</sup>

### 4.3.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides an overview of the existing air quality in the proposed project area, which is located in Contra Costa County and would be annexed into the City of Pittsburg upon approval.

#### Air Basin Characteristics

The project site is located in the eastern portion of the nine-county San Francisco Bay Area Air Basin (SFBAAB), and is within the jurisdictional boundaries of the BAAQMD. The SFBAAB consists of coastal mountain ranges, inland valleys, and bays. The proposed project is located on the south side of the San Joaquin River delta, east of the Carquinez Strait, and would be considered to be within the Carquinez Strait region of the SFBAAB. Being located between the greater Bay Area and the Central Valley has great influence on the climate and air quality of the area. During the summer and fall months, marine air is drawn eastward through the Carquinez Strait, with common wind speeds of 15 to 20 miles per hour throughout the region. The general west-to-east flow of the winds in the straits tends to move pollutants east. Thus, the winds dilute pollutants and transport them away from the area, so that emissions released in the project area have more influence on air quality in the Sacramento and San Joaquin Valleys than locally. However, stationary sources located in upwind cities could influence the local air quality.

<sup>1</sup> Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.

<sup>2</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

<sup>3</sup> City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January, 2001.

Average daily maximum temperatures (in degrees Fahrenheit) are in the mid to high 50s in the winter and the high 80s in the summer. Average minimum temperatures are in the high 30s to low 40s in the winter and the mid-50s in the summer. Rainfall amounts in the region vary from 13 inches annually in Antioch to 22 inches annually in Fairfield.

### **Ambient Air Quality Standards**

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. The federal standards are divided into primary standards, which are designed to protect the public health, and secondary standards, which are designed to protect the public welfare. The ambient air quality standards for each contaminant represent safe levels that avoid specific adverse health effects. Pollutants for which air quality standards have been established are called “criteria” pollutants. Table 4.3-1 identifies the major pollutants, characteristics, health effects and typical sources. The federal and California ambient air quality standards (NAAQS and CAAQS, respectively) are summarized in Table 4.3-2. The NAAQS and CAAQS were developed independently with differing purposes and methods. As a result, the federal and State standards differ in some cases. In general, the State of California standards are more stringent, particularly for ozone and particulate matter (PM), than the federal standards.

A description of each criteria pollutant and its potential health effects is provided below.

#### Ozone

Ozone is a reactive gas consisting of three oxygen atoms. In the troposphere, ozone is a product of the photochemical process involving the sun's energy, and is a secondary pollutant formed as a result of a complex chemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NO<sub>x</sub>) emissions in the presence of sunlight. As such, unlike other pollutants, ozone is not released directly into the atmosphere from any sources. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation. The primary source of ozone precursors is mobile sources, including cars, trucks, buses, construction equipment, and agricultural equipment.

Ground-level ozone reaches the highest level during the afternoon and early evening hours. High levels occur most often during the summer months. Ground-level ozone is a strong irritant that could cause constriction of the airways, forcing the respiratory system to work harder in order to provide oxygen. Ozone at the Earth's surface causes numerous adverse health effects and is a major component of smog. High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments.

**Table 4.3-1  
Summary of Criteria Pollutants**

<b>Pollutant</b>	<b>Characteristics</b>	<b>Health Effects</b>	<b>Major Sources</b>
Ozone	A highly reactive gas produced by the photochemical process involving a chemical reaction between the sun's energy and other pollutant emissions. Often called photochemical smog.	<ul style="list-style-type: none"> <li>• Eye irritation</li> <li>• Wheezing, chest pain, dry throat, headache, or nausea</li> <li>• Aggravated respiratory disease such as emphysema, bronchitis, and asthma</li> </ul>	Combustion sources such as factories, automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	An odorless, colorless, highly toxic gas that is formed by the incomplete combustion of fuels.	<ul style="list-style-type: none"> <li>• Impairment of oxygen transport in the bloodstream</li> <li>• Impaired vision, reduced alertness, chest pain, and headaches</li> <li>• Can be fatal in the case of very high concentrations</li> </ul>	Automobile exhaust, combustion of fuels, and combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	A reddish-brown gas that discolors the air and is formed during combustion of fossil fuels under high temperature and pressure.	<ul style="list-style-type: none"> <li>• Lung irritation and damage</li> <li>• Increased risk of acute and chronic respiratory disease</li> </ul>	Automobile and diesel truck exhaust, industrial processes, and fossil-fueled power plants.
Sulfur Dioxide	A colorless, irritating gas with a rotten egg odor formed by combustion of sulfur-containing fossil fuels.	<ul style="list-style-type: none"> <li>• Aggravation of chronic obstruction lung disease</li> <li>• Increased risk of acute and chronic respiratory disease</li> </ul>	Diesel vehicle exhaust, oil-powered power plants, and industrial processes.
Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	A complex mixture of extremely small particles and liquid droplets that can easily pass through the throat and nose and enter the lungs.	<ul style="list-style-type: none"> <li>• Aggravation of chronic respiratory disease</li> <li>• Heart and lung disease</li> <li>• Coughing</li> <li>• Bronchitis</li> <li>• Chronic respiratory disease in children</li> <li>• Irregular heartbeat</li> <li>• Nonfatal heart attacks</li> </ul>	Combustion sources such as automobiles, power generation, industrial processes, and wood burning. Also from unpaved roads, farming activities, and fugitive windblown dust.
Lead	A metal found naturally in the environment as well as in manufactured products.	<ul style="list-style-type: none"> <li>• Loss of appetite, weakness, apathy, and miscarriage</li> <li>• Lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract</li> </ul>	Industrial sources and combustion of leaded aviation gasoline.

*Sources:*

- California Air Resources Board. *California Ambient Air Quality Standards (CAAQS)*. Available at: <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>. Accessed March 2017.
- Sacramento Metropolitan, El Dorado, Feather River, Placer, and Yolo-Solano Air Districts, *Spare the Air* website. *Air Quality Information for the Sacramento Region*. Available at: <http://www.sparetheair.com/health.cfm?page=healthoverall>. Accessed March 2017.
- California Air Resources Board. *Glossary of Air Pollution Terms*. Available at: <http://www.arb.ca.gov/html/gloss.htm>. Accessed March 2017.

<b>Table 4.3-2 Ambient Air Quality Standards</b>				
<b>Pollutant</b>	<b>Averaging Time</b>	<b>CAAQS</b>	<b>NAAQS</b>	
			<b>Primary</b>	<b>Secondary</b>
<b>Ozone</b>	1 Hour	0.09 ppm	-	Same as primary
	8 Hour	0.070 ppm	0.070 ppm	
<b>Carbon Monoxide</b>	8 Hour	9 ppm	9 ppm	-
	1 Hour	20 ppm	35 ppm	
<b>Nitrogen Dioxide</b>	Annual Mean	0.030 ppm	53 ppb	Same as primary
	1 Hour	0.18 ppm	100 ppb	-
<b>Sulfur Dioxide</b>	24 Hour	0.04 ppm	-	-
	3 Hour	-	-	0.5 ppm
	1 Hour	0.25 ppm	75 ppb	-
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>	Annual Mean	20 ug/m <sup>3</sup>	-	Same as primary
	24 Hour	50 ug/m <sup>3</sup>	150 ug/m <sup>3</sup>	
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>	Annual Mean	12 ug/m <sup>3</sup>	12 ug/m <sup>3</sup>	15 ug/m <sup>3</sup>
	24 Hour	-	35 ug/m <sup>3</sup>	Same as primary
<b>Lead</b>	30 Day Average	1.5 ug/m <sup>3</sup>	-	-
	Calendar Quarter	-	1.5 ug/m <sup>3</sup>	Same as primary
<b>Sulfates</b>	24 Hour	25 ug/m <sup>3</sup>	-	-
<b>Hydrogen Sulfide</b>	1 Hour	0.03 ppm	-	-
<b>Vinyl Chloride</b>	24 Hour	0.010 ppm	-	-
<b>Visibility Reducing Particles<sup>1</sup></b>	8 Hour	see note below	-	-
ppm = parts per million ppb = parts per billion ug/m <sup>3</sup> = micrograms per cubic meter  <sup>1</sup> Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.  <i>Source: California Air Resources Board. Ambient Air Quality Standards. May 4, 2016. Available at: <a href="http://www.arb.ca.gov/research/aaqs/aaqs2.pdf">http://www.arb.ca.gov/research/aaqs/aaqs2.pdf</a>. Accessed March 2017.</i>				

### *Reactive Organic Gas*

ROG is a reactive chemical gas composed of hydrocarbon compounds typically found in paints and solvents that contributes to the formation of smog and ozone by involvement in atmospheric chemical reactions. A separate health standard does not exist for ROG. However, some compounds that make up ROG are toxic, such as the carcinogen benzene.

### *Oxides of Nitrogen*

NO<sub>x</sub> are a family of gaseous nitrogen compounds and are precursors to the formation of ozone and particulate matter. The major component of NO<sub>x</sub>, nitrogen dioxide (NO<sub>2</sub>), is a reddish-brown gas

that discolors the air and is toxic at high concentrations. NO<sub>x</sub> results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of NO<sub>x</sub>. NO<sub>x</sub> reacts with ROG to form smog, which could result in adverse impacts to human health, damage the environment, and cause poor visibility. Additionally, NO<sub>x</sub> emissions are a major component of acid rain. Health effects related to NO<sub>x</sub> include lung irritation and lung damage and can cause increased risk of acute and chronic respiratory disease.

### Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, poisonous gas produced by incomplete burning of carbon-based fuels such as gasoline, oil, and wood. When CO enters the body, the CO combines with chemicals in the body, which prevents blood from carrying oxygen to cells, tissues, and organs. Symptoms of exposure to CO can include problems with vision, reduced alertness, and general reduction in mental and physical functions. Exposure to CO can result in chest pain, headaches, reduced mental alertness, and death at high concentrations.

### Sulfur Dioxide

Sulfur Dioxide (SO<sub>2</sub>) is a colorless, irritating gas with a rotten egg odor formed primarily by the combustion of sulfur-containing fossil fuels from mobile sources, such as locomotives, ships, and off-road diesel equipment. SO<sub>2</sub> is also emitted from several industrial processes, such as petroleum refining and metal processing. Similar to airborne NO<sub>x</sub>, suspended sulfur oxide particles, including SO<sub>2</sub>, contribute to poor visibility. Sulfur oxide particles are also a component of PM<sub>10</sub>.

### Particulate Matter

Particulate matter, also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health impacts. The USEPA is concerned about particles that are 10 micrometers in diameter or smaller (PM<sub>10</sub>) because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, the particles could affect the heart and lungs and cause serious health effects. USEPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles (PM<sub>2.5-10</sub>)," which are found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. PM<sub>2.5-10</sub> is deposited in the thoracic region of the lungs.
- "Fine particles (PM<sub>2.5</sub>)," which are found in smoke and haze, are 2.5 micrometers in diameter and smaller. PM<sub>2.5</sub> particles could be directly emitted from sources such as forest fires, or could form when gases emitted from power plants, industries, and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- "Ultrafine particles (UFP)," which are very, very small particles (less than 0.1 micrometers in diameter) largely resulting from the combustion of fossil fuels, meat, wood, and other

hydrocarbons. While UFP mass is a small portion of PM<sub>2.5</sub>, their high surface area, deep lung penetration, and transfer into the bloodstream could result in disproportionate health impacts relative to their mass. UFP is not currently regulated separately, but is analyzed as part of PM<sub>2.5</sub>.

PM<sub>10</sub>, PM<sub>2.5-10</sub>, and UFP include primary pollutants (emitted directly to the atmosphere) as well as secondary pollutants (formed in the atmosphere by chemical reactions among precursors). Generally speaking, PM<sub>2.5</sub> and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM<sub>10</sub> sources include the same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust. Long-term PM pollution, especially fine particles, could result in significant health problems including, but not limited to, the following: increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; decreased lung function; aggravated asthma; development of chronic respiratory disease in children; development of chronic bronchitis or obstructive lung disease; irregular heartbeat; heart attacks; and increased blood pressure.

### Lead

Lead is a relatively soft and chemically resistant metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, and, thus, essentially persists forever. Lead forms compounds with both organic and inorganic substances. As an air pollutant, lead is present in small particles. Sources of lead emissions in California include a variety of industrial activities. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically. However, because lead was emitted in large amounts from vehicles when leaded gasoline was used, lead is present in many soils (especially urban soils) and could become re-suspended into the air.

Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources could accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms could include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children. Lead also causes cancer.

### Sulfates

Sulfates are the fully oxidized ionic form of sulfur and are colorless gases. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. The sulfur is oxidized to sulfur dioxide (SO<sub>2</sub>) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO<sub>2</sub> to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The sulfates standard established by CARB is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, because they are usually acidic, can harm ecosystems and damage materials and property.

### Hydrogen Sulfide

Hydrogen Sulfide (H<sub>2</sub>S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations; especially in enclosed spaces (800 ppm can cause death).

### Vinyl Chloride

Vinyl Chloride (C<sub>2</sub>H<sub>3</sub>Cl, also known as VCM) is a colorless gas that does not occur naturally, but is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC) which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

### Visibility Reducing Particles

Visibility Reducing Particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

### Toxic Air Contaminants

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are also a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Public exposure to TACs can result from emissions from normal operations as well as accidental releases.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, which typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer include birth defects, neurological damage, and death. Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to that for criteria air pollutants that have established AAQS. TACs are regulated or evaluated on the basis of risk to human health rather

than comparison to an AAQS or emission-based threshold. The proposed project site is not located within the vicinity of any substantial sources of TAC emissions.

### **Attainment Status and Regional Air Quality Plans**

Areas not meeting the national AAQS (NAAQS) presented in Table 4.3-2 above are designated by the USEPA as nonattainment. Further classifications of nonattainment areas are based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. The Federal Clean Air Act (FCAA) requires areas violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures for states to use to attain the NAAQS. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA reviews SIPs to determine if they conform to the mandates of the FCAA amendments and would achieve air quality goals when implemented.

The CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. The CCAA classifies ozone nonattainment areas as moderate, serious, severe, and extreme based on severity of violations of the CAAQS. For each nonattainment area classification, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment areas, attainment plans are required to demonstrate a five-percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. Air districts with air quality that is in violation of CAAQS are required to prepare an air quality attainment plan that lays out a program to attain the CCAA mandates.

Table 4.3-3 presents the current attainment status of the SFBAAB, including Contra Costa County. As shown in the table, the area is currently designated as a nonattainment area for the State and federal ozone, State and federal PM<sub>2.5</sub>, and State PM<sub>10</sub> standards. The SFBAAB is designated attainment or unclassified for all other AAQS.

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

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which is a proposed revision to the Bay Area part of the SIP to achieve the federal ozone standard.<sup>4</sup> The plan was adopted on October 24, 2001 and approved by the CARB on November 1, 2001.

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<sup>4</sup> Bay Area Air Quality Management District. Air Quality Plans. Available at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans.aspx>. Accessed March 2017.



<b>Table 4.3-3 Contra Costa County Attainment Status Designations</b>			
<b>Pollutant</b>	<b>Averaging Time</b>	<b>California Standards</b>	<b>Federal Standards</b>
<b>Ozone</b>	1 Hour	Nonattainment	-
	8 Hour	Nonattainment	Nonattainment
<b>Carbon Monoxide</b>	8 Hour	Attainment	Attainment
	1 Hour	Attainment	Attainment
<b>Nitrogen Dioxide</b>	Annual Mean	-	Attainment
	1 Hour	Attainment	Unclassified
<b>Sulfur Dioxide</b>	Annual Mean	-	Attainment
	24 Hour	Attainment	Attainment
	3 Hour	-	Unclassified
	1 Hour	Attainment	Attainment
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>	Annual Mean	Nonattainment	-
	24 Hour	Nonattainment	Unclassified
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>	Annual Mean	Nonattainment	Attainment
	24 Hour	-	Nonattainment
<b>Sulfates</b>	24 Hour	Attainment	-
<b>Lead</b>	30 Day Average	-	Attainment
	Calendar Quarter	-	Attainment
	Rolling 3-Month Average	-	Attainment
<b>Hydrogen Sulfide</b>	1 Hour	Unclassified	-
<b>Vinyl Chloride</b>	24 Hour	Unclassified	-
<i>Source: Bay Area Air Quality Management District. Air Quality Standards and Attainment Status. Available at: <a href="http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status">http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status</a>. Accessed March 2017.</i>			

The plan was submitted to the USEPA on November 30, 2001, and in July of 2003 the USEPA proposed approval of the 2001 Ozone Attainment Plan.

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

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures (TCMs) to be implemented in the region to attain the State and federal standards within the SFBAAB. The plans are based on population and employment projections provided by local governments, usually developed as part of the General Plan update process.

## Local Air Quality Monitoring

The BAAQMD operates a regional network of air pollution monitoring stations that provide information on ambient concentrations of criteria air pollutants and TACs. The project site is located between two air quality monitoring sites – the Concord monitoring site, which is located approximately 10 miles southwest of the project site at 2975 Treat Boulevard, and the Bethel Island Road monitoring site, which is located approximately 11 miles east of the project site. It should be noted that a monitoring site has been established in Pittsburg; however, monitoring data is not yet available for the site. Table 4.3-4 and Table 4.3-5 show historical occurrences of pollutant levels exceeding the State and federal AAQS for the three-year period from 2014 to 2016. The number of days that each standard was exceeded is presented in the tables as well.

<b>Table 4.3-4</b>				
<b>Air Quality Data Summary for the Concord Monitoring Site (2014-2016)</b>				
<b>Pollutant</b>	<b>Standard</b>	<b>Days Standard Was Exceeded</b>		
		<b>2014</b>	<b>2015</b>	<b>2016</b>
1-Hour Ozone	State	1	0	1
	Federal	0	0	0
8-Hour Ozone	State	2	4	2
	Federal	2	2	2
24-Hour PM <sub>10</sub>	State	0	0	0
	Federal	0	0	0
24-Hour PM <sub>2.5</sub>	State	8	8	7
	Federal	0	0	0
1-Hour Nitrogen Dioxide	State	0	0	0
	Federal	0	0	0
<i>Source: California Air Resources Board. iADAM Top Four Summary. Available at: <a href="http://www.arb.ca.gov/adam/topfour/topfour1.php">http://www.arb.ca.gov/adam/topfour/topfour1.php</a>. Accessed September 2017.</i>				

<b>Table 4.3-5</b>				
<b>Air Quality Data Summary for the Bethel Island Road Air Quality Monitoring Site (2014-2016)</b>				
<b>Pollutant</b>	<b>Standard</b>	<b>Days Standard Was Exceeded</b>		
		<b>2014</b>	<b>2015</b>	<b>2016</b>
1-Hour Ozone	State	0	0	0
	Federal	0	0	0
8-Hour Ozone	State	1	1	2
	Federal	1	2	2
24-Hour PM <sub>10</sub>	State	1	0	0
	Federal	0	0	0
24-Hour PM <sub>2.5</sub> <sup>1</sup>	State	--	--	--
	Federal	--	--	--
1-Hour Nitrogen Dioxide	State	0	0	0
	Federal	0	0	0
<sup>1</sup> Bethel Island Station does not monitor PM <sub>2.5</sub>				
<i>Source: California Air Resources Board. iADAM Top Four Summary. Available at: <a href="http://www.arb.ca.gov/adam/topfour/topfour1.php">http://www.arb.ca.gov/adam/topfour/topfour1.php</a>. Accessed September 2017.</i>				

As shown in the tables, the State AAQS, as well as the federal 8-Hour AAQS, for ozone were exceeded. In addition, the State PM<sub>10</sub>, and State and federal PM<sub>2.5</sub>, AAQS were exceeded. All other State and federal AAQS were met in the area.

### **Sensitive Receptors**

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. The BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The proposed project, being a residential development, would introduce new sensitive receptors to the area. Accordingly, the proposed project would be considered a sensitive receptor. In addition, the project site is currently surrounded by existing unimproved land uses and single-family residential uses to the north. The nearest existing sensitive land uses to the proposed project site would be the residences of the San Marco residential area, specifically along Rio Verde Circle, Barranca Drive, Pilar Ridge Drive, and Rosa Blanca Drive, as well as the various agricultural-related single-family residences in the vicinity.

### **Greenhouse Gas Emissions**

GHGs are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere due to human activities are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated carbons. Other common GHGs include water vapor, ozone, and aerosols. Since the beginning of the Industrial Revolution, global atmospheric concentrations of GHGs have increased due to human activities such as the burning of fossil fuels, clearing of forests and other activities. The increase in atmospheric concentrations of GHG due to human activities has resulted in more heat being held within the atmosphere, which is the accepted explanation for global climate change.<sup>5</sup>

The primary GHG emitted by human activities is CO<sub>2</sub>, with the next largest components being CH<sub>4</sub> and N<sub>2</sub>O. The primary sources of CH<sub>4</sub> emissions include domestic livestock sources, decomposition of wastes in landfills, releases from natural gas systems, coal mine seepage, and manure management. The main human activities producing N<sub>2</sub>O are agricultural soil management, fuel combustion in motor vehicles, nitric acid production, manure management, and stationary fuel combustion. Emissions of GHG by economic sector indicate that energy-related activities account for the majority of U.S. emissions. Electricity generation is the largest single-source of GHG

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<sup>5</sup> United States Environmental Protection Agency. *Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases*. Available at <https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases>. Accessed November 17, 2016.

emissions, and transportation is the second largest source, followed by industrial activities. The agricultural, commercial, and residential sectors account for the remainder of GHG emission sources.<sup>6</sup> Emissions of GHG are partially offset by uptake of carbon and sequestration in forests, trees in urban areas, agricultural soils, landfilled yard trimmings and food scraps, and absorption of CO<sub>2</sub> by the earth's oceans; however, the rate of emissions of GHGs currently outpaces the rate of uptake, thus causing global atmospheric concentrations to increase.<sup>7</sup> Attainment concentration standards for GHGs have not been established by the federal or State government.

### Global Warming Potential

Global Warming Potential (GWP) is one type of simplified index (based upon radiative properties) that can be used to estimate the potential future impacts of emissions of various gases. According to the USEPA, the global warming potential of a gas, or aerosol, to trap heat in the atmosphere is the “cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas.” The reference gas for comparison is CO<sub>2</sub>. GWP is based on a number of factors, including the heat-absorbing ability of each gas relative to that of CO<sub>2</sub>, as well as the decay rate of each gas relative to that of CO<sub>2</sub>. Each gas's GWP is determined by comparing the radiative forcing associated with emissions of that gas versus the radiative forcing associated with emissions of the same mass of CO<sub>2</sub>, for which the GWP is set at one. Methane gas, for example, is estimated by the USEPA to have a comparative global warming potential 25 times greater than that of CO<sub>2</sub>, as shown in Table 4.3-6.

<b>Table 4.3-6 Global Warming Potentials and Atmospheric Lifetimes of Select GHGs</b>		
<b>Gas</b>	<b>Atmospheric Lifetime (years)</b>	<b>Global Warming Potential (100-year time horizon)</b>
Carbon Dioxide (CO <sub>2</sub> )	50-200 <sup>1</sup>	1
Methane (CH <sub>4</sub> )	12	25
Nitrous Oxide (N <sub>2</sub> O)	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF <sub>4</sub> )	50,000	7,390
PFC: Hexafluoroethane (C <sub>2</sub> F <sub>6</sub> )	10,000	12,200
Sulfur Hexafluoride (SF <sub>6</sub> )	3,200	22,800
<sup>1</sup> For a given amount of carbon dioxide emitted, some fraction of the atmospheric increase in concentration is quickly absorbed by the oceans and terrestrial vegetation, some fraction of the atmospheric increase will only slowly decrease over a number of years, and a small portion of the increase will remain for many centuries or more.		
<i>Source: United States Environmental Protection Agency. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-201. April 15, 2017.</i>		

<sup>6</sup> United States Environmental Protection Agency. *Sources of Greenhouse Gas Emissions*. Available at: <http://epa.gov/climatechange/ghgemissions/sources/industry.html>. Accessed August 2016.

<sup>7</sup> United States Environmental Protection Agency. *Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases*. Available at: <https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases>. Accessed November 17, 2016.

### Effects of Global Climate Change

Uncertainties exist as to exactly what the climate changes will be in various local areas of the Earth. According to the Intergovernmental Panel on Climate Change's Working Group II Report, *Climate Change 2007: Impacts, Adaptation and Vulnerability*,<sup>8</sup> climate change impacts to North America may include:

- Diminishing snowpack;
- Increasing evaporation;
- Exacerbate shoreline erosion;
- Exacerbate inundation from sea level rising;
- Increased risk and frequency of wildfire;
- Increased risk of insect outbreaks;
- Increased experiences of heat waves; and
- Rearrangement of ecosystems as species and ecosystems shift northward and to higher elevations.

For California, climate change has the potential to cause/exacerbate the following environmental impacts:

- Increased frequency, duration, and intensity of conditions conducive to air pollution formation (particularly ozone);
- Reduced precipitation, changes to precipitation and runoff patterns, reduced snowfall (precipitation occurring as rain instead of snow), earlier snowmelt, decreased snowpack, and increased agricultural demand for water;
- Increased growing season and increased growth rates of weeds, insect pests and pathogens;
- Inundation by sea level rise; and
- Increased incidents and severity of wildfire events and expansion of the range and increased frequency of pest outbreaks.

### **4.3.3 REGULATORY CONTEXT**

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Air quality is monitored through the efforts of various international regulations and federal, State, regional, and local government agencies. The agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for regulating and improving the air quality within the City of Pittsburg area are discussed below.

#### **Federal Regulations**

The most prominent federal regulation is the FCAA, which is implemented and enforced by the USEPA.

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<sup>8</sup> Intergovernmental Panel on Climate Change. *Climate Change 2007: Impacts, Adaptation, and Vulnerability*. 2007.

## FCAA and USEPA

The FCAA requires the USEPA to set NAAQS and designate areas with air quality not meeting NAAQS as nonattainment. The USEPA is responsible for enforcement of NAAQS for atmospheric pollutants and regulates emission sources that are under the exclusive authority of the federal government including emissions of GHGs. The USEPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

The EPA has adopted policies consistent with FCAA requirements demanding states to prepare SIPs that demonstrate attainment and maintenance of the NAAQS. The 1990 amendments of the FCAA 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. The USEPA has responsibility to review all state SIPs to determine conformance to the mandates of the FCAA, and the amendments thereof, and determine if implementation would achieve air quality goals. If the USEPA determines a SIP to be inadequate, a Federal Implementation Plan may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions to transportation funding and stationary air pollution sources in the air basin.

The USEPA has been directed to develop regulations to address the GHG emissions of cars and trucks. The Mandatory Reporting of Greenhouse Gases Rule requires reporting of GHG emissions from large sources and suppliers in the U.S., and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHG, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the USEPA.

To track the national trend in emissions and removals of GHG since 1990, USEPA develops the official U.S. GHG inventory each year. The national GHG inventory is submitted to the United Nations in accordance with the United Nations Framework Convention on Climate Change (UNFCCC).

On December 7, 2009, USEPA issued findings under Section 202(a) of the FCAA concluding that GHGs are pollutants that could endanger public health. Under the so-called Endangerment Finding, USEPA found that the current and projected concentrations of the six key well-mixed GHGs – CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFCs, SF<sub>6</sub>, and HFCs – in the atmosphere threaten the public health and welfare of current and future generations. These findings do not, by themselves, impose any requirements on industry or other entities.

## **State Regulations**

California has adopted a variety of regulations aimed at reducing air pollution and GHG emissions. The adoption and implementation of the key State legislation described in further detail below demonstrates California's leadership in addressing air quality. Only the most prominent and

applicable California air quality- and GHG-related legislation are included below; however, an exhaustive list and extensive details of California air quality legislation can be found at the CARB website (<http://www.arb.ca.gov/html/lawsregs.htm>).

### State Regulations Related to Air Quality

The following regulations address air quality within California.

#### *CCAA and CARB*

The CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the CCAA. The CCAA requires that air quality plans be prepared for areas of the State that have not met the CAAQS for ozone, CO, NO<sub>x</sub>, and SO<sub>2</sub>. Among other requirements of the CCAA, the plans must include a wide range of implementable control measures, which often include transportation control measures and performance standards. In order to implement the transportation-related provisions of the CCAA, local air pollution control districts have been granted explicit authority to adopt and implement transportation controls. The CARB, California's air quality management agency, regulates and oversees the activities of county air pollution control districts and regional air quality management districts. The CARB regulates local air quality indirectly using State standards and vehicle emission standards, by conducting research activities, and through planning and coordinating activities. In addition, the CARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the USEPA. Furthermore, the CARB is charged with developing rules and regulations to cap and reduce GHG emissions.

### Air Quality and Land Use Handbook

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB Handbook) addresses the importance of considering health risk issues when siting sensitive land uses, including residential development, in the vicinity of intensive air pollutant emission sources including freeways or high-traffic roads, distribution centers, ports, petroleum refineries, chrome plating operations, dry cleaners, and gasoline dispensing facilities.<sup>9</sup> The CARB Handbook draws upon studies evaluating the health effects of traffic traveling on major interstate highways in metropolitan California centers within Los Angeles (I-405 and I-710), the San Francisco Bay, and San Diego areas. The recommendations identified by CARB, including siting residential uses a minimum distance of 500 feet from freeways or other high-traffic roadways, are consistent with those adopted by the State of California for location of new schools. Specifically, the CARB Handbook recommends, "Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day" (CARB 2005).

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<sup>9</sup> California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

Importantly, the Introduction section of the CARB Handbook clarifies that the guidelines are strictly advisory, recognizing that: “[l]and use decisions are a local government responsibility. The Air Resources Board Handbook is advisory and these recommendations do not establish regulatory standards of any kind.” CARB recognizes that there may be land use objectives as well as meteorological and other site-specific conditions that need to be considered by a governmental jurisdiction relative to the general recommended setbacks, specifically stating, “[t]hese recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues” (CARB 2005).

#### *Assembly Bill 1807*

Assembly Bill (AB) 1807, enacted in September 1983, sets forth a procedure for the identification and control of TACs in California. CARB is responsible for the identification and control of TACs, except pesticide use, which is regulated by the California Department of Pesticide Regulation.

#### *AB 2588*

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), California Health and Safety Code Section 44300 et seq., provides for the regulation of over 200 TACs, including DPM, and is the primary air contaminant legislation in California. Under the act, local air districts may request that a facility account for its TAC emissions. Local air districts then prioritize facilities on the basis of emissions, and high priority designated facilities are required to submit a health risk assessment and communicate the results to the affected public.

#### *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*

In 2002, the Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (Title 17, Section 93105, of the California Code of Regulations) went into effect, which requires each air pollution control and air quality management district to implement and enforce the requirements of Section 93105 and propose their own asbestos ATCM as provided in Health and Safety Code section 39666(d).<sup>10</sup>

#### *Senate Bill 656*

In 2003, the Legislature passed Senate Bill (SB) 656 to reduce public exposure to PM<sub>10</sub> and PM<sub>2.5</sub> above the State CAAQS. The legislation requires the CARB, in consultation with local air pollution control and air quality management districts, to adopt a list of the most readily available, feasible, and cost-effective control measures that could be implemented by air districts to reduce PM<sub>10</sub> and PM<sub>2.5</sub> emissions. The CARB list is based on California rules and regulations existing as of January 1, 2004, and was adopted by CARB in November 2004. Categories addressed by SB

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<sup>10</sup> California Air Resources Board. 2002-07-29 *Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations*. June 3, 2015. Available at: <http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm>. Accessed August 2016.



656 include measures for reduction of emissions associated with residential wood combustion and outdoor greenwaste burning, fugitive dust sources such as paved and unpaved roads and construction, combustion sources such as boilers, heaters, and charbroiling, solvents and coatings, and product manufacturing. Some of the measures include, but are not limited to, the following:

- Reduce or eliminate wood-burning devices allowed;
- Prohibit residential open burning;
- Permit and provide performance standards for controlled burns;
- Require water or chemical stabilizers/dust suppressants during grading activities;
- Limit visible dust emissions beyond the project boundary during construction;
- Require paving/curbing of roadway shoulder areas; and
- Require street sweeping.

Under SB 656, each air district is required to prioritize the measures identified by CARB, based on the cost effectiveness of the measures and their effect on public health, air quality, and emission reductions. Per SB 656 requirements, the BAAQMD amended their Regulation 6, Rule 3 related to wood-burning appliances to include conditions consistent with SB 656, including such conditions as the prohibition of the installation of any new, permanently installed, indoor or outdoor, uncontrolled wood-burning appliances.

#### *Heavy-Duty Vehicle Idling Emission Reduction Program*

On October 20, 2005, CARB approved a regulatory measure to reduce emissions of toxics and criteria pollutants by limiting idling of new and in-use sleeper berth equipped diesel trucks.<sup>11</sup> The regulation consists of new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck's main engine. For example, the regulation requires 2008 and newer model year heavy-duty diesel engines to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling, or optionally meet a stringent NO<sub>x</sub> emission standard. The regulation also requires operators of both in-state and out-of-state registered sleeper berth equipped trucks to manually shut down their engine when idling more than five minutes at any location within California beginning in 2008. Emission producing alternative technologies such as diesel-fueled auxiliary power systems and fuel-fired heaters are also required to meet emission performance requirements that ensure emissions are not exceeding the emissions of a truck engine operating at idle.

#### *In-Use Off-Road Diesel-Fueled Fleet Regulation*

On July 26, 2007, CARB adopted a regulation to reduce DPM and NO<sub>x</sub> emissions from in-use (existing), off-road, heavy-duty diesel vehicles in California.<sup>12</sup> Such vehicles are used in construction, mining, and industrial operations. The regulation is designed to reduce harmful emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower

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<sup>11</sup> California Air Resources Board. *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*. October 24, 2013. Available at: <http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm>. Accessed March 2017.

<sup>12</sup> California Air Resources Board. *In-Use Off-Road Diesel Vehicle Regulation*. December 10, 2014. Available at: <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>. Accessed March 2017.

requirements, imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The idling limits require operators of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to less than five minutes. The idling requirements are specified in Title 13 of the California Code of Regulations.

#### State Regulations Related to Greenhouse Gases

The following regulations address GHG and climate change within California.

##### *AB 1493*

California AB 1493 (Stats. 2002, ch. 200) (Health & Safety Code, §§42823, 43018.5), known as Pavley I, was enacted on July 22, 2002. AB 1493 requires that the CARB develop and adopt regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by the CARB to be vehicles whose primary use is noncommercial personal transportation in the state.” On June 30, 2009, the USEPA granted a waiver of CAA preemption to California for the State’s GHG emission standards for motor vehicles, beginning with the 2009 model year. Pursuant to the CAA, the waiver allows for the State to have special authority to enact stricter air pollution standards for motor vehicles than the federal government’s. On September 24, 2009, the CARB adopted amendments to the Pavley regulations (Pavley I) that reduce GHG emissions in new passenger vehicles from 2009 through 2016. The second phase of the Pavley regulations (Pavley II) is expected to affect model year vehicles from 2016 through 2020. The CARB estimates that the regulation would reduce GHG emissions from the light-duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030.

##### *Renewable Portfolio Standard*

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

##### *Executive Order S-03-05*

On June 1, 2005, then-Governor Schwarzenegger signed Executive Order S-03-05, which established total GHG emission targets. Specifically, emissions are to be reduced to year 2000 levels by 2010, 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (Cal-EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary is also directed to submit biannual reports to the governor and state legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California’s resources; and (3) mitigation and adaptation plans to combat these impacts.

To comply with the Executive Order, the Secretary of the Cal-EPA created a Climate Act Team (CAT) made up of members from various State agencies and commissions. In March 2006, CAT released their first report. In addition, the CAT has released several “white papers” addressing issues pertaining to the potential impacts of climate change on California.

### *Assembly Bill 32*

In September 2006, Assembly Bill (AB) 32, the California Climate Solutions Act of 2006, was enacted (Stats. 2006, ch. 488) (Health & Saf. Code, §38500 et seq.). AB 32 delegated the authority for its implementation to the CARB and directs CARB to enforce the State-wide cap. Among other requirements, AB 32 required CARB to (1) identify the State-wide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020, and (2) develop and implement a Scoping Plan. Accordingly, the CARB has prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008 and updated in 2014.<sup>13</sup> The Scoping Plan provides the outline for actions to reduce California’s GHG emissions. Based on the reduction goals called for in the 2008 Scoping Plan, a 29 percent reduction in GHG levels relative to a Business As Usual (BAU) scenario would be required to meet 1990 levels by 2020. The reduction goal and BAU scenario for the Scoping Plan were based on 2005 emissions projections. A BAU scenario is a baseline condition based on what could or would occur on a particular site in the year 2020 without implementation of a proposed project or any required or voluntary GHG reduction measures, including any State regulation GHG emission reductions. A project’s BAU scenario is project- and site-specific, and varies from project to project.

In 2011, the baseline or BAU level for the Scoping Plan was revised based on more recent (2010) data in order to account for the economic downturn and State regulation emission reductions (i.e., Pavley, Low Carbon Fuel Standard [LCFS], and RPS). Accordingly, the Scoping Plan emission reduction target from BAU levels required to meet 1990 levels by 2020 was modified from 29 percent to 21.7 percent (where BAU levels do not account for Statewide regulation emission reductions) below the revised estimated BAU level. The amended Scoping Plan was re-approved August 24, 2011, and updated in 2014.<sup>14</sup>

### California GHG Cap-and-Trade Program

The AB 32 Scoping Plan identifies a cap-and-trade program as one of the strategies California will employ to reduce the GHG emissions that cause climate change. The program will help put California on the path to meet the GHG emission reduction goal of 1990 levels by the year 2020, and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors would be established by the cap-and-trade program and facilities subject to the cap would be able to trade permits (allowances) to emit GHGs. The CARB has designed a California cap-and-trade program that is enforceable and meets the requirements of AB

<sup>13</sup> California Air Resources Board. *First Update to the Climate Change Scoping Plan*. May 22, 2014.

<sup>14</sup> California Air Resources Board. *AB 32 Scoping Plan*. Available at <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed March 2017.

32.<sup>15</sup> The program started on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions. On January 1, 2014 California linked the state's cap-and-trade plan with Quebec's, and on January 1, 2015 the program expanded to include transportation and natural gas fuel suppliers.<sup>16</sup>

#### *Executive Order S-01-07*

On January 18, 2007, then-Governor Schwarzenegger signed Executive Order S-01-07, which mandates that a State-wide goal be established to reduce carbon intensity of California's transportation fuels by at least 10 percent by 2020. The Order also requires that a LCFS for transportation fuels be established for California.

#### *SB 97*

SB 97, signed in August 2007, acknowledges that climate change is an important environmental issue that requires analysis under CEQA. The bill directs the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, by July 1, 2009.

As directed by SB 97, the OPR amended the CEQA Guidelines, effective March 18, 2010, to provide guidance to public agencies regarding the analysis and mitigation of GHG emissions and the effects of GHG emissions in draft CEQA documents. The amendments include revisions to the *Appendix G Initial Study Checklist* that incorporates a new subdivision to address project-generated GHG emissions and contribution to climate change. The new subdivision emphasizes that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. In addition, the revisions include a new subdivision to assist lead agencies in determining the significance of project related GHG emissions. Under the revised CEQA Appendix G checklist, an agency would consider whether the project will generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and whether the project conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs.

Guidance on determining the significance of impacts from GHG emissions is also provided in the SB 97 amendments. The guidance suggests the lead agency make a good-faith effort, based on available information, to describe, calculate or estimate the amount of GHG emissions resulting from a project. When assessing the significance of impacts from GHG emissions on the environment, lead agencies can consider the extent to which the project may increase or reduce GHG as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance determined applicable to the project, and/or the extent to which the project complies with adopted regulations or requirements to implement a State-wide, regional, or local plan for the reduction or mitigation of GHG emissions. When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or

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<sup>15</sup> California Air Resources Board. *First Update to the Climate Change Scoping Plan*. Accessed March 2017.

<sup>16</sup> California Air Resources Board. *AB 32 Scoping Plan*. Available at <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed March 2017.

recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

Under the SB 97 amendments, if GHG emissions of a project are determined to be significant, feasible means of mitigating GHG emissions, such as the following, shall be applied:

- Measurement of the reduction of emissions required as part of the lead agency's decision;
- Reductions in emissions resulting from project through project features, design, or other measures;
- Off-site measures, including offsets, to mitigate a project's emissions;
- Measures that sequester GHG gases; and
- If a GHG reduction plan, ordinance, regulation, or other similar plan is adopted, mitigation may include project-by-project measures, or specific measures or policies found in the plan that reduces the cumulative effect of emissions.

#### *SB 375*

In September 2008, SB 375, known as the Sustainable Communities and Climate Protection Act of 2008, was enacted, which is intended to build on AB 32 by attempting to control GHG emissions by curbing sprawl. SB 375 enhances CARB's ability to reach goals set by AB 32 by directing CARB to develop regional GHG emission reduction targets to be achieved by the State's 18 metropolitan planning organizations (MPOs), including the Association of Bay Area Governments (ABAG). Under SB 375, MPOs must align regional transportation, housing, and land-use plans and prepare a "Sustainable Communities Strategy" (SCS) to reduce the amount of vehicle miles traveled in their respective regions and demonstrate the region's ability to attain its greenhouse gas reduction targets. SB 375 provides incentives for creating walkable and sustainable communities and revitalizing existing communities, and allows home builders to get relief from certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Furthermore, SB 375 encourages the development of alternative transportation options, which will reduce traffic congestion.

#### *Executive Order S-13-08*

Then-Governor Arnold Schwarzenegger issued Executive Order S-13-08 on November 14, 2008. The Executive Order is intended to hasten California's response to the impacts of global climate change, particularly sea level rise, and directs state agencies to take specified actions to assess and plan for such impacts, including requesting the National Academy of Sciences to prepare a Sea Level Rise Assessment Report, directing the Business, Transportation, and Housing Agency to assess the vulnerability of the State's transportation systems to sea level rise, and requiring the Office of Planning and Research and the Natural Resources Agency to provide land use planning guidance related to sea level rise and other climate change impacts.

The order also required State agencies to develop adaptation strategies to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. The adaption strategies report summarizes key climate change impacts to the State for the following areas:

public health; ocean and coastal resources; water supply and flood protection; agriculture; forestry; biodiversity and habitat; and transportation and energy infrastructure. The report recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

### *AB 197 and SB 32*

On September 8, 2016, AB 197 and SB 32 were enacted with the goal of providing further control over GHG emissions in the State. SB 32 built on previous GHG reduction goals by requiring that the CARB ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by the year 2030. Achieving a 40 percent reduction of statewide GHG emissions by 2030 represents a critical milestone on the path to reducing statewide GHG Emissions by 80 percent by 2050, as required by Executive Order S-03-05. Additionally, SB 32 emphasizes the critical role that reducing GHG emissions would play in protecting disadvantaged communities and public health from adverse impacts of climate change. Enactment of SB 32 was predicated on the enactment of AB 197, which seeks to make the achievement of SB 32's mandated GHG emission reductions more transparent to the public and responsive to the Legislature. Transparency to the public is achieved by AB 197 through the publication of an online inventory of GHG and TAC emissions from facilities required to report such emissions pursuant to Section 38530 of California's Health and Safety Code. AB 197 further established a six-member Joint Legislative Committee on Climate Change Policies, which is intended to provide oversight and accountability of the CARB, while also adding two new legislatively-appointed, non-voting members to the CARB. Additionally, AB 197 directs the CARB to consider the "social costs" of emission reduction rules and regulations, with particular focus on how such measures may impact disadvantaged communities.

The CARB is currently drafting an update to the State's Climate Change Scoping Plan in accordance with the 2030 GHG emissions targets codified by SB 32. Although the CARB has begun preparing the update to the State's Climate Change Scoping Plan, at the time of preparation of this EIR, the CARB has not yet adopted the updated Scoping Plan.

### *California Building Standards Code*

California's building codes (California Code of Regulations [CCR], Title 24) are published on a triennial basis, and contain standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Standards Commission (CBSC) is responsible for the administration and implementation of each code cycle, which includes the proposal, review, and adoption process. Supplements and errata are issued throughout the cycle to make necessary mid-term corrections. The 2016 code has been prepared and becomes effective January 1, 2017. The California building code standards apply State-wide; however, a local jurisdiction may amend a building code standard if the jurisdiction makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

### California Green Building Standards Code

The 2016 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the CBSC, which becomes effective with the rest of the CBSC on January 1, 2017. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California.

The CALGreen Code encourages local governments to adopt more stringent voluntary provisions, known as Tier 1 and Tier 2 provisions, to further reduce emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. The City of Pittsburg has not adopted any voluntary provisions of the CALGreen Code to date.

### Building Energy Efficiency Standards

The 2016 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2013 Building Energy Efficiency Standards resulting in a 28 percent reduction in energy consumption from the 2013 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards would be achieved through various regulations including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high performance attics and walls.

## **Local Regulations**

The following are the regulatory agencies and regulations pertinent to the proposed project on a local level.

### Plan Bay Area

Plan Bay Area is a long-range integrated transportation and land use/housing strategy through 2040 for the San Francisco Bay Area, designed to reduce greenhouse gas emissions from cars and light duty trucks. On July 18, 2013, the Plan was jointly approved by the MTC and the ABAG. Pursuant to SB 375, the Plan includes the region's Sustainable Communities Strategy and 2040 Regional Transportation Plan. Plan Bay Area provides a strategy for meeting 80 percent of the region's future housing needs in Priority Development Areas (PDAs).<sup>17</sup>

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<sup>17</sup> Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2040: Final Preferred Scenario*. Available at: <http://www.planbayarea.org/2040-plan/final-preferred-scenario>. Accessed March 2017.

Plan Bay Area is based on Visions for PDAs.<sup>18</sup> The Visions report states that from 2010 to 2040, Contra Costa County is projected to experience 12 percent of the total regional housing growth, or an estimated 93,390 additional households. The County will also take 11 percent of the region's job growth, or 70,300 new jobs, the majority of which will be in PDAs. Both job and housing growth will cluster along San Pablo Avenue in the western part of the County, including Richmond, as well as in the suburbs of Antioch, Pittsburgh, Walnut Creek, and San Ramon. The most transformative growth will occur at the former Concord Naval Weapons station, where a new Regional Center with over 17,000 jobs and 12,000 homes will rise near BART. A PDA is not identified in the vicinity of the proposed project.

The Introduction to the Plan explains: "Adoption of Plan Bay Area does not mandate any changes to local zoning, general plans or project review. The region's cities, towns and counties maintain control of all decisions to adopt plans and permit or deny development projects. Similarly, Plan Bay Area's forecasted job and housing numbers do not act as a direct or indirect cap on development locations in the region. The forecasts are required by SB 375 and reflect the intent of regional and local collaboration that is the foundation of Plan Bay Area".<sup>19</sup>

The plan assists jurisdictions seeking to implement the plan at the local level by providing funding for PDA planning and transportation projects. Plan Bay Area also provides jurisdictions with the option of increasing the efficiency of the development process for projects consistent with the plan and other criteria included in SB 375.

#### Bay Area Air Quality Management District

The BAAQMD is the public agency entrusted with regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties. The BAAQMD has prepared their own *CEQA Air Quality Guidelines* (May 2017), which is intended to be used for assistance with CEQA review. The BAAQMD CEQA Air Quality Guidelines include thresholds of significance and project screening levels for criteria air pollutants (ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>), GHGs, TACs, carbon monoxide (CO), and odors, as well as methods to assess and mitigate project-level and plan-level impacts.

#### *Regional Air Quality Plans*

As discussed above, the 2001 Ozone Attainment Plan was prepared as a revision to the Bay Area part of the SIP to achieve the federal ozone standard. The plan was adopted on October 24, 2001, approved by the CARB on November 1, 2001, and was submitted to the USEPA on November 30, 2001 for review and approval as a revision to the SIP. In addition, in order to fulfill federal air quality planning requirements, the BAAQMD adopted a PM<sub>2.5</sub> emissions inventory for the year 2010, which was submitted to the USEPA on January 14, 2013 for inclusion in the SIP.

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<sup>18</sup> Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2040: Final Preferred Scenario*. Available at: <http://www.planbayarea.org/>. Accessed March 2017.

<sup>19</sup> Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2040: Final Preferred Scenario*. Available at: <http://www.planbayarea.org/>. Accessed March 2017.



The most recent State ozone plan is the 2017 CAP, adopted on April 19, 2017. The 2017 CAP was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, TACs, and GHGs. Although the CCAA does not require the region to submit a plan for achieving the State PM<sub>10</sub> standard, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 CAP. It should be noted that on January 9, 2013, the USEPA issued a final rule to determine that the San Francisco Bay Area has attained the 24-hour PM<sub>2.5</sub> federal standard, which suspends federal SIP planning requirements for the Bay Area.

The aforementioned applicable air quality plans contain mobile source controls, stationary source controls, and TCMs to be implemented in the region to attain the State and federal standards within the SFBAAB. The plans are based on population and employment projections provided by local governments, usually developed as part of the General Plan update process.

### *Rules and Regulations*

All projects under the jurisdiction of the BAAQMD are required to comply with all applicable BAAQMD rules and regulations. Applicable BAAQMD's regulations and rules include, but are not limited to, the following:

- Regulation 6: Particulate Matter and Visible Emissions
  - Rule 3: Wood-burning Devices
- Regulation 7: Odorous Substances
- Regulation 8: Organic Compounds
  - Rule 3: Architectural Coatings

### City of Pittsburg General Plan

The following are applicable General Plan goals and policies related to air quality from the City of Pittsburg General Plan:

- Goal 9-G-9     Work toward improving air quality and meeting all Federal and State ambient air quality standards by reducing the generation of air pollutants from stationary and mobile sources.
- Goal 9-G-10    Reduce the potential for human discomfort or illness due to local concentrations of toxic contaminants, odors and dust.
- Goal 9-G-11    Reduce the number of motor vehicle trips and emissions accounted to Pittsburg residents and encourage land use and transportation strategies that promote use of alternatives to the automobile for transportation, including bicycling, bus transit, and carpooling.
- Policy 9-P-29   Cooperate with the Bay Area Air Quality Management District to achieve emissions reductions for ozone and its precursor, PM-10.

Policy 9-P-30 Cooperate with Bay Area Air Quality Management District to ensure compliance with dust abatement measures during construction.

These measures would reduce particulate emissions from construction and grading activities.

Policy 9-P-33 Encourage new residential development and remodeled existing homes to install clean-burning fireplaces and wood stoves.

Residential woodburning is a growing source of localized air pollution. Woodsmoke released from fireplaces and wood stoves contains carbon monoxide, nitrogen dioxide, and PM-10. Pollution can be reduced by installing gas fireplaces or EPA certified wood heaters.

#### **4.3.4 IMPACTS AND MITIGATION MEASURES**

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This section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to air quality and GHG emissions. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

##### **Standards of Significance**

Based on the recommendations of BAAQMD, City of Pittsburg standards, and consistent with Appendix G of the CEQA Guidelines, the proposed project would result in a significant impact related to air quality and GHG emissions if the project would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan (Initial Study Question III.a.);
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation (Initial Study Question III.b.);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (Initial Study Question III.c.);
- Expose sensitive receptors to substantial pollutant concentrations (Initial Study Question III.d.);
- Create objectionable odors affecting a substantial number of people (Initial Study Question III.e.);
- Conflict, or create an inconsistency, with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects related to air quality;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment (Initial Study Question VII.a.); or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs (Initial Study Question VII.b.).

Further discussion of each of the above thresholds is provided below.

### Criteria Pollutant Emissions

The BAAQMD thresholds of significance for ozone precursor and PM emissions are presented in Table 4.3-7, and are expressed in pounds per day (lbs/day) for construction and operational average daily emissions and tons per year (tons/year) for maximum annual operational emissions. In addition to the thresholds of significance presented below for criteria air pollutants of particular concern for the Bay Area, BAAQMD has developed thresholds for GHG emissions, localized CO emissions, and TACs. Pursuant to CEQA Guidelines Section 15064.4(b)(2), the lead agency is charged with determining a threshold of significance that is applicable to the project. As discussed above, for the analysis within this EIR, the City has elected to use the BAAQMD's thresholds of significance.

<b>Table 4.3-7 BAAQMD Thresholds of Significance</b>			
<b>Pollutant</b>	<b>Construction</b>	<b>Operational</b>	
	<b>Average Daily Emissions (lbs/day)</b>	<b>Average Daily Emissions (lbs/day)</b>	<b>Maximum Annual Emissions (tons/year)</b>
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub> (exhaust)	82	82	15
PM <sub>2.5</sub> (exhaust)	54	54	10
<i>Source: BAAQMD, CEQA Guidelines, May 2017.</i>			

### Localized CO Emissions

If a project would cause localized CO emissions to exceed the 1-hour and 8-hour CAAQS of 20.0 parts per million (ppm) and 9.0 ppm, respectively, BAAQMD would consider the project to result in a significant impact to air quality. In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a project would result in a less-than-significant impact related to localized CO emission concentrations if the following screening 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, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

### TAC Emissions

According to BAAQMD, a significant impact related to TACs would occur if a project would cause any of the following:

- An increase in cancer risk levels of more than 10 persons in one million;
- A non-cancer (chronic or acute) hazard index greater than 1.0; or
- An annual average PM<sub>2.5</sub> concentration of 0.3 micrograms per cubic meter (µg/m<sup>3</sup>) or greater.

An impact associated with TACs would also occur 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 from the location of a receptor, plus the contribution from the project, would exceed the following:

- An increase in cancer risk levels (from all local sources) of more than 100 persons in one million;
- A chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- An annual average PM<sub>2.5</sub> concentration (from all local sources) of 0.8 µg/m<sup>3</sup> or greater.

### GHG Emissions

The BAAQMD developed a threshold of significance for project-level GHG emissions in 2009. The District's approach to developing the threshold was to identify a threshold level of GHG emissions for which a project would not be expected to substantially conflict with existing California legislation. At the time that the thresholds were developed, the foremost legislation regarding GHG emissions was AB 32, which established an emissions reductions goal of reducing statewide emissions to 1990 levels by 2020.<sup>20</sup> If a project would generate GHG emissions above the threshold level, the project would be considered to generate significant GHG emissions and conflict with AB 32. The GHG emissions thresholds of significance recommended by BAAQMD to determine compliance with AB 32 are as follows:

- 1,100 MTCO<sub>2e</sub>/yr; or
- 4.6 MTCO<sub>2e</sub>/SP/yr, where "SP" equates to service population, which is the total residents plus employees.

Because BAAQMD emissions thresholds include both a mass emissions threshold (i.e., 1,100 MTCO<sub>2e</sub>/yr), and an emissions efficiency threshold (i.e., 4.6 MTCO<sub>2e</sub>/SP/yr), a project may result in operational emissions in excess of 1,100 MTCO<sub>2e</sub>/yr, but still avoid a significant impact by resulting in emissions below the 4.6 MTCO<sub>2e</sub>/SP/yr efficiency threshold, or vice versa. It should be noted that the foregoing thresholds are intended for use in assessing operational GHG emissions only. However, construction of a proposed project would result in GHG emissions over a short-period of time. To capture the construction-related GHG emissions due to buildout of the proposed project, such emissions are amortized over the duration of the construction period and added to the

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<sup>20</sup> Bay Area Air Quality Management District. *California Environmental Quality Act Guidelines Update: Proposed Thresholds of Significance*. December 7, 2009.

operational GHG emissions. Given that construction-related GHG emissions would not occur concurrently with operational emissions and would cease upon completion of construction activities, combining the two emissions sources represents a conservative estimate of total project GHG emissions.

Since the adoption of BAAQMD's GHG thresholds of significance, the State legislature has passed AB 197 and SB 32, which builds off of AB 32 and establishes a statewide GHG reduction target of 40 percent below 1990 levels by 2030. Considering the legislative progress that has occurred regarding statewide reduction goals since the adoption of BAAQMD's standards, the emissions thresholds presented above would determine whether a proposed project would be in compliance with AB 32, but would not demonstrate whether a project would be in compliance with SB 32. In accordance with the changing legislative environment, the BAAQMD has begun the process of updating the District's CEQA Guidelines; however, updated thresholds of significance have not yet been adopted. In the absence of BAAQMD-adopted thresholds to assess a project's compliance with SB 32, the City has chosen to consider additional GHG emissions thresholds.

The BAAQMD has determined that projects with operational emissions equal to or less than 1,100 MTCO<sub>2e</sub>/yr or 4.6 MTCO<sub>2e</sub>/SP/yr would comply with the emission reductions target of 1990 levels by 2020 set forth by AB 32. SB 32 requires that by 2030 statewide emissions be reduced by 40 percent beyond the 2020 reduction target set by AB 32; therefore, in the absence of specific guidance from BAAQMD or the CARB, the City assumes that in order to meet the reduction targets of SB 32, a proposed project would be required to reduce emissions by an additional 40 percent beyond the emissions reductions currently required by BAAQMD for compliance with AB 32. Assuming a 40 percent reduction from current BAAQMD targets would be in compliance with SB 32, a proposed project would be in compliance with SB 32 if the project's emissions did not exceed the following thresholds:

- 660 MTCO<sub>2e</sub>/yr; or
- 2.76 MTCO<sub>2e</sub>/SP/yr.

By using the BAAQMD thresholds of significance for GHG and the updated SB 32 thresholds discussed above, the City would comply with Section 15064.4(b)(3) of the CEQA Guidelines, which suggests that lead agencies consider the extent that the project would comply with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction of GHG emissions.

#### Standards of Significance Used

Based on the recommendations of BAAQMD as presented above and consistent with Appendix G of the CEQA Guidelines, this chapter of the EIR considers a significant impact associated with air quality and/or GHG emissions to occur if the proposed project would result in any of the following:

- Generation of short-term construction-related or operational criteria air pollutant emissions in excess of 54 lbs/day for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 82 lbs/day for PM<sub>10</sub>, or
- Conflict with or obstruct implementation of the 2017 Clean Air CAP, and/or the 2001

Ozone Attainment Plan;

- Exposure of sensitive receptors to substantial levels of pollutant concentrations (i.e., localized CO emissions of 20.0 ppm for 1-hour averaging time or 9.0 ppm for 8-hour averaging time);
- An increase in cancer risk levels of more than 10 persons in one million;
- A non-cancer (chronic or acute) hazard index greater than 1.0;
- An annual average PM<sub>2.5</sub> concentration of 0.3 micrograms per cubic meter (µg/m<sup>3</sup>) or greater;
- Generation of cumulative criteria air pollutant emissions in excess of 10 tons/year for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 15 tons/year for PM<sub>10</sub>; and/or
- Generation of a cumulatively considerable contribution to GHG emissions in excess of 1,100 MTCO<sub>2e</sub>/yr or 4.6 MTCO<sub>2e</sub>/SP/yr by 2020, 660 MTCO<sub>2e</sub>/yr or 2.76 MTCO<sub>2e</sub>/SP/yr by 2030, or an 80 percent reduction from 1990 levels by 2050.

In addition, as noted above, an impact associated with TACs would occur 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 from the location of a receptor, plus the contribution from the project, would exceed the following:

- An increase in cancer risk levels (from all local sources) of more than 100 persons in one million;
- A chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- An annual average PM<sub>2.5</sub> concentration (from all local sources) of 0.8 µg/m<sup>3</sup> or greater.

### Method of Analysis

A comparison of the proposed project's emissions to the thresholds discussed above shall determine the significance of the proposed project's potential impacts to air quality and climate change. Emissions attributable to the proposed project which exceed the significance thresholds could have a significant effect on regional air quality and the attainment of the federal and State AAQS. Where potentially significant air quality impacts are identified, mitigation measures are described that would reduce or eliminate the impact.

### Construction Emissions

The proposed project's short-term construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 software - a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions from land use projects.<sup>21</sup> The model applies inherent default values for various land uses, including trip generation rates based on the ITE Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data was available, such data was input into the model.

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<sup>21</sup> ENVIRON International Corporation and the California Air Districts. *California Emissions Estimator Model User's Guide Version 2016.3.1*. September 2016.

Because the proposed project does not include a detailed project design at this time (such as a subdivision map or design review request), the project was analyzed at a program-level. Accordingly, project-specific details regarding the buildout schedule for the proposed project are currently unavailable. Thus, the following assumptions were made for the project construction modeling:

- Demolition would not be required;
- Construction was assumed to commence in June 2018;
- Assumed a conservative five-year buildout period (i.e., approximately 300 homes built per year) to provide a worst-case scenario;
- Buildout of the project would include up to 1,500 single-family dwelling units; and
- A total of 412 acres would be disturbed during the grading phase.

The results of emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. Results of the modeling are expressed in lbs/day for criteria air pollutant emissions and  $\text{MTCO}_2\text{e/yr}$  for GHG emissions, which allows for comparison between the model results and the thresholds of significance. All CalEEMod modeling results are included in Appendix D to this EIR.

### Operational Emissions

The proposed project's operational emissions were estimated using CalEEMod. Because the proposed project does not include a detailed project design at this time (such as a subdivision map or design review request), the project was analyzed at a program-level. For purposes of this CEQA analysis, the maximum buildout for the proposed project site, according to the current General Plan, is 1,500 single family units. Based on the default construction phase durations used within CalEEMod, the proposed project was assumed to be fully operational by 2023.

The modeling performed for the proposed project included compliance with BAAQMD rules and regulations (i.e., low-volatile organic compound [VOC] paints, low-VOC cleaning supplies, wood-burning devices), as well as with the California Building Energy Efficiency Standards Code. The proposed project's compliance with the California Building Energy Efficiency Standards would be verified as part of the City's building approval review process. As mentioned above, the 2016 Building Energy Efficiency Standards are anticipated to result in 28 percent less energy consumption for residential buildings over the previous energy standards. Furthermore, the  $\text{CO}_2$  intensity factor was adjusted within CalEEMod in order to reflect PG&E's anticipated progress towards the State RPS goal by 2030.<sup>22</sup> The project-specific trip rate data provided by Kimley-Horn and Associates, Inc. was applied to the project modeling as well.

The results of emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. Results of the modeling are expressed in lbs/day for project-level emissions, tons/yr for cumulative emissions, and  $\text{MTCO}_2\text{e/yr}$  for GHG

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<sup>22</sup> California Public Utilities Commission. *California Renewables Portfolio Standard*. March 25, 2015. Available at: <http://www.cpuc.ca.gov/PUC/energy/Renewables/>. Accessed March 2015.

emissions, which allows for comparison between the model results and the thresholds of significance. All CalEEMod modeling results are included in Appendix D to this EIR.

The service population for the proposed project was calculated based on 3.2 persons per household according to the City's 2015 – 2023 Housing Element.

### **Project-Specific Impacts and Mitigation Measures**

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

**4.3-1 Generation of short-term construction-related criteria air pollutant emissions in excess of 54 lbs/day for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 82 lbs/day for PM<sub>10</sub>. Based on the analysis below, because the proposed project would result in construction-related emissions of NO<sub>x</sub> in excess of the applicable standard of significance, even with mitigation, the impact would be *significant and unavoidable*.**

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM<sub>10</sub> and PM<sub>2.5</sub> emissions. As construction of the proposed project would generate air pollutant emissions intermittently within the site, and in the vicinity of the site, until all construction has been completed, construction is a potential concern because the proposed project is in a nonattainment area for ozone and PM.

The proposed project is required to comply with all BAAQMD rules and regulations including Regulation 8, Rule 3 related to architectural coatings. In addition, all projects under the jurisdiction of the BAAQMD are recommended to implement all of the Basic Construction Mitigation Measures provided in the BAAQMD CEQA Guidelines, which include the following:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.



6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Using CalEEMod, the proposed project's maximum construction-related emissions were estimated and are presented in Table 4.3-8. Although BAAQMD recommends that all construction activity within the SFBAAB implement the above listed Basic Construction Mitigation Measures, the proposed project was modeled without the inclusion of such measures to provide a conservative, worst-case emissions scenario. If project construction included any of the Basic Construction Mitigation Measures, PM emissions would likely be reduced from what is presented in Table 4.3-8 below.

Modeling assumptions are discussed in the Method of Analysis section above. As presented in Table 4.3-8, the proposed project would result in construction-related emissions of ROG, PM<sub>10</sub>, and PM<sub>2.5</sub> below the applicable thresholds of significance. However, emissions of NO<sub>x</sub> would exceed the applicable threshold of significance. Therefore, the proposed project could contribute to the region's nonattainment status of ozone and violate an air quality standard, and a *significant* impact associated with construction-related emissions of NO<sub>x</sub> could result.

<b>Table 4.3-8</b>			
<b>Maximum Unmitigated Construction Emissions (lbs/day)</b>			
<b>Pollutant</b>	<b>Proposed Project Emissions</b>	<b>Threshold of Significance</b>	<b>Exceeds Threshold?</b>
ROG	43.88	54	<b>NO</b>
NO <sub>x</sub>	59.58	54	<b>YES</b>
PM <sub>10</sub> (exhaust)	2.63	82	<b>NO</b>
PM <sub>10</sub> (fugitive)	20.79	None	<b>N/A</b>
PM <sub>2.5</sub> (exhaust)	2.42	54	<b>NO</b>
PM <sub>2.5</sub> (fugitive)	9.97	None	<b>N/A</b>
<i>Source: CalEEMod, January 2018 (see Appendix D).</i>			

#### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the construction-related emissions of NO<sub>x</sub>. However, as shown in Table 4.3-9, NO<sub>x</sub> emissions related to build-out of the Draft Master Plan would remain in excess of the applicable threshold of significance

of 54 lbs/day. Additional feasible mitigation does not exist to reduce the NO<sub>x</sub> emissions to below the applicable threshold of significance. Thus, despite implementation of the following mitigation measure, the impact would remain *significant and unavoidable*.

<b>Table 4.3-9 Maximum Mitigated Construction Emissions (lbs/day)</b>			
<b>Pollutant</b>	<b>Proposed Project Emissions</b>	<b>Threshold of Significance</b>	<b>Exceeds Threshold?</b>
ROG	41.61	54	<b>NO</b>
NO <sub>x</sub>	23.82	54	<b>YES</b>
PM <sub>10</sub> (exhaust)	0.23	82	<b>NO</b>
PM <sub>10</sub> (fugitive)	18.28	None	<b>N/A</b>
PM <sub>2.5</sub> (exhaust)	0.23	54	<b>NO</b>
PM <sub>2.5</sub> (fugitive)	9.97	None	<b>N/A</b>
<i>Source: CalEEMod, January 2018 (see Appendix D).</i>			

**4.3-1** *Prior to issuance of a grading permit, the project applicant shall show on the grading plans via notation that the contractor shall ensure that all off-road heavy-duty diesel-powered equipment larger than 100 horsepower (e.g., rubber tired dozers, excavators, graders, scrapers, pavers, paving equipment, and cranes) to be used for each phase of construction of the project (i.e., owned, leased, and subcontractor vehicles) shall meet USEPA emissions standards for Tier 4 engines or equivalent. The grading plans shall be submitted for review and approval by the City Engineer.*

**4.3-2** **Generation of operational criteria air pollutant emissions in excess of 54 lbs/day for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 82 lbs/day for PM<sub>10</sub> and conflict with or obstruct implementation of the 2017 Clean Air CAP, and/or the 2001 Ozone Attainment Plan. Based on the analysis below, because the proposed project would result in operational emission of ROG and NO<sub>x</sub> in excess of the applicable standards of significance, even with mitigation, the impact would be *significant and unavoidable*.**

Operational emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would be generated by the proposed project from both mobile and stationary sources. Day-to-day activities such as future residents' vehicle trips to and from the project site would make up the majority of the mobile emissions. Emissions would occur from area sources such as natural gas combustion from heating mechanisms, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, cleaning products, spray paint, etc.).

The proposed project's daily unmitigated operational emissions have been estimated using CalEEMod and are presented in Table 4.3-10 below. The various assumptions included in the modeling are discussed above.

As shown in the Table 4.3-10 below, the proposed project would result in operational emissions of PM<sub>10</sub> and PM<sub>2.5</sub> below the applicable thresholds of significance. However, emissions of ROG and NO<sub>x</sub> would exceed the applicable thresholds of significance. It

should be noted that the proposed project has been evaluated at a program-level, as detailed project designs have not yet been prepared. Because the environmental analysis included in this EIR is intended to provide a ‘worst case scenario’ evaluation for the development of 1,500 single-family homes, actual project emissions may be less than what has been estimated. Nonetheless, because at maximum allowable buildout, the proposed project could generate long-term operational criteria air pollutant emission in excess of thresholds, the project could contribute to the region’s nonattainment status of ozone and/or violate an air quality standard.

<b>Table 4.3-10</b>						
<b>Maximum Unmitigated Project Operational Emissions (lbs/day)</b>						
<b>Pollutant</b>	<b>Project Emissions</b>				<b>Threshold of Significance</b>	<b>Exceeds Threshold?</b>
	<b>Area</b>	<b>Energy</b>	<b>Mobile</b>	<b>Total</b>		
ROG	69.91	1.29	18.05	<b>89.25</b>	54	<b>YES</b>
NO <sub>x</sub>	21.17	11.01	67.36	<b>99.54</b>	54	<b>YES</b>
PM <sub>10</sub> (exhaust)	2.28	0.89	0.54	<b>3.71</b>	82	<b>NO</b>
PM <sub>10</sub> (fugitive)	--	--	61.60	<b>61.60</b>	None	<b>N/A</b>
PM <sub>2.5</sub> (exhaust)	2.28	0.89	0.51	<b>3.68</b>	54	<b>NO</b>
PM <sub>2.5</sub> (fugitive)	--	--	16.48	<b>16.48</b>	None	<b>N/A</b>
<i>Source: CalEEMod, January 2018 (see Appendix D).</i>						

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2017 CAP. The air quality plans contain mobile source controls, stationary source controls, and TCMs to be implemented within the region to attain the State and federal ozone standards within the SFBAAB. According to the BAAQMD CEQA Guidelines, if a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the air quality plans. Additionally, if approval of a project would not cause the disruption, delay, or otherwise hinder the implementation of any air quality plan control measure, the project may be considered consistent with the air quality plans. Because the proposed project is expected to generate long-term operational criteria air pollutant emission in excess of thresholds, the project would be considered to conflict with or obstruct implementation of regional air quality plans.

Based on the above, the proposed project would result in a *significant* impact associated with the generation of operational emissions of ROG and NO<sub>x</sub> in excess of thresholds and a conflict with or obstruction of implementation of regional air quality plans.

#### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact associated with the generation of ROG and NO<sub>x</sub> emissions. However, it should be noted that the proposed project has been evaluated at a program-level and a guarantee cannot be made that emissions from future development in the project area would not exceed the thresholds of significance. Therefore, until further project-level design details are available and a project-level air quality analysis can be performed to show otherwise, the impact is assumed to remain *significant and unavoidable*.

4.3-2

*In conjunction with the submittal of each application for any development within the proposed project area, a project-level, detailed air quality analysis shall be performed. The analysis shall include, but not be limited to, quantification of operational criteria air pollutant emissions, a determination of operational air quality impacts, and identification of mitigation measures necessary to reduce any significant impacts. Mitigation measures shall be developed in coordination with the BAAQMD and shall include, but would not be limited to, BAAQMD's recommended mitigation measures as follows:*

- *Use zero-VOC paints, finishes, and adhesives only;*
- *Use of cool roof materials;*
- *Plant shade trees;*
- *Orient buildings to maximize passive solar heating;*
- *Install smart meters and programmable thermostats;*
- *Improve bike and pedestrian network (complete sidewalks, connection to adjacent areas, connection to bike network, etc.);*
- *Implement bicycle and pedestrian facilities such as bike lanes, routes, and paths, bike parking, sidewalks, and benches;*
- *Promote ridesharing, transit, bicycling, and walking for work trips;*
- *Extend transit service into project site;*
- *Participate in bike sharing programs;*
- *Implement programs that offer residents free or discounted transit passes to encourage transit use;*
- *Subsidize residential transit passes;*
- *Promote use of public electric vehicle charging infrastructure;*
- *Provide charging stations and preferential parking spots for electric vehicles;*
- *Provide traffic calming features;*
- *Minimize use of cul-de-sacs and incomplete roadway segments;*
- *Install energy star appliances;*
- *Install solar water heating;*
- *Exceed minimum CALGreen standards (e.g., adopt Tier 1 or Tier 2 voluntary measures);*
- *Pre-wire homes for photovoltaic systems;*
- *Provide community composting facilities or curb-side food waste services;*
- *Use water efficient landscapes and native/drought-tolerant vegetation; and*
- *Provide electrical outlets outside of homes to allow for use of electrically powered landscaping equipment.*

*The above mitigation measures are mandatory to reduce any significant impacts unless the applicant demonstrates that the measures are not feasible.*

*If off-site mitigation measures are proposed, the applicant must be able to show that the emission reductions from identified projects are real, permanent through the duration of the project, enforceable, and are equal to the pollutant type and amount of the project impact being offset. BAAQMD recommends that off-site mitigation projects occur within the nine-county Bay Area in order to reduce localized impacts and capture potential co-benefits. If BAAQMD has established an off-site mitigation program at the time a development application is submitted, as an off-site mitigation measure, the applicant may choose to enter into an agreement with BAAQMD and pay into the established off-site mitigation program fund, where BAAQMD would commit to reducing the type and amount of emissions identified in the agreement.*

*The analysis and proposed mitigation measures shall be reviewed as part of the development review process.*

**4.3-3 Exposure of sensitive receptors to substantial levels of pollutant concentrations. Based on the analysis below, the impact would be *less than significant*.**

The major pollutant concentrations of concern are localized CO emissions and TAC emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. The statewide CO Protocol document identifies signalized intersections operating at Level of Service (LOS) E or F, or projects that would result in the worsening of signalized intersections to LOS E or F, as having the potential to result in localized CO concentrations in excess of the State or federal AAQS, as a result of large numbers of cars idling at stop lights.<sup>23</sup>

As discussed previously, in accordance with the State CO Protocol, the BAAQMD has established preliminary screening criteria for determining whether the effect that a project would have on any given intersection would cause localized CO emissions in excess of the applicable thresholds of significance, including compliance with an applicable congestion management program and a contribution of additional traffic such that traffic volumes at

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<sup>23</sup> University of California, Davis. *Transportation Project-Level Carbon Monoxide Protocol*. December 1997.

an affected intersection would increase to 44,000 vehicles per hour, or 24,000 vehicles per hour where mixing is limited.

The Traffic Impact Study prepared for the proposed project includes analysis of the proposed project in accordance with criteria set forth by the City of Pittsburg, the City of Concord, and the Contra Costa Transportation Authority (CCTA), including the CCTA's 2015 Congestion Management Program. The Contra Costa Congestion Management Program outlines strategies for managing the performance of regional transportation within the County, including standards, performance measures, a capital program of projects, and a travel demand element. In addition, the CCTA and associated Regional Transportation Planning Committees have set various standards on specific roadways, called Multi-Modal Transportation Service Objectives (MTSO's), which are specific to each region and regulate the routes of regional significance. The Traffic Impact Study prepared for the proposed project evaluated MTSO's in accordance with the East County Action Plan for Routes of Regional Significance and the Central County Action Plan for Routes of Regional Significance. The proposed project's traffic-related impacts in comparison with such plans and regulations are discussed in further detail in Chapter 4.12, Transportation, Traffic, and Circulation, of this EIR. As discussed in the chapter, impacts related to MTSO's would be less than significant. Therefore, the proposed project would be considered to be consistent with the applicable congestion management programs or transportation plans.

According to the Kimley-Horn and Associates, Inc., the traffic consultant for the proposed project, the maximum traffic volume anticipated at an affected intersection would be 5,506, which would occur at the intersection of Treat Boulevard and Clayton Road during the PM peak hour under Cumulative Plus Project conditions.<sup>24</sup> As such, the maximum volume of traffic anticipated at an affected intersection as a result of the proposed project would be below the 44,000 vehicles per hour, or 24,000 vehicles per hour where mixing is limited, screening criteria established by the BAAQMD. Therefore, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards.

#### TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards.<sup>25</sup> The CARB has identified DPM from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest

<sup>24</sup> Kimley-Horn and Associates, Inc. *Traffic Impact Study Faria Annexation, Pittsburg, CA*. September 2017.

<sup>25</sup> California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure.

As discussed above, the proposed project would be considered a sensitive receptor. In addition, existing sensitive receptors in the vicinity of the project area include the residences of the San Marco residential area, specifically along Rio Verde Circle, Barranca Drive, Pilar Ridge Drive, and Rosa Blanca Drive, as well as the various agricultural-related single-family residences.

Development and operation of residential units within the Draft Master Plan area would not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. The CARB's Handbook includes facilities (distribution centers) with associated diesel truck trips of more than 100 trucks per day as a source of substantial TAC emissions. The project is not a distribution center and relatively few vehicle trips associated with the proposed use, which would be comprised of future residents' trips, would be expected to be composed of diesel-fueled vehicles. Accordingly, the proposed project would not involve diesel truck trips in excess of 100 per day. Therefore, overall, the proposed project would not expose any existing sensitive receptors to any new permanent or substantial TAC emissions.

Construction activities have the potential to generate DPM emissions related to the number and types of equipment typically associated with construction. Off-road heavy-duty diesel equipment used for site grading, paving, and other construction activities result in the generation of DPM. The nearest sensitive receptors to the project site could become exposed to DPM emissions during construction activities. However, construction is temporary and occurs over a relatively short duration for each development phase. Health risks associated with exposure to DPM or any TAC are typically correlated with high concentrations over a long period of exposure. In addition, buildout of the proposed project would likely occur in phases, where only portions of the site would be disturbed at a time, with operation of construction equipment occurring intermittently throughout the course of a day. All construction equipment and operation thereof would be regulated per CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation.<sup>26</sup> Considering the intermittent nature of construction equipment operating within an influential distance to the nearest sensitive receptors, the relatively short duration of construction activities, the likelihood that sensitive receptors would be exposed to high concentrations of DPM for any extended period of time would be low. Thus, construction of the proposed project would not be expected to expose sensitive receptors to substantial concentrations of TACs.

The CARB, per its Handbook, recommends the evaluation of emissions when freeways are within 500 feet of sensitive receptors. Any project placing sensitive receptors within 500 feet of a major roadway or freeway may have the potential to expose those receptors to DPM. The nearest point on the project site is over 2,000 feet southeast of the nearest freeway, which would be State Route (SR) 4. As such, a sufficient buffer would be provided between the proposed project site and the nearest freeway, and the proposed

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<sup>26</sup> California Code of Regulations, Title 13, Article 4.8, Chapter 9, Section 2449.

project would not be expected to expose any sensitive receptors to substantial concentrations of DPM associated with roadway traffic.

The BAAQMD considers a significant impact related to TACs to occur if an increase in cancer risk level of more than 10 persons in one million, a non-cancer hazard index of greater than 1.0 or an annual average PM<sub>2.5</sub> concentration of 0.3µg/m<sup>3</sup> or greater would result due to the proposed project. Implementation of the proposed project would not involve the operation of any stationary source of TACs, and construction activity on the project site would be unlikely to result in substantial DPM concentrations at any sensitive receptors. Thus, the proposed project is not anticipated to result in an increased cancer risk, hazard index, or PM<sub>2.5</sub> concentration in excess of the above standards. Moreover, the project site is not located in proximity to any significant sources of TACs. Therefore, implementation of the proposed project would not be anticipated to locate receptors in an area where an increase in cancer risk levels of more than 100 persons in a million, a chronic hazard index greater than 10.0, and/or an annual average PM<sub>2.5</sub> concentration in excess of 0.8 µg/m<sup>3</sup> would occur due to an aggregated total of TAC emissions from local sources. Consequently, the Draft Master Plan would not expose any sensitive receptors to substantial TAC emissions.

#### Conclusion

As discussed above, the proposed project would not cause any substantial levels of localized CO concentrations or involve long-term operations of any stationary diesel engine or other major on-site stationary source of TACs. Construction-related emissions would be temporary, intermittent throughout the day, spread over the project site, and regulated. In addition, future sensitive receptors on-site would not be exposed to substantial levels of pollutant concentrations associated with any existing or future sources of TAC emissions. Thus, the proposed project would be expected to result in a ***less-than-significant*** impact associated with exposure of sensitive receptors to substantial levels of pollutant concentrations.

#### Mitigation Measure(s)

*None required.*

### **Cumulative Impacts and Mitigation Measures**

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

A project’s emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The geographic context for the



proposed project cumulative air quality analysis includes the City of Pittsburg and surrounding areas within the SFBAAB that are designated nonattainment for ozone and PM.

Global climate change is, by nature, a cumulative impact. Emissions of GHG contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). A single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. However, the combination of GHG emissions from a project in combination with other past, present, and future projects contribute substantially to the world-wide phenomenon of global climate change and the associated environmental impacts. The standards of significance described above focus on a project's contribution to cumulative global climate change impacts.

**4.3-4 Generation of cumulative criteria air pollutant emissions in excess of 10 tons/year for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 15 tons/yr for PM<sub>10</sub>. Based on the analysis below, because the proposed project would result in operational emission of ROG and NO<sub>x</sub> in excess of the applicable standards of significance, even with mitigation, the impact would be *significant and unavoidable*.**

The long-term emissions associated with operation of the proposed project in conjunction with other existing or planned development in the area would incrementally contribute to impacts to the region's air quality. The proposed project's contribution to cumulative emissions of criteria air pollutants were calculated using CalEEMod and are presented in Table 4.3-11.

Table 4.3-11 Unmitigated Project Cumulative Emissions (tons/yr)			
Pollutant	Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	15.10	10	YES
NO <sub>x</sub>	14.89	10	YES
PM <sub>10</sub> (Exhaust)	0.33	15	NO
PM <sub>2.5</sub> (Exhaust)	0.33	10	NO

*Source: CalEEMod, January 2018 (see Appendix D).*

As shown in the table, the proposed project's cumulative emissions of ROG and NO<sub>x</sub> would exceed the applicable cumulative thresholds of significance. It should be noted that the proposed project has been evaluated at a program-level, as detailed project designs have not yet been prepared. Because the environmental analysis included in this EIR is intended to provide a 'worst case scenario' evaluation for the development of 1,500 single-family homes, actual project emissions could be less than what has been estimated. Nonetheless, because at maximum allowable buildout, the proposed project could generate operational emissions of ROG and NO<sub>x</sub> in excess of thresholds, the project's incremental contribution to cumulative air quality impacts could be considered *significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact associated with the generation of ROG and NO<sub>x</sub> emissions. However, it should be noted that the proposed project has been evaluated at a program-level and a guarantee cannot be made that emissions from future development in the project area would not exceed the thresholds of significance. Therefore, until further project-level design details are available and a project-level air quality analysis can be performed to show otherwise, the impact is assumed to remain *significant and unavoidable*.

4.3-4            *Implement Mitigation Measure 4.3-2.*

- 4.3-5    Generation of a cumulatively considerable contribution to GHG emissions in excess of 1,100 MTCO<sub>2e</sub>/yr or 4.6 MTCO<sub>2e</sub>/SP/yr by 2020, 660 MTCO<sub>2e</sub>/yr or 2.76 MTCO<sub>2e</sub>/SP/yr by 2030, or an 80 percent reduction from 1990 levels by 2050. Based on the analysis below, because the proposed project would result in GHG emissions in excess of 660 MTCO<sub>2e</sub>/yr or 2.76 MTCO<sub>2e</sub>/SP/yr by 2030 and cannot be shown to reduce emissions to 80 percent below 1990 levels by 2050 at this time, even with mitigation, the impact would be *cumulatively considerable and significant and unavoidable*.**

An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO<sub>2</sub> and, to a lesser extent, other GHG pollutants, such as CH<sub>4</sub> and N<sub>2</sub>O. Sources of GHG emissions include area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste.

Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. Neither the City nor BAAQMD has an adopted threshold of significance for construction-related GHG emissions and does not require quantification. Nonetheless, the proposed project's construction GHG emissions have been amortized over the conservative construction period assumed for this analysis of five years, and included in the annual operational GHG emissions. Amortizing the construction GHG emissions (a one-time release that would occur only during construction of the project) and including them in the annual operational emissions (which would occur every year over the lifetime of the entire project) would represent a conservative analysis for the annual operational emissions. Using CalEEMod, the total annual construction-related GHG emissions were estimated to be 14,045.64 MTCO<sub>2e</sub>, or 2,809.12 MTCO<sub>2e</sub>/yr over a five-year construction period.

The proposed project's operational GHG emission estimations were conducted using CalEEMod. Modeling assumptions are discussed in the Method of Analysis section above. Based on 3.2 persons per household, according to the City of Pittsburgh 2015 – 2023 Housing Element,<sup>27</sup> the proposed project's service population was estimated to be 4,800 people.

#### Compliance with AB 32

As shown in Table 4.3-12, the project's total unmitigated annual GHG emissions in the first year of project operation, 2023, including amortized construction-related emissions, were estimated to be approximately 19,782.46 MTCO<sub>2e</sub>/yr, which results in emissions of 4.12 MTCO<sub>2e</sub>/SP/yr. Thus, implementation of the Draft Master Plan would result in emissions below the BAAQMD's 4.6 MTCO<sub>2e</sub>/SP/yr threshold of significance for GHG emissions, and the Draft Master Plan would be considered in compliance with AB 32.

<b>Table 4.3-12 Unmitigated Year 2023 Project GHG Emissions</b>	
	<b>Annual GHG Emissions</b>
Construction-Related GHG Emissions <sup>1</sup>	1,164.64 MTCO <sub>2e</sub> /yr
Operational GHG Emissions:	17,033.54 MTCO <sub>2e</sub> /yr
Area	146.72 MTCO <sub>2e</sub> /yr
Energy	4,512.60 MTCO <sub>2e</sub> /yr
Mobile	11,094.08 MTCO <sub>2e</sub> /yr
Waste	1,013.85 MTCO <sub>2e</sub> /yr
Water	266.28 MTCO <sub>2e</sub> /yr
<b>Total Annual GHG Emissions</b>	<b>18,198.18 MTCO<sub>2e</sub>/yr</b>
<b>Total Annual GHG Emissions Per Service Population<sup>2</sup></b>	<b>3.79 MTCO<sub>2e</sub>/SP/yr</b>
BAAQMD AB 32 Threshold	4.6 MTCO <sub>2e</sub> /SP/yr
<b>Exceeds Threshold?</b>	<b>NO</b>
<sup>1</sup> Total annual construction-related GHG emissions of 5,823.21 MTCO <sub>2e</sub> amortized over the conservative construction period assumed for this analysis of five years (5,823.21 MTCO <sub>2e</sub> / 5 yrs = 1,164.64 MTCO <sub>2e</sub> /yr). <sup>2</sup> Service population for project calculated to be 4,800 based on 3.2 persons per household (1,500 households x 3.2 persons/household = 4,800 persons).	
<i>Source: CalEEMod, January 2018 (see Appendix D).</i>	

It should be noted that the actual annual GHG emissions of the proposed project would be less than presented in Table 4.3-12 due to the one-time release of construction-related GHG emissions and implementation of the mitigation measures prescribed throughout this chapter. Furthermore, the proposed project has been evaluated at a program-level, as detailed project designs have not yet been prepared. However, because the environmental analysis included in this EIR is intended to provide a 'worst case scenario' evaluation for the development of 1,500 single-family homes, actual project emissions would likely be

<sup>27</sup> City of Pittsburgh. 2015 – 2023 Housing Element. May 04, 2015.

less than what has been estimated. Despite the use of worst case scenario assumptions, at maximum allowable buildout, the project's unmitigated annual GHG emissions would be below the 4.6 MTCO<sub>2e</sub>/SP/yr threshold used by BAAQMD, and operation of the proposed project would result in GHG emissions in compliance with AB 32.

#### Compliance with SB 32

As shown in Table 4.3-13, the project's total unmitigated annual GHG emissions in the year 2030, including amortized construction-related emissions, were estimated to be approximately 14,643.45 MTCO<sub>2e</sub>/yr, which results in emissions of 3.64 MTCO<sub>2e</sub>/SP/yr. Thus, implementation of the Draft Master Plan would result in emissions above the 660 MTCO<sub>2e</sub>/yr and 2.76 MTCO<sub>2e</sub>/SP/yr thresholds of significance being used for GHG emissions in the year 2030, and, thus, the Draft Master Plan would be considered to conflict with SB 32.

<b>Table 4.3-13 Unmitigated Year 2030 Project GHG Emissions</b>	
	<b>Annual GHG Emissions</b>
Construction-Related GHG Emissions <sup>1</sup>	1,164.64 MTCO <sub>2e</sub> /yr
Operational GHG Emissions:	14,643.45 MTCO <sub>2e</sub> /yr
Area	146.72 MTCO <sub>2e</sub> /yr
Energy	3,928.42 MTCO <sub>2e</sub> /yr
Mobile	9,318.58 MTCO <sub>2e</sub> /yr
Waste	1,013.85 MTCO <sub>2e</sub> /yr
Water	235.88 MTCO <sub>2e</sub> /yr
<b>Total Annual GHG Emissions</b>	<b>17,452.57 MTCO<sub>2e</sub>/yr</b>
<b>Total Annual GHG Emissions Per Service Population<sup>2</sup></b>	<b>3.29 MTCO<sub>2e</sub>/SP/yr</b>
SB 32 Threshold	2.76 MTCO <sub>2e</sub> /SP/yr
<b>Exceeds Threshold?</b>	<b>YES</b>
<sup>1</sup> Total annual construction-related GHG emissions of 5,823.21 MTCO <sub>2e</sub> amortized over the conservative construction period assumed for this analysis of five years (5,823.21 MTCO <sub>2e</sub> / 5 yrs = 1,164.64 MTCO <sub>2e</sub> /yr).	
<sup>2</sup> Service population for project calculated to be 4,800 based on 3.2 persons per household (1,500 households x 3.2 persons/household = 4,800 persons).	
<i>Source: CalEEMod, January 2018 (see Appendix D).</i>	

#### Compliance with Executive Order S-03-05

As it is impossible to predict the impact of legislation and policy that has yet to come, an accurate prediction of 2050 emissions is not possible. The regulatory environment associated with climate change is becoming more stringent and technological advancements for the reduction of GHG emissions are ever-evolving. Accordingly, the future regulations that may be in place in the year 2050 could substantially reduce project emissions at that time, but are currently unknown and cannot be reasonably predicted or quantified.

While the proposed project would likely include features that would reduce GHG emissions per Mitigation Measure 4.3-2, the future of transportation emissions generated by the proposed project, which represent the largest GHG-emitting sector of the project, are uncertain (e.g., additional state-mandated low carbon fuel standards, percentage of electric vehicles traveling to/from the site, etc.). With the variety of factors involved, and without knowing future actions on the proposed project site that would reduce GHG emissions, it is uncertain that the proposed project could be on a trajectory to achieving a reduction of GHG emissions 80 percent below 1990 levels by 2050.

### Conclusion

Based on the above, the proposed project would be considered to be compliant with the emissions reduction targets of AB 32. However, operational emissions in the year 2030 would not be anticipated to achieve the 40 percent emissions reduction from 1990 levels required by SB 32, and a reduction of GHG emissions to 80 percent below 1990 levels by 2050 consistent with Executive Order S-03-05 cannot be verified or guaranteed at this time. Therefore, the proposed project would be considered to conflict with the goals of SB 32 and Executive Order S-03-05, and would contribute to a *cumulatively considerable* impact related to GHG emissions.

### Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact associated with the generation of GHG emissions. However, unless subsequent GHG emissions analysis can be performed to show otherwise, the impact is assumed to remain *cumulatively considerable and significant and unavoidable*.

4.3-5(a)      *Implement Mitigation Measure 4.3-2.*

4.3-5(b)      *The project-level air quality analysis required by Mitigation Measure 4.3-2 shall include an analysis of project-level GHG emissions. Such future analyses shall include, but not be limited to, quantification of GHG emissions, as well as determination of operational GHG emission impacts based on existing statewide climate change laws in effect at the time of analysis. The project-level GHG emissions shall be reduced through the implementation of the mitigation measures identified in Mitigation Measure 4.3-2 designed to reduce operational GHG emissions.*



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## 4.4 BIOLOGICAL RESOURCES

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## 4.4

## BIOLOGICAL RESOURCES

### 4.4.1 INTRODUCTION

The Biological Resources chapter of the EIR evaluates the biological resources known to occur or potentially occur within the proposed project area. Existing plant communities, wildlife habitats, and potential for special-status species and communities are discussed for the project site. The information contained in this analysis is primarily based on the Biological Evaluation Report prepared by Pacific Biology (see Appendix E),<sup>1</sup> a previous Biological Resources Assessment prepared by Moore Biological (see Appendix F),<sup>2</sup> the *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan* (ECCC HCP/NCCP),<sup>3</sup> the Pittsburg General Plan<sup>4</sup> and associated EIR,<sup>5</sup> and the Pittsburg Municipal Code.<sup>6</sup>

### 4.4.2 EXISTING ENVIRONMENTAL SETTING

The following section describes the regional setting, project setting, as well as the existing biological resources, natural communities, and critical habitat occurring in the proposed project area.

#### Regional Setting

The City of Pittsburg is located in the northern portion of Contra Costa County on the southern border of Suisun Bay. The City of Bay Point bounds Pittsburg to the west, the City of Antioch is located east of Pittsburg, and the Black Diamond Mines Regional Preserve is situated to the south. The City is made up of relatively flat land in its northern portion, with increasing elevations in the southern portion. The City's planning area includes 41.1 square miles of land, including the Sphere of Influence and City corporate limits. Geographic features in Pittsburg include the Sacramento River along the northern boundary, steep hills reaching almost 1,900 feet and the Black Diamond Mines Regional Preserve along the southern boundary, and Browns Island, located across New York Slough. Pittsburg is characterized by a Mediterranean climate and supports a variety of grasslands, wetland communities, and scattered stands of trees. Historic vegetation in Pittsburg included native grassland, oak woodlands, riparian communities, and coastal salt and brackish marshes. The southern portion of the City is largely undeveloped open space with large areas of

<sup>1</sup> Pacific Biology. *Faria/Southwest Hills Annexation Project Draft Biological Evaluation Report*. June 2018.

<sup>2</sup> Moore Biological Consultants. *Biological Resources Assessment at the 606 +/- Acre "Faria" Site, Pittsburg, Contra Costa County, California*. December 23, 2014.

<sup>3</sup> East Contra Costa County Habitat Conservation Plan Association. *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. October 2006.

<sup>4</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

<sup>5</sup> City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January, 2001.

<sup>6</sup> City of Pittsburg. *Pittsburg Municipal Code*. October 21, 2013.

rolling grassy hills, while the northern portion of Pittsburg consists of salt and brackish marshlands at New York Slough. The aforementioned natural areas have potential for inhabitation by several threatened and endangered plant and animal species.

### **Project Setting**

The project area is generally characterized as hillside and ridgeline land that consists of undeveloped vacant grasslands. With the exception of two single family homes located near the terminus of San Marco Boulevard, the remainder of the project area consists of vacant and undeveloped hills just beyond the southwestern boundary of the City of Pittsburg.

The project site consists of relatively steep rolling hills with site elevations ranging from approximately 435 feet to 1,000 feet above mean sea level. As shown in Figure 4.4-1, a man-made compensatory wetland mitigation area is located within the west edge of the site. A considerable network of dirt roads dissects the site and the roads are re-graded two times per year to provide access throughout the site for grazing management purposes, access for utilities, and firebreaks. The project site has historically been used for agricultural grazing. Soils throughout the project site are relatively thick, clay to clay loam with near neutral pH values, and are derived from common sandstone and shale parent material.

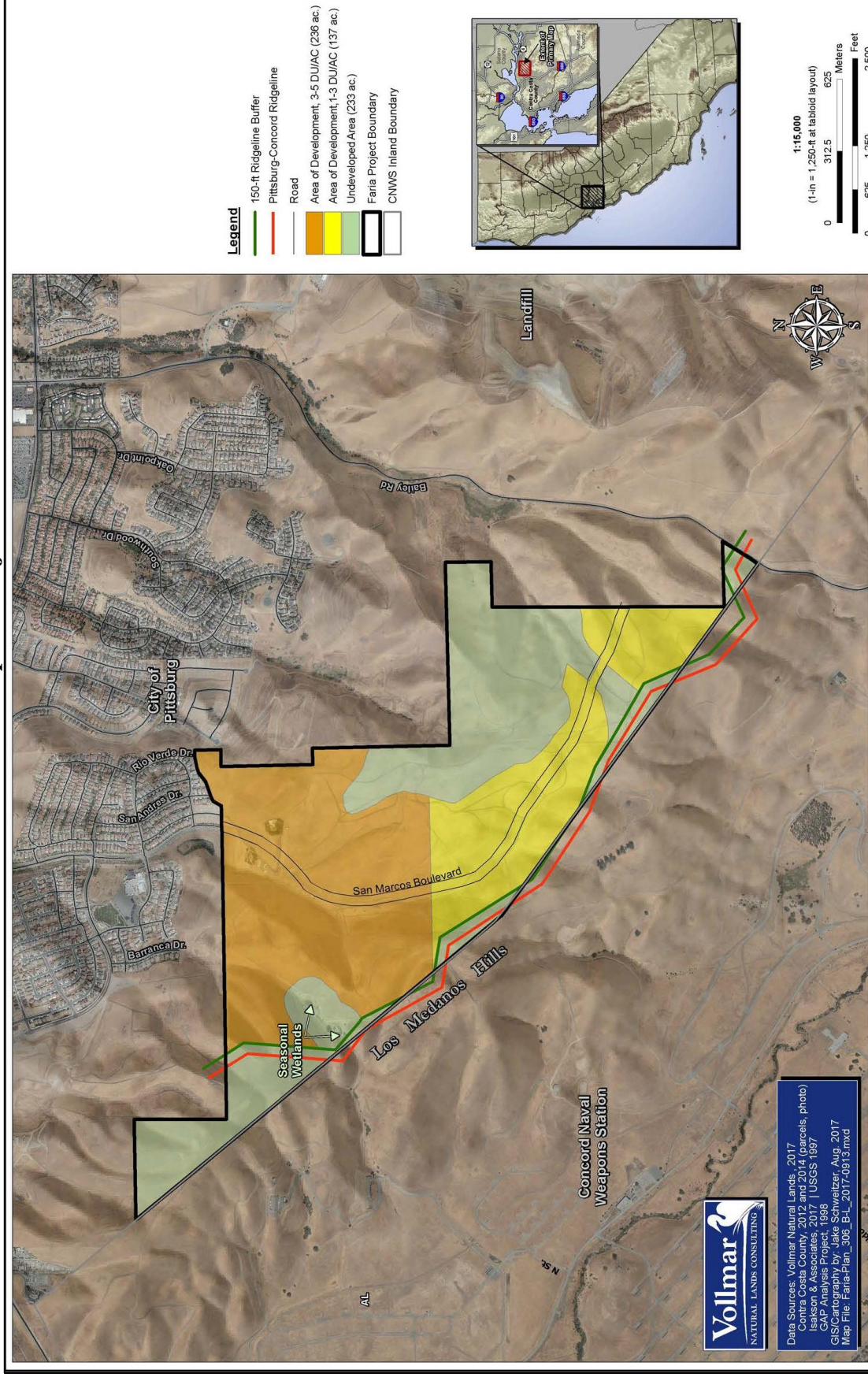
### **On-Site Plant Communities and Habitats**

The project site is primarily vegetated with annual grassland vegetation, with only a few stands of trees surrounding two wetlands and two home sites. The two wetlands, both of which serve as mitigation wetlands, support the only significant cover of wetland vegetation in the project site. In addition to the two wetlands, a number of drainage swales exist in the project site, but all of the swales are ephemeral and support primarily upland grasses and forbs. Streams, with a defined bed and bank, were not observed on the project site. Figure 4.4-2 presents the habitat types present on the project site.

#### *Annual Grasslands*

Annual grassland is prevalent on over 99 percent of the project site. As a result of the property grazing regime, as well as the similarity of soil types and generally uniform topography across the site (i.e., consistently sloping hills that generally lack due northern and southern exposures), the grasslands are relatively homogenous. Recently, grazing activity has been relatively light, allowing annual grasses to grow notably tall and dense. Such growth was aided by the above-average precipitation during the 2016-2017 wet season. The fertile soils located on the project site support a predominance of introduced grasses and forbs, which are generally more competitive than native grasses and forbs.

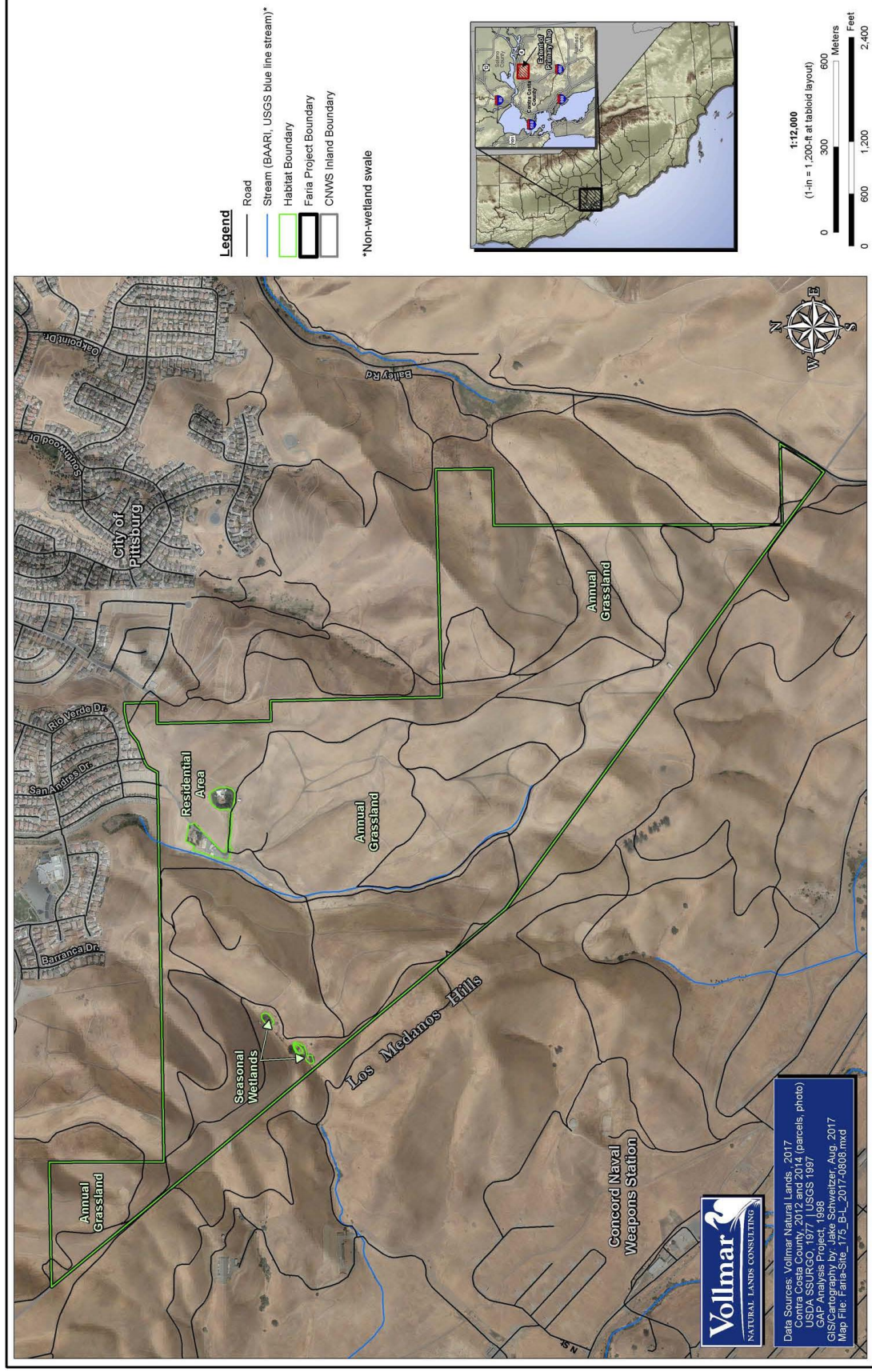
**Figure 4.4-1**  
**Aerial View of the Proposed Project Site**



Source: Pacific Biology. Faria/Southwest Hills Annexation Project Biological Evaluation Report. June 2018.



**Figure 4.4-2**  
**Habitat Types and Plant Communities**



Source: Pacific Biology. Faria/Southwest Hills Annexation Project Biological Evaluation Report. June 2018.

Dominant grasses observed during the August 2017 survey included slender wild oat (*Avena barbata*), soft chess brome (*Bromus hordeaceus*), and ripgut brome (*B. diandrus*). The larger swales, including the drainage depicted on Figure 4.4-2 by a blue line, included foxtail barley (*Hordeum murinum*) and Italian ryegrass (*Festuca perennis*). During the August 2017 field survey, wildflowers were relatively sparse in the project site, and the only native perennial grass species observed was creeping wildrye (*Elymus triticoides*), which occurred as a few small, isolated stands.

Interspersed among the annual grasses throughout the grassland habitat were a variety of annual and perennial forbs. Like the grasses in the habitat, the most common forbs were introduced and often rather weedy. Examples include Mediterranean mustard (*Hirschfeldia incana*), fiddle dock (*Rumex pulcher*), bindweed (*Convolvulus arvensis*), milkthistle (*Silybum marianum*), and Mediterranean linseed (*Bellardia trixago*). Milkthistle, an upland plant, was particularly common within the swales. Scattered among the nonnative species are a few native forbs, primarily along areas of slightly more shallow soils. Native forbs include turkey-mullein (*Croton setigerus*), narrow leaf milkweed (*Asclepias fascicularis*), lupines (*Lupinus* spp.), and naked buckwheat (*Eriogonum nudum* var. *auriculatum*).

### Wetlands

Wetlands in the project site are limited to two man-made wetlands that were created as part of compensatory mitigation for nearby development projects; the two wetlands are located outside of the development area indicated within the Draft Master Plan, and both wetlands would be preserved in an Open Space area of the Draft Master Plan that would not be disturbed by temporary grading activities. Combined, the wetlands occupy approximately 0.7 acre within a low-lying area in the northwestern portion of the project site (see Figure 4.4-2). The wetlands are situated at the upper reaches of a USGS identified, blue line stream that flows off-site to the southwest into the Concord Naval Weapons Station (CNWS), where the stream enters the Clayton Canal. A buffer was established around the wetlands in order to maintain habitat quality, such that the preserve area amounts to approximately 17.5 acres. Both of the wetland features were completely dry during the August 2017 field survey, though both supported perennial, as well as seasonal, wetland vegetation, indicating a topographic gradient where the deeper portions hold water for long periods of time and presumably are underlain by saturated soils during the summer. The perennial wetland vegetation in both wetlands is concentrated along the southwestern, lower portions of the features. Based on hydrologic features as well as the spillway locations, both wetlands hold roughly one to two feet of water during the wet season, and rarely flow over the spillways. Wetland plant species observed within the deeper portions of the wetlands were dominated by hardstem bulrush (*Schoenoplectus acutus*) and swamp picklegrass (*Crypsis schoenoides*), with an overstory of arroyo willow (*Salix lasiolepis*) and Fremont's cottonwood (*Populus fremontii*). The shallower portions were dominated by Baltic rush (*Juncus balticus*), rabbitsfoot grass (*Polypogon monspeliensis*), clustered dock (*Rumex conglomeratus*), and prostrate knotweed (*Polygonum aviculare*). Significant cover of wetland species outside of the excavated basins does not exist—the two wetlands are separated by upland habitat—though quasi-wetland trees, primarily valley oak (*Quercus lobata*), have been planted along the slopes adjacent to the features. The southwestern wetland surrounds an island of upland habitat, with a windmill and water pump installed at the center of the island.

### Existing Residences

A small portion of the site, near San Marco Boulevard, has been developed with two residential sites. The existing residences and associated outbuildings include some landscaping, paved areas, and gravel areas. With the exception of the trees and shrubs in the wetland mitigation area, the only other on-site trees are associated with the existing residential sites.

### **Special-Status Species**

Several species of plants and animals within the State of California have low populations, limited distributions, or both. Such species may be considered “rare” and are vulnerable to extirpation as the State’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described below, State and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the State. A number of native plants and animals have been formally designated as threatened or endangered under state and federal endangered species legislation. Others have been designated as “candidates” for such listing. Still others have been designated as “species of special concern” by the CDFW. In addition, the California Native Plant Society (CNPS) has developed a set of lists of native plants considered rare, threatened, or endangered (CNPS 2001). Collectively, these plants and animals are referred to as “special-status species.”

A plant species may be considered a special-status plant species if they meet one or more of the following criteria:

- Plants listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (FESA) (50 CFR 17.12 for listed plants and various notices in the Federal Register for proposed species);
- Plants that are candidates for possible future listing as threatened or endangered under the FESA (64 FR 205, October 25, 1999; 57533-57547);
- Plants that meet the definitions of rare or endangered species under the California Environmental Quality Act (CEQA) (CEQA Guidelines, Section 15380);
- Plants considered by the California Native Plant Society (CNPS) to be “rare, threatened, or endangered” in California (Lists 1A, 1B, and 2 species in CNPS [2001]);
- Locally important occurrences of plants listed by CNPS as plants for which more information is needed and plants of limited distribution (Lists 3 and 4, respectively, species in CNPS [2001]);
- Plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 CCR 670.5);
- Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq.). Plants considered sensitive by other federal agencies (i.e., U.S. Forest Service, Bureau of Land Management) or state and local agencies or jurisdictions; and/or
- Plants considered sensitive or unique by the scientific community or occurring at the limits of their natural range (*CEQA Guidelines*, Appendix G).

A wildlife species may be considered a special-status wildlife species if they meet one or more of the following criteria:

- Wildlife listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.11 for listed wildlife and various notices in the Federal Register for proposed species);
- Wildlife that are candidates for possible future listing as threatened or endangered under the FESA (54 CFR 554);
- Wildlife that meet the definitions of rare or endangered species under the CEQA (CEQA Guidelines, Section 15380);
- Wildlife listed or proposed for listing by the State of California as threatened and endangered under the CESA (14 CCR 670.5);
- Wildlife species of special concern to the California Department of Fish and Game (Remsen [1978] for birds; Williams [1986] for mammals); and/or
- Wildlife species that are fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Sensitive plants are those that are designated rare, threatened, or endangered and candidate species for listing by the USFWS. Sensitive plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those plant species identified on Lists 1A, 1B, and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the CNPS (CNPS, 2001). Finally, sensitive plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

#### Special-Status Plant Species

Table 4.4-1 provides a summary of the listing status and habitat requirements of special-status plant species that have been documented in the project vicinity or for which potentially suitable habitat exists in the area. The table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability of the site, and field observations.

Most of the special-status plants found in the greater project vicinity generally occur in relatively undisturbed areas within vegetation communities such as marshes and swamps, chaparral, coastal scrub, cismontane woodland, chenopod scrub, inland dunes, and areas with unique soils (e.g., serpentine, alkaline, clay). None of the aforementioned vegetation communities occur within the project site. For example, Bolander's water hemlock, delta tule pea, Mason's lilaeopsis, delta mudwort, slender-leaved pondwood, and Suisun marsh aster are restricted to marsh and swamp habitats. Antioch dunes evening primrose and Contra Costa wallflower occur only in inland dunes. Other species including Mount Diablo Manzanita, Contra Costa Manzanita, chaparral harebell, Mount Diablo bird's-beak, Lime Ridge eriastrum, Halls bush mallow, and Lime Ridge navarretia occur in chaparral habitats.

**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
Large-flowered fiddleneck	<i>Amsinckia grandiflora</i>	E/E/1B	Cismontane woodland, valley and foothill grassland at elevations of 902 to 1,805 feet. Blooms April to May.	The heavily grazed ruderal grasslands on the site do not provide suitable habitat for large-flowered fiddleneck and the site is just below the elevation range of the species. Occurrences of this species in the CNDDDB search area do not exist.
Bent-flowered fiddleneck	<i>Amsinckia lunaris</i>	--/--/1B.2	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland at elevations of 10 feet to 1,640 feet. Blooms March to June.	Marginal habitat occurs on the property. Dominated by tall, dense grass cover. Not observed during 2014 surveys by Moore Biological Consultants.
Slender silver moss	<i>Anomobryum julaceum</i>	--/--/4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest/damp rock and soil on outcrops, usually on roadcuts at elevations of 330 feet to 3,280 feet.	Not Expected. Suitable habitat does not occur on project site.
Mount Diablo manzanita	<i>Arctostaphylos auriculata</i>	--/--/1B	Chaparral, only in the Mount Diablo area of Contra Costa County at elevations of 443 to 2,133 feet. Blooms January to March.	The site does not contain suitable habitat for Mount Diablo manzanita and the site is at the low end of the elevation range for this species. The site is mapped as suitable habitat for Mount Diablo Manzanita; however, the chaparral habitat needed by the species does not exist on the site. Furthermore, evergreen shrubs, such as the Mount Diablo manzanita, were not observed on the site. The nearest occurrence of this species in the CNDDDB search area is approximately five miles southeast of the site.
Contra Costa manzanita	<i>Arctostaphylos manzanita</i> spp. <i>laevigata</i>	--/--/1B	Rocky areas in chaparral within Contra Costa County only and at elevations of 1,640 to 3,609 feet. Blooms January to April.	The site does not contain suitable habitat for Contra Costa manzanita and evergreen shrubs were not observed. The site is also below the elevation range of this species. The nearest occurrence of this species in the CNDDDB search area is approximately eight miles south of the site.
Alkali milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	--/--/1B	Alkali playas and vernal pools at elevations of 3 to 197 feet. Blooms March to June.	Vernal pools do not exist in the site and the site is above the elevation range for this species. The nearest occurrence of this

(Continued on next page)



**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
				species in the CNDDB search area is approximately eight miles northeast of the site.
Heartscale	<i>Atriplex cordulata</i> var. <i>cordulata</i>	--/--/1B.2	Chenopod scrub, Meadows and seeps, Valley and foothill grassland (sandy)/saline or alkaline at elevations of 0 to 1,840 feet. Blooms April through October.	Suitable habitat does not occur on project site. Saline or alkaline soils not present. Not observed during 2014 field surveys.
Brittlescale	<i>Atriplex depressa</i>	--/--/1B.2	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland, Vernal pools/alkaline, clay at elevations of 3 to 1,050 feet. Blooms April through October.	Suitable habitat does not occur on project site. Saline or alkaline soils not present. Not observed during 2014 field surveys.
San Joaquin spearscale	<i>Atriplex joaquinana</i>	--/--/1B.2	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland/alkaline at elevations of 3 to 2,740 feet. Blooms April through October.	Suitable habitat does not occur on project site. Saline or alkaline soils not present. Not observed during 2014 field surveys.
Big tarplant	<i>Blepharizonia plumose</i> ssp. <i>plumose</i>	--/--/1B	Valley and foothill grasslands at elevations of 98 to 1,657 feet. Blooms July to October.	The low area in the north-central part of the site is mapped in the ECCC HCP/NCCP as suitable low potential habitat for big tarplant, and the relatively higher elevation parts of the site are mapped as suitable habitat. However, the on-site grasslands have been grazed and site surveys concluded that the on-site grasslands do not provide suitable habitat for big tarplant; additionally, clay soils were not observed on-site. The nearest occurrence of this species in the CNDDB search area is approximately 3.5 miles northeast of the site.
Round-leaved filaree	<i>California macrophyllum</i>	--/--/2	Cismontane woodland and valley and foothill grassland at elevation	The heavily grazed ruderal grasslands on the site provide marginally suitable habitat for round-leaved filaree. A small area in the central portion of the site is mapped in the ECCC

(Continued on next page)

**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
			of 49 to 3,937 feet. Blooms March to May.	HCP/NCCP as suitable habitat for this species. The nearest occurrence of this species in the CNDDDB search area is approximately two miles southeast of the site.
Mount Diablo fairy-lantern	<i>Calochortus pulchellus</i>	--/--/1B	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland at elevations of 98 to 2,756 feet. Blooms April to June.	The heavily grazed ruderal grasslands in the site contain marginally suitable habitat for Mount Diablo fairy-lantern. The relatively higher elevation parts of the site are mapped in the ECCC HCP/NCCP as suitable habitat for this species. The nearest occurrence of this species in the CNDDDB search area is approximately five miles southeast of the site.
Chaparral harebell	<i>Campanula exigua</i>	--/--/1B	Chaparral, usually rocky serpentine soils at elevations of 902 to 4,101 feet. Blooms May to June.	The site does not contain suitable habitat for chaparral harebell and areas of serpentine soil were not observed on the site. The site is also below the elevation range of this species. The nearest occurrence of this species in the CNDDDB search area is approximately 6.5 miles southeast of the site.
Congdon's harebell	<i>Centromadia parryi</i> ssp. <i>congonii</i>	--/--/1B.1	Valley and foothill grassland (alkaline) at elevations of 0 to 755 feet. Blooms from May through October, occasionally through November.	Marginal habitat occurs on the project site. The project site is dominated by tall, dense grass cover. Alkaline soils do not occur within project site. Congdon's harebell was not observed during 2014 field surveys.
Soft bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>mollis</i>	E/R/1B	Coastal salt marsh at elevations of 0 to 10 feet. Blooms July to November.	The site does not contain suitable habitat for soft bird's-beak. The nearest occurrence of this species in the CNDDDB search area is approximately two miles northwest of the site.
Bolander's water hemlock	<i>Cicuta maculate</i> var. <i>bolanderi</i>	--/--/2	Fresh or brackish water marshes at elevations of 0 to 656 feet. Blooms July to September.	The site does not contain suitable habitat for Bolander's water hemlock. The nearest occurrence of this species in the CNDDDB search area is approximately four miles northeast of the site.
Mount Diablo bird's-beak	<i>Cordylanthus nidularius</i>	--/R/1B	Chaparral with serpentine soils at elevations of 1,969 to 2,625 feet. Blooms June to August.	The site does not contain suitable habitat for Mount Diablo bird's-beak and areas of serpentine soils were not observed on-site. The site is also below the elevation range of this species. The nearest occurrence of this species in the CNDDDB search area is approximately six miles southeast of the site.

(Continued on next page)

**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
Hoover's cryptantha.	<i>Cryptantha hooveri</i>	--/--/1A	Inland dunes, Valley and foothill grassland (sandy soils) at elevations from 30 to 490 feet. Blooms from April to May.	Marginal suitable habitat occurs on project site, but the valley and foothill grassland that does exist on the project site is not sandy, which reduce the likelihood that the project site would provide habitat for the species.
Hospital Canyon larkspur	<i>Delphinium californicum</i> ssp. <i>interius</i>	--/--/1B	Cismontane woodland and chaparral at elevations of 639 to 3,593 feet. Blooms April to June.	The site does not contain suitable habitat for Hospital Canyon larkspur. The site is also at the low end of the elevation range of this species. The nearest occurrence of this species in the CNDDDB search area is approximately four miles south of the site.
Norris' beard moss	<i>Didymodon norrisii</i>	--/--/2B.2	Cismontane woodland, Lower montane coniferous forest/intermittently mesic, rock from elevations of 1,970 to 6,470 feet.	Suitable habitat does not occur on project site.
Western leatherwood	<i>Dirca occidentalis</i>	--/1B.2	Broadleafed upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Riparian forest, Riparian woodland/mesic sites from elevations of 82 to 1,394 feet. Blooms from January through March, occasionally through April.	Suitable habitat does not occur on project site.
Dwarf downingia	<i>Downingia pusilla</i>	--/--/2B.2	Valley and foothill grassland (mesic), vernal pools at elevations from 3 to 1,460 feet. Blooms from March through May.	Suitable habitat does not occur on project site. Project site does not contain grassland areas with adequate soil moisture (mesic areas) or vernal pools.
Lime Ridge eriastrum	<i>Eriastrum erterae</i>	--/--/1B	Chaparral edges and openings usually with alkaline or sandy soils at elevations of 656 to 951 feet. Blooms June to July.	The site does not contain suitable habitat for Lime Ridge eriastrum and the site is at the very low end of the elevation range of this species. The nearest occurrence of this species in the CNDDDB search area is approximately four miles south of the site.

(Continued on next page)  
CHAPTER 4.4 – BIOLOGICAL RESOURCES

**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
Antioch Dunes buckwheat	<i>Eriogonum nudum</i> var. <i>psychicola</i>	--/--/1B.1	Inland Dunes at elevations between 0 and 65 feet. Blooms from July through October.	Suitable habitat does not occur on project site.
Mount Diablo buckwheat	<i>Eriogonum truncatum</i>	--/--/1B	Coastal scrub, valley and foothill grassland, and coastal scrub usually with sandy soils at elevations of 10 to 1,148 feet. Blooms April to December.	The ruderal grassland on the site does not contain suitable habitat for Mount Diablo buckwheat. The nearest occurrence of this species in the CNDDDB search area is approximately five miles south of the site.
Contra Costa wallflower	<i>Erysimum capitatum</i> var. <i>angustatum</i>	E/E/1B	Inland dunes at elevations of 10 to 66 feet. Blooms March to July.	The site does not contain suitable dune habitat for Contra Costa wallflower and the site is not designated as critical habitat for the species. The nearest occurrence of this species in the CNDDDB search area is approximately six miles northeast of the site.
Diamond-petaled California poppy	<i>Eschscholzia rhombipetala</i>	--/--/1B	Valley and foothill grasslands in alkaline, clay soils at elevations of 0 to 3,200 feet. Blooms March to April.	The on-site grasslands are heavily grazed and do not provide suitable habitat for diamond-petaled California poppy. Alkaline or clay soils were not observed on-site. The CNPS Inventory describes this species as completely destroyed in Contra Costa County. The species does not have any occurrences in the CNDDDB search area.
Fragrant fritillary	<i>Fritillaria liliacea</i>	--/--/1B	Coastal scrub, valley and foothill grassland, and coastal prairie often in serpentine soils at elevations of 10 to 1,345 feet. Blooms February to April.	The on-site grasslands are heavily grazed and do not provide suitable habitat for fragrant fritillary. Serpentine soils were not observed on-site. The nearest occurrence of this species in the CNDDDB search area is approximately eight miles southwest of the site.
Toren's grimmia	<i>Grimmia torenii</i>	--/--/1B	Chaparral, cismontane woodland, lower montane coniferous forest, and within openings and rocky areas at elevations of 1,066 to 3,806 feet. The species does not have a defined blooming period.	The site does not contain suitable habitat for Toren's grimmia and the site is below the elevation range of this species. The nearest occurrence of this species in the CNDDDB search area is approximately seven miles southeast of the site.

(Continued on next page)

**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
Diablo helianthella	<i>Helianthella castanea</i>	--/--/1B	Broad-leaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland at elevations of 197 to 4,265 feet. Blooms March to June.	The heavily grazed ruderal grasslands on the site provide marginally suitable habitat for Diablo helianthella. The species was not observed on-site and is more commonly associated with oak woodland and savannah habitats. The site is also at the very low end of the elevation range of the species and is below the elevation range of the potential habitat for Diablo helianthella as modeled in the ECCC HCP/NCCP. The nearest occurrence of this species in the CNDDDB search area is approximately four miles southeast of the site.
Brewers western flax	<i>Hesperolinon breweri</i>	--/--/1B	Chaparral, cismontane woodland, and valley and foothill grassland usually in serpentine soils at elevations of 98 to 3,100 feet. Blooms May to July.	The heavily grazed ruderal grasslands on the site do not provide suitable habitat for Brewers western flax. The site is outside the area of potential habitat for this species as modeled in the ECCC HCP/NCCP. The nearest occurrence of this species in the CNDDDB search area is approximately 6.5 miles southeast of the site.
Carquinez goldenbush	<i>Isocoma arguta</i>	--/--/1B.1	Valley and foothill grassland (alkaline soils) at elevations from 3 to 65 feet. Blooms August through December.	Suitable habitat does not occur on project site. Project site does not contain alkaline areas and is above the elevation range.
Northern California black walnut	<i>Juglans hindsii</i>	--/--/1B.1	Riparian forest, Riparian woodland at elevations from 0 to 1,440 feet.	Suitable habitat does not occur on project site.
Contra Costa goldfields	<i>Lasthenia conjugens</i>	E/--/1B	Valley and foothill grassland within vernal pools and swales at elevations of 0 to 1,542 feet. Blooms March to June.	The site does not contain suitable habitat for Contra Costa goldfields. The site is not designated critical habitat for Contra Costa goldfields. The species does not have any occurrences in the CNDDDB search area.
Delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	--/--/1B	Marshes and swamps at elevations of 0 to 16 feet. Blooms May to September.	The site does not contain suitable habitat for Delta tule pea. The nearest occurrence of this species in the CNDDDB search area is approximately 3.5 miles northeast of the site.

(Continued on next page)

**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>	--/R/1B	Marshes, swamps, and riparian scrub at elevations of 0 to 33 feet. Blooms April to November.	The site does not contain suitable habitat for Mason's lilaeopsis. The nearest occurrence of this species in the CNDDB search area is approximately two miles north of the site.
Delta mudwort	<i>Limosella australis</i>	--/--/2	Marshes and swamps at elevations of 0 to 10 feet. Blooms May to August.	The site does not contain suitable habitat for Delta mudwort. The nearest occurrence of this species in the CNDDB search area is approximately six miles northeast of the site.
Showy golden madia	<i>Madia radiata</i>	--/--/1B	Cismontane woodland, valley and foothill grassland at elevations of 82 to 3,986 feet. Blooms March to May.	The on-site grasslands would be considered marginal habitat for the species. However, the grasslands have been heavily grazed and are not expected to provide suitable habitat for showy golden madia. Furthermore, the species is considered completely destroyed in Contra Costa County. The nearest occurrence of this species in the CNDDB search area is approximately five miles southeast of the site.
Halls bush mallow	<i>Malacothamnus hallii</i>	--/--/1B	Chaparral at elevations of 33 to 2,493 feet. Blooms May to October.	The site does not contain suitable habitat for Halls bush mallow. The nearest occurrence of this species in the CNDDB search area is approximately five miles southeast of the site.
Mt. Diablo cottonweed	<i>Micropus amphibolus</i>	--/--/3.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland/rocky at elevations from 145 to 2,706 feet. Blooms from March to May.	Marginal habitat occurs on the property. Dominated by tall, dense grass cover. Rocky soils are not present on the project site. The species was not observed during 2014 field surveys.
San Antonio Hills monardella	<i>Monardella Antonina ssp. antonina</i>	--/--/3	Chaparral, Cismontane woodland at elevations from 145 to 3,280 feet. Blooms from June to August	Suitable habitat does not occur on project site.
Woodland woollythreads	<i>Monolopia gracilis</i>	--/--/1B	Mixed evergreen forest, redwood forest, and chaparral at elevations of 328 to 3,937 feet. Blooms February to July.	Marginal habitat occurs on the property. Dominated by tall, dense grass cover. Serpentine and burned habitats do not exist on the project site. The species was not observed during 2014 surveys by Moore Biological Consultants.

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**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
Lime Ridge narvarretia	<i>Navarretia gowenii</i>	--/--/1B	Chaparral at elevations of 591 to 1,001 feet. Blooms May to June.	The site does not contain suitable habitat for Lime Ridge narvarretia. The nearest occurrence of this species in the CNDDB search area is approximately five miles southwest of the site.
Adobe marvarretia	<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>	--/--/4	Vernal pools, vernal mesic areas with cismontane woodland and valley and foothill grassland, usually in clay or serpentine soils at elevations of 328 to 3,280 feet. Blooms April to June.	The on-site grasslands would be considered marginal habitat for the species; however, grazing of the site reduces the site's suitability as habitat for Adobe marvarretia. Areas of clay or serpentine soils were not observed in the site. The site is also at the low end of the known elevation range for the species. Adobe marvarretia requires evaluation in the ECCC HCP/NCCP as the species may occur in seasonal wetland habitats in the project vicinity. The species does not have any occurrences in the CNDDB search area.
Shining narvarretia	<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	--/--/1B.2	Cismontane woodland, Valley and foothill grassland, Vernal pools/Sometimes clay at elevations from 250 to 3,280 feet. Blooms from April through July.	Marginal habitat occurs on the property. The project site is dominated by tall, dense grass cover. Vernal pools are not present on the project site. Shining narvarretia was not observed during 2014 field surveys.
Colusa Grass	<i>Neostapfia colusana</i>	T/E/1B.1	Vernal Pools (adobe, large), at elevations from 16 to 656 feet. Blooms May through August.	Suitable habitat does not occur on the project site.
Antioch dunes evening-primrose	<i>Oenothera deltoids</i> ssp. <i>howellii</i>	E/E/1B	Interior dunes in the Delta region at elevations of 0 to 98 feet. Blooms March to September.	The site does not contain suitable habitat for Antioch dunes evening primrose and the site is above the known elevation range of the species. The nearest occurrence of this species in the CNDDB search area is approximately 4.5 miles northeast of the site.
Mount Diablo phacelia	<i>Phacelia phacelioides</i>	--/--/1B	Chaparral, cismontane, and woodland areas usually with rocky soils at elevations of 1,640 to 4,494 feet. Blooms April to May.	The heavily grazed grasslands on the site do not provide suitable habitat for Mount Diablo phacelia. The site is below the known elevation range for the species. The nearest occurrence of this species in the CNDDB search area is approximately six miles southeast of the site.

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**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
Bearded popcorn-flower	<i>Plagiobothrys hystriculus</i>	--/--/1B.1	Valley and foothill grassland (mesic sites), Vernal pools margins/often vernal swales at elevations between 0 and 895 feet. Blooms from April to May	Mesic grasslands, vernal pools, or vernal swales do not occur on the project site.
Rock sanicle	<i>Sanicula sacatilis</i>	--/R/1B	Broad-leaved upland forest, chaparral, cismontane woodland, and valley and foothill grassland with rocky soils at elevations of 2,034 to 3,854 feet. Blooms April to May.	The annual grassland within the project site represents marginal habitat for the species. However, the site is well below the known elevation range for the species, and the site does not contain rocky soils preferred by the species. The nearest occurrence of this species in the CNDDB search area is approximately seven miles southeast of the site. The species was not observed during 2014 surveys conducted by Moore Biological Consultants.
Chaparral ragwort	<i>Senecio aphanactis</i>	--/--/2	Cismontane woodland, coastal scrub, within drying alkaline flats at elevations of 49 to 2,625 feet. Blooms January to April.	The site does not contain suitable habitat for chaparral ragwort. The nearest occurrence of this species in the CNDDB search area is approximately four miles southeast of the site.
Most beautiful jewelflower	<i>Streptanthus albidus</i> spp. <i>peramoenus</i>	--/--/1B	Chaparral, cismontane woodland, and valley and foothill grassland usually in serpentine soils at elevations of 311 to 3,281 feet. Blooms March to October.	The heavily grazed grasslands on the site do not provide suitable habitat for most beautiful jewelflower. The nearest occurrence of this species in the CNDDB search area is approximately six miles south of the site.
Mount Diablo jewelflower	<i>Streptanthus hispidus</i>	--/--/1B	Chaparral, valley and foothill grasslands usually in rocky soils at elevations of 1,198 to 3,937 feet. Blooms March to June.	The heavily grazed grasslands on the site do not provide suitable habitat for Mount Diablo jewelflower. The site is also well below the known elevation range for this species. The nearest occurrence of this species in the CNDDB search area is approximately eight miles southeast of the site.
Slender-leaved pondweed	<i>Stuckenia filiformis</i>	--/E/2	Marshes and swamps at elevations of 98 to 7,054 feet. Blooms in May to July.	The site does not contain suitable habitat for slender-leaved pondweed. The nearest occurrence of this species in the CNDDB search area is approximately 7.5 miles south of the site.

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**Table 4.4-1  
Special-Status Plant Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup> / CNPS <sup>3</sup>	Habitat	Potential for Occurrence in the Project Site
Suisun marsh aster	<i>Symphotrichum lentum</i>	--/--/1B	Mashes and swamps at elevations of 0 to 10 feet. Blooms May to November.	The site does not contain suitable habitat for Suisun marsh aster and the site is well above the elevation range of Suisun marsh aster. The nearest occurrence of this species in the CNDDB search area is approximately five miles northeast of the site.
Coastal triquetrella	<i>Triquetrella californica</i>	--/--/1B	Coastal scrub and coastal bluff scrub usually on sandy soils at elevations of 33 to 328 feet. The species does not have a defined blooming period.	The site does not contain suitable habitat for coastal triquetrella. The nearest occurrence of this species in the CNDDB search area is approximately seven miles southeast of the site.
Caper-fruited tropidocarpum	<i>Tropidocarpum capparidum</i>	--/--/1B	Valley and foothill grasslands in alkaline soils at elevations of 3 to 1,493 feet. Blooms March to April.	The heavily grazed ruderal vegetation does not provide suitable habitat for Caper-fruited tropidocarpum. Evidence of alkaline soils were not observed on-site. The nearest occurrence of this species in the CNDDB search area is approximately three miles southeast of the site.
Oval-leaved viburnum	<i>Viburnum ellipticum</i>	--/--/2	Chaparral, cismontane woodland, and lower montane coniferous forest at elevations of 705 to 4,593 feet. Blooms May to June.	The site does not contain suitable habitat for oval-leaved viburnum and the site is below the known elevation range of this species. The nearest occurrence of this species in the CNDDB search area is approximately nine miles southeast of the site.

**Notes:**

<sup>1</sup> Federal Status: T = Threatened; E = Endangered

<sup>2</sup> State Status: T = Threatened; E = Endangered; R = Rare; SC = State of California Species of Special Concern

<sup>3</sup> CNPS List: 1B = species that are rare, threatened, or endangered in California and elsewhere; List 2 = species that are rare, threatened, or endangered in California but are more common elsewhere; List 4 = "watch list"

**Sources:**

*Pacific Biology. Faria/Southwest Hills Annexation Project Biological Evaluation Report. June 2018.*

*Moore Biological Consultants. Biological Resources Assessment at the 606 +/- Acre "Faria" Site, Pittsburg, Contra Costa County, California. December 23, 2014.*

Several of the species in Table 4.4-1 are known only from elevations above or below those at the site. For example, rock sanicle and Mount Diablo jewelflower can occur in upland grassland habitats, but only in much higher elevations than those on-site.

As shown in Table 4.4-1, the project site does not provide habitat or provides only marginal habitat for special-status plant species known to occur within the region. The project site consists of only annual grassland habitat, along with two small seasonal wetlands (which are located outside of the proposed development area). The annual grasslands, as observed during the August 2017 survey, were only lightly grazed, and, therefore, dominated by tall, dense grass cover. In addition, the grassland is uniform and lacks microhabitats such as unique soils (e.g., alkali or serpentine), rock outcrops, or vernal pools. Even mammal burrows were quite limited and localized. The possibility exists that, given a hypothetical even, moderate grazing regime, the grasslands could provide suitable habitat for species associated with common grassland habitat or grassland habitat with clay soils. Such species include the following: bent-flowered fiddleneck, big tarplant, round-leaved filaree, Mt. Diablo fairy-lantern, Mt. Diablo buckwheat, fragrant fritillary, Diablo helianthella, Brewer's western flax, showy golden madia, Mt. Diablo cottonweed, woodland woollythreads, adobe navarretia, shining navarretia, and rock sanicle. The foregoing species were not observed on the project site during rare plant surveys conducted by Moore Biological Consultants during 2013 and 2014 field surveys, which were conducted on December 12, April 17, June 23, and September 3. All of the foregoing species are considered rare by the CNPS, but none are State- or federally-listed as threatened or endangered. Based on the CNDDDB, special-status plant species have not been documented in the project vicinity (i.e., within two miles of the project site) and special-status plant species were not documented on the adjacent CNWS site during focused botanical surveys of the CNWS, conducted by Vollmar Natural Lands Consulting in 2008. However, since rare plant surveys have not been conducted since the 2014 field surveys conducted by Moore Biological Consultants, and because habitat conditions could improve prior to project implementation from a change in grazing practices or fire, special-status plants have some potential to occur.

#### Special-Status Wildlife Species

Table 4.4-2 provides a summary of the listing status and habitat requirements of special-status wildlife species that have been documented in the project vicinity or for which potentially suitable habitat exists in the area. The table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability of the site, and field observations.

As noted previously, the site contains upland annual grassland and two small seasonal wetlands in the wetland mitigation area. Only a few trees exist on-site, and perennial sources of water, forest, woodland, or chaparral habitats do not exist. Considering the lack of perennial sources of water, forest, woodland, or chaparral habitats many of the species listed in the table above, including all fish species, and many avian, reptile, amphibian, and invertebrate species are not considered to have the potential to occur on the project site.

**Table 4.4-2**

**Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
<b>Birds</b>				
Golden eagle	<i>Aquila chrysaetos</i>	--/FP	Nesting areas are associated with cliff-walled canyons and large trees. Foraging habitat includes rolling hills and mountain areas.	The trees within the site provide poor quality nesting habitat for golden eagles as the species prefers ledges on cliff walls or very large trees isolated from any type of disturbance. Golden eagles were observed foraging in the site. The site is mapped as suitable habitat for golden eagle as modeled in the ECCC HCP/NCCP. The nearest occurrence of this species in the CNDDB search area is approximately one mile west of the site.
Swainson's hawk	<i>Buteo swainsoni</i>	--/T	Breeds in stands of tall trees in open areas. Foraging habitat includes cropland, grasslands, or alfalfa fields supporting rodents.	A few potential suitable nesting trees are located on-site and Swainson's hawk could use the on-site grasslands for foraging. However, the site is located along the extreme west edge of the nesting range of this species. The site is not within an area mapped as potential breeding or foraging habitat for this species as modeled in the ECCC HCP/NCCP. The nearest occurrence of this species in the CNDDB search area is approximately eight miles northeast of the site.
Burrowing owl	<i>Athene cunicularia</i>	--/SC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation	Burrowing owl could use the on-site grasslands for foraging, but not many ground squirrels or ground squirrel burrows are located on-site. Burrowing owls or evidence of occupancy were not found in the site. The site is mapped as suitable habitat for burrowing owl as modeled in the ECCC HCP/NCCP. The nearest occurrence of nesting burrowing owls in the CNDDB search area is just east of the south tip of the project site.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	--/T	Mainly inhabits salt marshes bordering larger bays.	The site does not contain suitable habitat for California black rail. The nearest occurrence of this species in the CNDDB search area is approximately three miles northwest of the site.
California clapper rail	<i>Rallus longirostris obsoletus</i>	E/E	Salt water and brackish marshes traversed by tidal sloughs in the San Francisco Bay. Associated with abundant growths of pickleweed.	The site does not contain suitable marsh habitat for California clapper rail. The nearest occurrence of this species in the CNDDB search area is approximately four miles northwest of the site.

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**Table 4.4-2  
Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
California least tern	<i>Sturnula antillarum browni</i>	E/E	Estuaries and bays. Nests on exposed tidal flats or beaches.	The site does not contain suitable habitat for California least tern. The nearest occurrence of this species in the CNDDDB search area is approximately three miles northwest of the site.
California horned lark	<i>Geothlypis trichas sinuosa</i>	--/SA	Nests in open areas that contain relatively barren ground with short grass and scattered bushes.	Suitable nesting and foraging habitat are present on the project site.
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	--/--	San Francisco Bay fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging.	The site does not contain suitable habitat for saltmarsh common yellowthroat. The nearest occurrence of this species in the CNDDDB search area is approximately five miles northeast of the site.
Suisun song sparrow	<i>Melospiza melodia maxillaries</i>	--/SC	Brackish water marshes in and near Suisun Bay. Inhabits cattails, tules, and tangles bordering sloughs.	The site does not provide suitable habitat for Suisun song sparrow. The nearest occurrence of this species in the CNDDDB search area is approximately 2.5 miles northeast of the site.
Tricolored blackbird	<i>Agelaius tricolor</i>	--/SC	Open water and protected nesting substrate, usually cattails and riparian scrub.	The wetland mitigation area contains suitable nesting habitat for tricolored blackbird and the species was observed foraging near the mitigation area. The site is mapped as primary foraging habitat for tricolored blackbirds as modeled in the ECCC HCP/NCCP. The nearest occurrence of this species in the CNDDDB search area is approximately ten miles northeast of the site.
Short-eared owl	<i>Asio flammeus</i>	--/--	Winters in the Central Valley and utilized annual grassland habitat and agricultural lands for foraging.	The site does not contain suitable nesting habitat for short-eared owl, but may be used for occasional foraging by wintering short-eared owls. The nearest occurrence of this species in the CNDDDB search area is approximately nine miles north of the site.
Grasshopper sparrow	<i>Ammodramus savannarum</i>	--/SC	Open grasslands, nests on ground.	Suitable nesting and foraging habitat are present on the project site.
Ferruginous hawk	<i>Buteo Regalis</i>	BCC/SA	Wintering – open grasslands, sagebrush flats, desert scrub; does not nest in California.	The species occurs in the project area as an infrequent winter migrant, but does not nest in California. The project site represents potential

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**Table 4.4-2  
Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
White-tailed kite	<i>Elanus leucurus</i>	--/FP	Typically nests in trees surrounded by open foraging habitat.	foraging habitat for the species during the winter, but the site does not represent nesting habitat.
Loggerhead shrike	<i>Lanius ludovicianus</i>	BCC/CSC	Habitat consists of open spaces such as grasslands with scattered trees, shrubs, utility lines, and/or fences for perching. Typically nest in densely vegetated trees and shrubs	Suitable nesting and foraging habitat are present on the project site.
Suisun song sparrow	<i>Melospiza melodia maxillaris</i>	--/SC	Resident of brackish water marshes surrounding Suisun Bay. Inhabits cattails, tules, and tangles bordering sloughs.	The project site does not provide suitable habitat for Suisun song sparrow given the absence of brackish marshes. The nearest occurrence of this species in the CNDDB search area is approximately 1.5 miles north of the project site.
Ridgeway's rail	<i>Rallus obsoletus</i>	E/E	Salt water and brackish marshes traversed by tidal channels.	The project site does not provide suitable habitat for this species given the absence of tidal and brackish marshes.
<b>Mammals</b>				
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E/T	Inhabits open, dry grasslands and scrublands with loose textured soils.	While on-site grassland provides potentially suitable habitat for San Joaquin kit fox, the site is just outside (i.e., northwest) of the range of San Joaquin kit fox. The site is mapped as suitable core habitat for San Joaquin kit fox. The nearest occurrence of this species in the CNDDB search area is approximately five miles southeast of the site.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	--/C	Wide variety of habitats, most common in desert scrub, mixed conifer forest, and pinyon-juniper or pine forest.	Townsend's big-eared bat may fly over or forage in the site on occasion, but the site does not contain suitable roosting habitat for this species. While this species is covered by the ECCC HCP/NCCP, roosting habitat is not mapped. The nearest occurrence of this species in the CNDDB search area is approximately seven miles southeast of the site.

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**Table 4.4-2  
Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
Pallid bat	<i>Antrozous pallidus</i>	--/SC	Primarily roosts in caves, mines, and buildings. Open and dry habitats with rocky areas for roosting.	Pallid bat and other species of bat may fly over or forage in the site on occasion, but the species would not be expected to roost on-site. The nearest occurrence of this species in the CNDDB search area is approximately two miles southwest of the site.
Western red bat	<i>Lasiurus blossevillii</i>	--/SC	Roosts in trees in a wide variety of habitats between the coast western Sierra Nevada mountains. Strongly associated with riparian habitats, particularly mature stands of cottonwood and sycamore trees.	This species is strongly associated with riparian habitats, particularly mature stands of cottonwood/sycamore; such habitat does not occur in the proposed development area, but potential habitat is present in the wetland mitigation area. Based on the CNDDB, the closest documented occurrence of the species is approximately eight miles east of the project site.
Hoary bat	<i>Lasiurus cinereus</i>	--/SA	Roost alone in foliage of trees.	This foliage roosting species may fly over, forage, or roost on the project site on occasion. Based on the CNDDB, the closest documented occurrence of the species is approximately 3 miles southwest of the project site.
San Joaquin pocket mouse	<i>Perognathus inornatus inornatus</i>	--/SA	Grasslands and blue oak woodlands with friable soils in the foothills and valley bottoms of the Central Valley	The project site lacks characteristic friable soils; nonetheless, the potential exists for the species to occur on the site. Based on the CNDDB, the species has been documented approximately four miles southeast of the project site.
Salt-marsh harvest mouse	<i>Reithrodontomys raviventris</i>	E/E	Saline emergent wetlands dominated by pickleweed.	The site does not contain suitable habitat for salt-marsh harvest mouse. The nearest occurrence of this species in the CNDDB search area is approximately three miles northeast of the site.
American badger	<i>Taxidea taxus</i>	--/SC	Most abundant in drier, open stages of shrub, forest, and herbaceous habitats with friable soils where they can dig burrows.	Badger dens have not been observed on the project site and soils are not particularly friable. However, as the species is known from the area, there is a potential that a badger could dig a den on the site.
<b>Reptiles &amp; Amphibians</b>				

**Table 4.4-2**

**Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
California tiger salamander	<i>Ambystoma californiense</i>	T/T	Seasonal water bodies without fish (i.e., vernal pools and stock ponds) and grassland/ woodland habitats with summer refugia (i.e., burrows).  (Continued on next page)	There are numerous documented occurrences of the species in the project area, including multiple breeding ponds at the adjacent CNWS. In addition, occurrences have been documented near the southeast and east site boundaries. The CNDDDB (Occurrence #756) also reports that an adult CTS was captured in the vicinity of the wetland mitigation area (which is not currently proposed for development). The mitigation wetlands within the preserve feature a significant cover of reeds and riparian trees, and thus provide marginal breeding habitat for this species. However, given the proximity of breeding habitat, and the known maximum dispersal distance of the species (1.3 miles), especially the entire project site provides potential upland/aestivation habitat. Potential breeding habitat does not exist in portions of the project site proposed for development. The project site is not within designated critical habitat for CTS. The site is mapped as suitable migration and aestivation habitat for the species as modeled in the HCP/NCCP.
California red-legged frog	<i>Rana aurora draytonii</i>	T/SC	Lowland and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	The site does not contain suitable habitat for California red-legged frog. The site is mapped as potential migration and aestivation habitat for California red-legged frog as modeled in the ECCC HCP/NCCP. A low area in the north-central part of the site and a low area in the southeast corner of the site are also mapped as potential breeding habitat as modeled in the ECCC HCP/NCCP. The nearest occurrence of this species in the CNDDDB search area is in the wetland mitigation area along the west edge of the site where three adults were detected in 2003. The CNDDDB record describes the wetland as having insufficient water levels for breeding, which is consistent with observations of potential ponding depth. The species is also reported in the CNDDDB just north of the site in 2001 in a pond that no longer exists, and in 2008 breeding in a pond approximately 0.5 miles southwest of the site. The site is not within designated critical habitat for California red-legged frog.

**Table 4.4-2  
Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
Western pond turtle	<i>Emys marmorata</i>	--/SC	Ponds, marshes, streams, and ditches with emergent aquatic vegetation and basking areas.  (Continued on next page)	The site does not contain suitable breeding habitat for western pond turtle. The low area in the north-central part of the site and a low area in the southeast corner of the site are mapped as movement habitat for this species as modeled in the ECCC HCP/NCCP. In addition, a small area in the low area in the north-central part of the site is mapped as core habitat. Neither area contains streams or aquatic features. Based on the CNDDB, the closest documented occurrence of the species is approximately four miles west of the project site. However, the species has been reported from the Cistern Pond on the CNWS; the pond is approximately 3,000 feet from the project site. Within the CNWS, other ponds exist which are closer to the project site; if such closer ponds are occupied by pond turtles, the species could potentially migrate into the project site during egg laying/nesting.
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	T/T	Scrub, chaparral, grassland, woodland habitat mosaics, and south-facing slopes and ravines.	The sites does not contain suitable habitat for Alameda whipsnake. The site is not mapped as suitable habitat for this species as modeled in the ECCC HCP/NCCP. The nearest occurrence of this species in the CNDDB search area is approximately 3.5 miles south of the site. The site is not designated critical habitat for Alameda whipsnake.
Coast horned lizard	<i>Phrynosoma blainvillii</i>	--/SC	Coniferous forest, deciduous forest, scrub, and grassland habitats, usually in sandy soils.	The site does not provide suitable habitat for coast horned lizard given the absence of sandy and loose soils. The nearest occurrence of this species in the CNDDB search area is approximately four miles south of the site.
California legless lizard	<i>Anniella pulchra pulchra</i>	--/SC	Sandy or loose loamy soils under sparse vegetation.	The project site does not provide suitable habitat for silvery legless lizard given the absence of sandy and loose soils. The nearest documented CNDDB occurrence of this species is approximately eight miles east of the project site. The site is not mapped as suitable habitat for the species as modeled in the HCP/NCCP.
Giant Garter Snake	<i>Thamnophis gigas</i>	T/T	Freshwater marsh and low gradient streams. Has adapted to drainage canals and	The project site does not provide suitable aquatic habitat for giant garter snake. The CNDDB does not contain any documented occurrences of this species within seven miles of the project site. The project site is not modeled as habitat for the species in the HCP/NCCP.



**Table 4.4-2  
Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
			irrigation ditches, primarily for dispersal or migration.	
<b>Fish</b>				
Delta smelt	<i>Hypomesus transpacificus</i>	T/T	Shallow lower delta waterways with submersed aquatic plants and other suitable refugia.	Aquatic habitat does not exist in the site. The species does not have any occurrences in the CNDDDB search area. The site is not within designated critical habitat for delta smelt.
Central Valley steelhead	<i>Oncorhynchus mykiss</i>	T/--	Riffle and pool complexes with adequate spawning substrates within Central Valley drainages.	Aquatic habitat does not exist in the site. The nearest occurrence of this species in the CNDDDB search area is approximately three miles north of the site. The site is not within designated critical habitat for Central Valley steelhead.
Winter-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	E/E	Deep flowing pools and riffle complexes with adequate spawning substrates. Currently known only from the Sacramento River system.	Aquatic habitat does not exist in the site. The species does not have any occurrences in the CNDDDB search area.
Spring-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	T/T	Deep flowing pools and riffle complexes with adequate spawning substrates. Currently known only from the Sacramento River system.	Aquatic habitat does not exist in the site. The species does not have any occurrences in the CNDDDB search area.
Green sturgeon	<i>Acipenser medirostris</i>	T/--	San Francisco Bay and delta. Moves upstream to spawn.	Aquatic habitat does not exist in the site. The species does not have any occurrences in the CNDDDB search area.
Longfin smelt	<i>Spirinchus thaleichthys</i>	--/SC	Brackish estuarine habitats.	Aquatic habitat does not exist in the site. The nearest occurrence of this species in the CNDDDB search area is approximately three miles north of the site.
<b>Invertebrates</b>				
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T/--	Vernal pools.	Vernal pools or seasonal wetlands do not exist in the proposed development area of the site. The wetlands in the wetland mitigation area within the project site provide poor quality yet potentially suitable habitat for vernal pool fairy shrimp. The on-site wetlands are in an area

**Table 4.4-2  
Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
				that will remain as Open Space as part of the proposed project and would not be disturbed by temporary grading activities. The nearest occurrence of this species in the CNDDB search area is approximately eight miles northeast of the site. The site is not within designated critical habitat for vernal pool fairy shrimp.
Conservancy fairy shrimp	<i>Branchinecta conservation</i>	E/--	Vernal pools.	Vernal pools or seasonal wetlands do not exist in the proposed development area of the site. The wetlands in the wetland mitigation area within the project site provide poor quality yet potentially suitable habitat for Conservancy fairy shrimp. The on-site wetlands are in an area that will remain as Open Space as part of the proposed project and would not be disturbed by temporary grading activities. The nearest occurrence of this species in the CNDDB search area is approximately eight miles northeast of the site. The site is not within designated critical habitat for Conservancy fairy shrimp.
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	T/--	Vernal pools. (Continued on next page)	Vernal pools or seasonal wetlands do not exist in the proposed development area of the site. The wetlands in the wetland mitigation area within the project site provide poor quality yet potentially suitable habitat for longhorn fairy shrimp. The on-site wetlands are in an area that will remain as Open Space as part of the proposed project and would not be disturbed by temporary grading activities. Based on the CNDDB, the closest documented occurrence of the species is approximately 15 miles southeast of the project site. The site is not within designated critical habitat for longhorn fairy shrimp.
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	E/--	Vernal pools.	Vernal pools or seasonal wetlands do not exist in the proposed development area of the site. The wetlands in the wetland mitigation area within the project site provide poor quality yet potentially suitable habitat for vernal pool tadpole shrimp. The on-site wetlands are in an area that will remain as Open Space as part of the proposed project and would not be disturbed by temporary grading activities. The nearest occurrence of this species in the CNDDB search area is approximately

**Table 4.4-2  
Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
				seven miles northeast of the site. The site is not within designated critical habitat for vernal pool tadpole shrimp.
California fairy shrimp	<i>Lindieriella occidentalis</i>	--/SA	Seasonal pools.	Vernal pools or other potentially suitable habitat do not occur within the proposed development area. The wetland mitigation area (which would not be developed) provides potential habitat for the species. Based on the CNDDB, the species was documented within the vicinity of the CNWS to the east of the site.
Midvalley fairy shrimp	<i>Branchinecta mesovallensis</i>	--/SA	Vernal pools and other seasonally ponded areas.	Vernal pools or other potentially suitable habitat do not occur within the proposed development area. The existing on-site wetland mitigation area (which would not be developed) provides marginal habitat for the species. Based on the CNDDB, the closest documented occurrence of the species is approximately 11 miles northeast of the project site.
Western bumble bee	<i>Bombus occidentalis</i>	--/SA	Open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows.	Based on the CNDDB, several occurrences of the species have been documented within the project region, with the most recent being from 1974. Potentially suitable grassland habitat is present on the site, but low number of potential nest sites (i.e., suitable abandoned mammal burrows) limits the potential for the species to occur on-site.
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T/--	Elderberry shrubs in the Central Valley and surrounding foothills.	The site contains a few blue elderberry shrubs. However, the site is well outside (i.e., west) of the range of this species. The species does not have any occurrences in the CNDDB search area.
San Bruno elfin butterfly	<i>Callophrys mossii bayensis</i>	E/--	Rocky outcrops and cliffs in coastal scrub habitats.	The sites does not contain suitable habitat for San Bruno elfin butterfly. The closest occurrence of this species in the CNDDB search area is approximately 7.5 miles southeast of the site.
Delta green ground beetle	<i>Elaphrus viridis</i>	T/--	Margins of vernal pools in grasslands.	Vernal pools or seasonal wetlands do not exist in the proposed development area of the site. The wetlands in the wetland mitigation area along the west edge of the site provide poor quality yet potentially suitable habitat for delta green ground beetle. The wetlands are in an area that will remain as Open Space as part of the proposed project and

**Table 4.4-2**

**Special-Status Wildlife Species that Potentially Occur Within the Project Site**

Common Name	Scientific Name	Fed <sup>1</sup> / State <sup>2</sup>	Habitat	Potential for Occurrence in the Project Site
				would not be disturbed by temporary grading activities. The species does not have any occurrences in the CNDDB search area. The site is not within designated critical habitat for delta green ground beetle.
Molestan blister beetle	<i>Lyta molesta</i>	--/SA	Dried vernal pools and associated flowers.	Vernal pools or other potentially suitable habitat do not exist in the proposed development area. The wetland mitigation area (which would not be developed) provides marginal habitat for the species. Based on the CNDDB, the closest documented occurrence of the species is approximately 12 miles from the project site.

**Notes:**

<sup>1</sup> Federal Status: T = Threatened; E = Endangered

<sup>2</sup> State Status: T = Threatened; E = Endangered; FP = Fully Protected; R = Rare; SC = State of California Species of Special Concern; SA = CDFW Special Animals List (2018)

*Source: Pacific Biology. Faria/Southwest Hills Annexation Project Biological Evaluation Report. June 2018.*

As noted in Table 4.4-2, the following special-status wildlife species have some potential to occur on the project site: golden eagle, swainson's hawk, burrowing owl, California horned lark, tricolored blackbird, grasshopper sparrow, ferruginous hawk, white-tailed kite, loggerhead shrike, San Joaquin kit fox, San Joaquin pocket mouse, western red bat, hoary bat, American badger, CTS, California red-legged frog, western pond turtle, and Vernal Pool Invertebrates. The manner in which these species may occur on the project site, and potential impacts to these species from the construction of the proposed project, are discussed below.

### *Golden Eagle*

The golden eagle is not listed under either the State or federal Endangered Species Acts (ESA), but is a State of California Fully Protected Species and is also protected by the Migratory Bird Treaty Act (MBTA). Golden eagles forage in grasslands in coastal foothills, including the rolling hillsides around the base of Mount Diablo. Golden eagles prefer to nest on ledges on cliff walls, but can also use very large trees that are isolated from disturbance.

The nearest occurrence of golden eagle in the CNDDDB search area is approximately one mile west of the site. The site is mapped as suitable habitat for golden eagle as modeled in the ECCC HCP/NCCP. Golden eagles were observed foraging on the site. The on-site trees and other relatively large trees visible from the site were inspected for raptor stick nests. The trees provide poor quality nesting habitat for golden eagles, as they prefer ledges on cliff walls or very large trees isolated from any type of disturbance. A few raptor stick nests were observed in the trees in the wetland mitigation area, but these nests were being utilized by red-tailed hawks and great-horned owls. Considering the presence of foraging habitat and of isolated trees, the project site is considered marginally suitable habitat for golden eagle foraging and nesting.

### *Swainson's hawk*

The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The MBTA and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawk is found in the Central Valley primarily during their breeding season, and a population is known to winter in the San Joaquin Valley. Swainson's hawk prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western U.S.. The raptor generally arrives in the Central Valley in mid-march and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July and most Swainson's hawks leave their nest territories by late August.

The site is along or outside of the extreme west edge of the nesting range of this species and is not within an area mapped as potential breeding or foraging habitat for this species, as modeled in the ECCC HCP/NCCP. The nearest occurrence of nesting Swainson's hawks in the CNDDDB search area is approximately eight miles northeast of the site. Swainson's hawks were not observed during the field surveys. The larger trees within the site are suitable for nesting Swainson's hawks and the species could use the on-site grasslands for foraging; however, the on-site grasslands provide only marginally suitable foraging habitat. Considering that the project site is not considered a

potential breeding or foraging habitat for the species by the ECCC HCP/NCCP, and the project site represents only marginally suitable foraging habitat for the species, Swainson's hawks are not anticipated to use the site for nesting and are unlikely to use the site for foraging on a more than occasional basis in the future.

### *Burrowing Owl*

The MBTA and Fish and Game Code protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands, as well as scrub lands that have a low density of trees and scrubs with low-growing vegetation. Burrowing owls that nest in the Central Valley may winter elsewhere. The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although the species has been known to dig their own burrows in softer soils. The semi-colonial owl breeds from March through August and is most active while hunting during dawn and dusk.

While the CNDDDB contains numerous occurrences of burrowing owls throughout the search area, the nearest occurrence of nesting burrowing owls is just east of the south tip of the site. Although burrowing owls were not observed during field surveys of the site, the site is mapped as suitable habitat for burrowing owl as modeled in the ECCC HCP/NCCP, and the species is assumed to be present. A small number of ground squirrel burrows were observed on-site; however, none of the burrows showed any evidence of current or past occupancy by burrowing owls (i.e., whitewash, pellets, feathers).

### *California Horned Lark*

The California horned lark is included on the State special animals list. The species typically nests in open country, tundra, grassland, and agricultural areas that contain relatively barren ground with short grass and scattered bushes. The California horned lark subspecies lives year-round throughout most of California, except in the Sierra Nevada and some parts of northwestern California, where the species is only a migrant. In the winter, the California horned lark can be found in large flocks that often include other species of birds. The species could nest and forage in the on-site grasslands.

### *Tricolored Blackbird*

The tricolored blackbird is a State of California Species of Concern and is also protected by the MBTA. Tricolored blackbirds are colonial nesters requiring very dense stands of emergent wetland vegetation and/or dense thickets of wild rose or blackberries adjacent to open water for nesting. The species is endemic to California.

The nearest occurrence of tricolored blackbirds in the CNDDDB search area is approximately 10 miles northeast of the site. The site is mapped as primary foraging habitat for tricolored blackbirds, as modeled in the ECCC HCP/NCCP, and the species is assumed to forage on the site. The wetland mitigation area provides suitable nesting habitat for the species, and tricolored blackbirds were observed foraging near the mitigation area during the June 2014 site survey.

### *Grasshopper Sparrow*

The grasshopper sparrow is included on the State special animals list. The species inhabits grasslands and nests on the ground. Grasshopper sparrow nests are well-concealed open cups, on the ground, under vegetation. The species forages on the ground in vegetation, mainly eating insects, especially grasshoppers, and seeds. The grasshopper sparrow could nest and forage on the project site.

### *Ferruginous Hawk*

The ferruginous hawk is a federal bird of conservation concern and is included on the State special animals list. The ferruginous hawk is a large, narrow-winged hawk. The species winters in open habitats, including deserts and grasslands, between September and April in the Modoc Plateau, Central Valley, and Coast Ranges, but the species does not nest in California. The ferruginous hawk prefers low elevations and avoids canyons and forests, and forages over open areas for birds, reptiles, amphibians, mice, and ground squirrels. The species is an uncommon winter resident and migrant in northern California, and a more common winter resident in southwestern California. The ferruginous hawk does not nest in the project region, but could occasionally forage on the project site in the winter.

### *White-Tailed Kite*

The white-tailed kite is a State fully protected species. White-tailed kite typically nests in trees, often in isolated stands, surrounded by open foraging habitat. Nests are built on top of oaks, willows, or other dense, broad-leaved deciduous trees within partially cleared or cultivated fields, grasslands, marsh, riparian, woodland, and savanna habitats. The species could nest and forage on the project site.

### *Loggerhead shrike*

The loggerhead shrike is a federal bird of conservation concern and a State species of special concern. Loggerhead shrike is a predatory passerine bird species. The species is a resident in the lowlands and foothills throughout California, where the species' habitat consists of open spaces, such as grasslands with scattered trees, shrubs, utility lines, and/or fences for perching. Loggerhead shrikes typically nest in densely vegetated trees and shrubs. Loggerhead shrikes could nest and forage on the project site.

### *San Joaquin Kit Fox*

The project site is located just north of the perceived range of the federally Endangered and State of California Threatened San Joaquin kit fox. The species dens in subterranean burrows and forages primarily for small mammals and insects in annual grasslands, pasturelands, cultivated fields, and along the edges of orchards.

Although the project site is located just north of the known range of the San Joaquin kit fox, the HCP/NCCP identifies the project site and vicinity as being suitable core habitat for the species.

The closest documented occurrence of the species is approximately four miles east of the project site, which was documented in 1992 at Black Diamond Mines Regional Preserve. However, the current status of San Joaquin kit fox in the northern range (which is south of project site) is unclear. Considering that the project site is outside of the generally-accepted range of the San Joaquin kit fox, sightings of the San Joaquin kit fox have not been reported in the project area within the past two decades, and that few ground squirrels inhabit the site, which are the primary prey of the species, the species is considered unlikely to occur on the project site. Nevertheless, the potential of a San Joaquin kit fox to occasionally wander outside of the species' expected range and to occur on the project site cannot be completely ruled out. Thus, to provide a conservative analysis, the San Joaquin kit fox is assumed to occasionally use the project site.

#### *Western Red Bat*

The western red bat is identified as a State species of special concern. Western red bats primarily roost in trees, forming nursery colonies. The species is strongly associated with riparian habitats, particularly mature stands of cottonwood and sycamore trees. The trees within the wetland mitigation area on-site represent potential roosting habitat for the species. Thus, western red bats are considered to potentially nest and forage on the project site.

#### *Hoary Bat*

The hoary bat is of relatively low sensitivity as the species is not State- or federally-listed as threatened or endangered, is not a California Species of Special Concern, but is included on the State special animals list. Given the inclusion of the species on the State special animals list, could be considered to be of special-status under CEQA. The hoary bat is a solitary rooster and only roosts in trees. The on-site trees would represent suitable roosting habitat for the species, and the species may forage on the project site.

#### *San Joaquin Pocket Mouse*

San Joaquin pocket mouse is included on the CDFW Special Animals List. The species is not covered by the East Contra Costa County HCP/NCCP. San Joaquin pocket mouse typically inhabits grasslands and blue oak woodlands with friable soils in the foothills and valley bottoms of the Central Valley. The project site does not contain the characteristic friable soils, and therefore, onsite habitat is considered of lower quality. Based on the CNDDDB, the species has been documented approximately four miles southeast of the project site. Given occurrences of the San Joaquin pocket mouse have been recorded in areas with habitat connectivity to the project site, the species has some potential to occur on the site.

#### *American Badger*

American badger is a State species of special concern. The species is not covered by the ECC CHCP/NCCP. American badgers range throughout California but are most abundant in drier, open stages of shrub, forest, and herbaceous habitats with friable soils where the badgers can dig burrows. Badger dens have not been observed on the project site and soils are not particularly



friable. However, because the species is known to occur in the area, the potential exists that a badger could dig a den on the site. Thus, the species could occur on the project site.

### *California Tiger Salamander*

The CTS was listed as threatened under the FESA in 2004 and was listed as threatened under the CESA in 2010. In August 2005, the USFWS designated critical habitat for the Central Valley population of CTS. For breeding, CTS require stock ponds without game fish, or deep, large vernal pools which hold water well into spring. Following breeding, the young disperse to nearby grasslands and woodlands and spend the summer months in subterranean refugia such as small mammal burrows. While most salamanders aestivate in burrows within several hundred feet of their breeding ponds, CTS have been documented over-summering up to a mile or more from their breeding ponds.

CTS have been documented at numerous locations in the project vicinity. Such occurrences are primarily south of the project site on the CNWS and to the east of the project site. Previous studies have noted five ponds on the CNWS that are the primary CTS breeding ponds on the CNWS property. The two closest breeding locations to the project site are on the CNWS and are referred to as the North and South Hilltop Ponds; the North Hilltop Pond is approximately 150 feet south of the project site and the South Hilltop Pond is approximately 450 feet south of the project site. Additionally, occurrences have been documented north and southeast of the project site.

The CNDDDB reports that an adult CTS was captured in the vicinity of the wetland mitigation area. The lower pond, of the existing on-site mitigation wetlands, appears to be the deeper of the two ponds, but the surrounding trees (which provide cover and roosts for predators) may limit the suitability of the habitat. Additionally, the presence of tules and other marsh vegetation in the pond tend to support predators of CTS.

Given the proximity of breeding ponds on the CNWS and other nearby locations, and the known maximum dispersal distance of the species (1.3 miles), essentially the entire project site provides potential upland/aestivation habitat (see Figure 4.4-3). However, given that 50 to 95 percent of adult CTS were trapped between 150 (0.1 mile) to 620 m (0.4 mile) from a breeding pond, higher numbers of CTS would likely occur on portions of the project site within such distances of the closest breeding ponds (see Figure 4.4-3). Previous biological studies prepared for the project site noted that a small number of ground squirrel burrows were observed, and large soil cracks and pocket gopher burrows exist that provide potential upland refuge habitat.

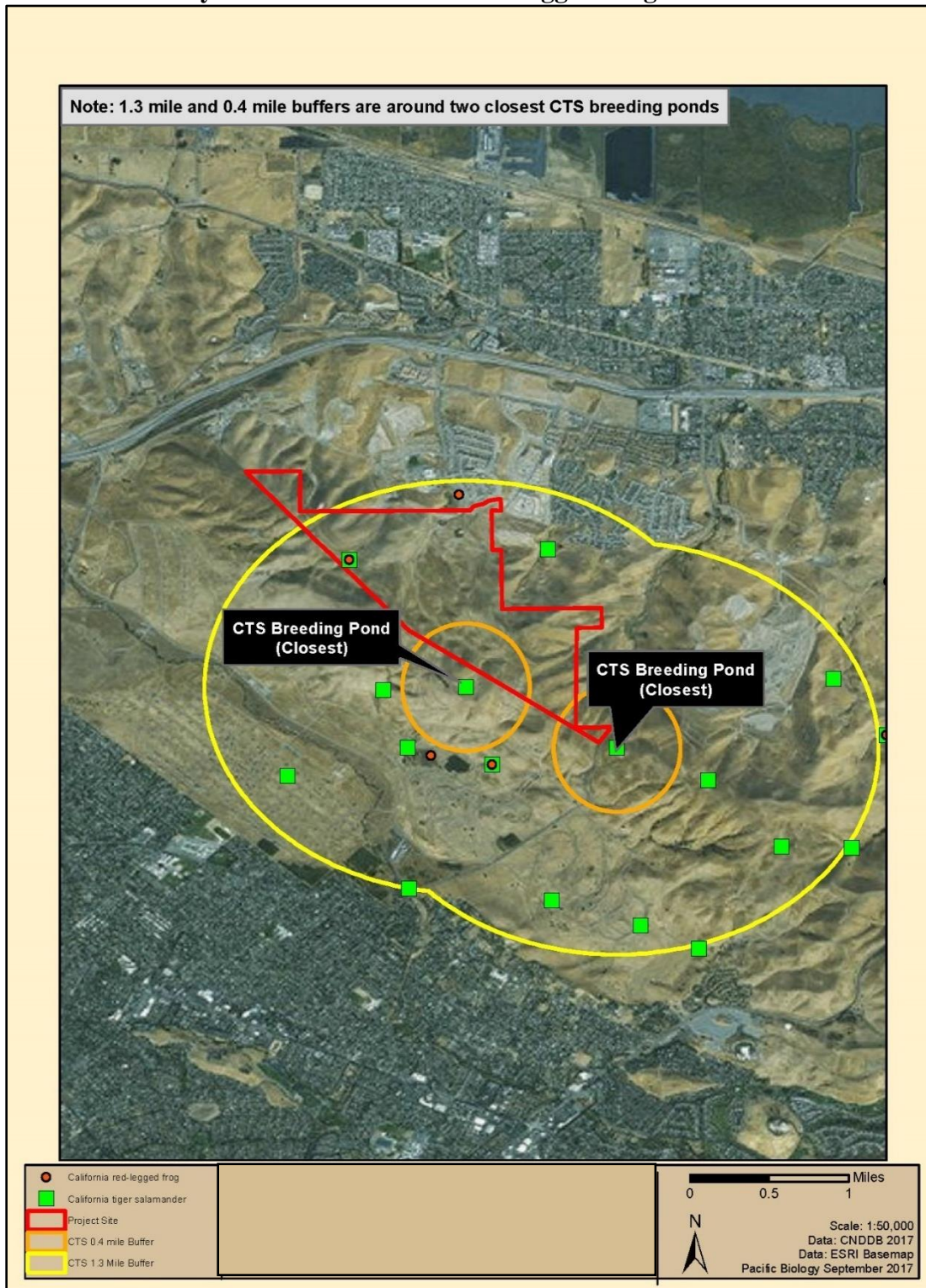
Given the above, CTS could use large portions of the project site as upland refuge and dispersal habitat, but with higher usage areas likely occurring closer to the breeding ponds, located off-site in the CNWS. The project site is not within the designated critical habitat for CTS; however, the site is mapped as suitable migration and aestivation habitat for the species per the HCP/NCCP.

### *California Red-Legged Frog*

California red-legged frog was listed by the USFWS as a Threatened species in May 1996. California red-legged frog is also classified by the CDFW as a Species of Special Concern.



**Figure 4.4-3**  
**Nearby CTS and California Red-Legged Frog Occurrences**



Source: Pacific Biology. Faria/Southwest Hills Annexation Project Biological Evaluation Report. June 2018.



Once abundant in low-elevation Sierra Nevada and Coastal foothill streams, the species now occurs in a patchy distribution throughout a fraction of the historic range. The California red-legged frog typically breeds in perennial or nearly perennial well-shaded woodland ponds or deeper plunge-pools of well-shaded streams. The species is covered by the ECCC HCP/NCCP.

Three adult California red-legged frogs were detected within the wetland mitigation area in 2003. Although occurrences of the California red-legged frogs in the wetland mitigation areas exist, the CNDDDB record describes the wetland as having insufficient water levels for breeding, which is consistent with observations of potential ponding depth. Nonetheless, given that California red-legged frogs have been documented on-site and water is present during the wet season, at a minimum, the wetland mitigation area provides non-breeding habitat that may be used by adult and/or juvenile frogs. It should be noted that the Draft Master Plan includes the existing wetland mitigation areas within areas designated for open space that would not be disturbed by proposed grading or development activities, and, thus, the project would not include development of the wetland mitigation areas.

California red-legged frogs have been documented breeding on the adjacent CNWS property. Based on the CNDDDB, the closest breeding location on the CNWS property is approximately 2,000-feet south of the project site, but other ponds that provide potential breeding habitat exist approximately 150 and 450 feet south of the project site. Additionally, a large detention basin exists to the north of the project site and California red-legged frogs have been historically documented in that general area. The project site is mapped as potential migration and aestivation habitat for California red-legged frogs, as modeled in the HCP/NCCP.

Given known breeding locations near the project site, the documentation of non-breeding frogs on the site (in the wetland mitigation area), and the presence of potential habitat north of project site, the species could make overland movements across the site, occur near water troughs, use soil cracks or small mammal burrows for refuge habitat, and/or forage on portions of the site.

#### *Western Pond Turtle*

Western pond turtle is state species of special concern. The species is covered by the East Contra Costa County HCP/NCCP. Western pond turtle primarily inhabits aquatic habitats, including ponds, slow moving streams, lakes, marshes, and canals. The species frequently basks on logs or other objects out of the water. Western pond turtles also require upland oviposition (i.e., egg-laying) sites typically within 656 feet, but as far as 1,312 feet, of the aquatic site. Mating typically occurs in late April or early May and most oviposition occurs during May and June, although some individuals may deposit eggs as early as late April and as late as early August. Nest sites are most often situated on south or west-facing slopes, are sparsely vegetated with short grasses or forbs, and are scraped in sands or hard-packed, dry, silt or clay soils.

Based on the CNDDDB, the closest documented occurrence of the species is approximately 4 miles west of the project site. However, the species has been reported from the Cistern Pond on the CNWS; the pond is approximately 3,000 feet from the project site. Within the CNWS, other ponds exist which are closer to the project site; if such closer ponds are occupied by pond turtles, the species could potentially migrate into the project site during egg laying/nesting.

### *Vernal Pool Invertebrates*

In 1994, the USFWS listed three species of Central Valley fairy shrimp and one species of tadpole shrimp as Threatened or Endangered species under the FESA. Vernal pool fairy shrimp was listed as Threatened, while Conservancy fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp were listed as Endangered. All of the species occur in vernal pools and other seasonal wetland habitats throughout much of the Central Valley. Shrimp eggs that lay on the floor of the dry wetlands during the summer hatch after the onset of cold winter rains every year. The shrimp grow for a few weeks to a couple months, lay eggs, and then die.

The nearest occurrences of vernal pool fairy shrimp, Conservancy fairy shrimp, and vernal pool tadpole shrimp in the CNDDDB search area are each approximately eight miles northeast of the site. The site is not within an area designated by USFWS as critical habitat for vernal pool species. Vernal pools or seasonal wetlands do not exist in the area of the project site proposed for development. The wetlands in the wetland mitigation area within the western edge of the site provide poor quality, yet potentially suitable, habitat for vernal pool fairy shrimp, Conservancy fairy shrimp, vernal pool tadpole shrimp, and longhorn fairy shrimp.

### *Western Bumble Bee*

Western bumble bee is included on the CDFW Special Animals List, but does not have a formal listing status. The species is not covered by the East Contra Costa County HCP/NCCP. Like most other species of bumble bees, the western bumble bee typically nests underground in abandoned rodent burrows or other cavities. Most reports of Western bumble bee nests are from underground cavities such as old squirrel or other animal nests and in open west-southwest slopes bordered by trees, although a few nests have been reported from above-ground locations such as in logs among railroad ties. Availability of nests sites for the species may depend on rodent abundance. Moore Biological Consultants noted that only, a small number of ground squirrel burrows were observed on the proposed project site. Therefore, potential nest sites on the project site are limited. In addition, most reports of nests are from areas bordered by trees, which are generally absent from the development area. Therefore, optimal habitat for the species is not present on-site. Nonetheless, given the presence of on-site ground squirrel burrows, the Western bumble bee has a limited potential to occur on-site.

### **Sensitive Natural Communities**

Sensitive natural communities are those that are considered rare in the region, support special-status plant or wildlife species, or receive regulatory protection (i.e., wetlands and other waters under Sections 404 and 401 of the Clean Water Act, Section 1600 *et seq.* of the California Fish and Game Code, and/or the Porter-Cologne Act).

The two man-made seasonal wetlands in the wetland mitigation area within the western edge of the project site were created as part of compensatory mitigation for nearby development projects. The mitigation area includes 17.5 acres of protected area to assure the protection of the created wetlands. The two man-made wetlands are shallow basins in a fenced-off area and are both between 0.25 and 0.5 acres. The wetlands capture water from a relatively small watershed, and the

upper wetland is supplied water through a windmill powered pump. The wetlands were dry or nearly dry during all of the site surveys. Under very wet conditions, the wetlands have the potential to pond water to depths of up to one foot. Other potentially jurisdictional wetlands or Waters of the U.S. were not observed on-site.

As noted previously, dominant vegetation in the wetland mitigation area includes Mediterranean barley, rabbit's foot grass, spikerush, perennial ryegrass, and Bermuda grass. Small patches of tules and cattails also exist in the upper man-made wetland, which exist only due to the overflow from the cattle trough. The Biological Evaluation Report prepared by Pacific Biology indicates that the project site does not contain riparian habitat.

#### **4.4.3 REGULATORY CONTEXT**

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A number of federal, State, and local policies provide the regulatory framework that guides the protection of biological resources. The following discussion summarizes those laws that are most relevant to biological resources in the vicinity of the project site.

##### **Federal Regulations**

The following are the federal environmental laws and policies relevant to biological resources.

##### Federal Endangered Species Act

The U.S. Congress passed the FESA in 1973 to protect those species that are endangered or threatened with extinction. The FESA 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 FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3). Taking can result in civil or criminal penalties.

The FESA and NEPA Section 404 guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered wildlife or plant species. The U.S. Army Corps of Engineers (USACE) must consult with the U.S. Fish and Wildlife Service (USFWS) and National Oceanic Atmospheric Administration (NOAA) when threatened or endangered species may be affected by a proposed project to determine whether issuance of a Section 404 permit would jeopardize the 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 Interior. Section 3503.5 of

the California Fish and Game Code states, “It is unlawful to take, possess, or destroy any birds in the order 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.”

### Clean Water Act

The USACE regulates discharge of dredged or fill material into Waters of the U.S. of fill material into Waters of the U.S., including but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. §328.2[f]). In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 C.F.R. §328.3[b]).

Furthermore, Jurisdictional Waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 C.F.R. §328.3[e]).

### **State Regulations**

The following are the State environmental laws and policies relevant to biological resources.

#### California Endangered Species Act

The State of California enacted the CESA in 1984. The CESA is similar to the FESA but pertains to State-listed endangered and threatened species. The CESA prohibits the taking of State-listed endangered or threatened plant and wildlife species. CDFW exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. CDFW may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFW requires preparation of mitigation plans in accordance with published guidelines.

The CDFW exercises jurisdiction over wetland and riparian resources associated with rivers, streams, and lakes under California Fish and Game Code Sections 1600 to 1607. The CDFW has the authority to regulate work that will substantially divert, obstruct, or change the natural flow of



a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

In addition, CDFW enforces the Fish & Wildlife Code of California, which provides protection for “fully protected birds” (§3511), “fully protected mammals” (§4700), “fully protected reptiles and amphibians” (§5050), and “fully protected fish” (§5515). The California Code of Federal Regulations (Title 14) prohibits the take of Protected amphibians (Chapter 5, §41), Protected reptiles (Chapter 5, §42) and Protected furbearers (Chapter 5, §460). The California Endangered Species Act, which prohibits ‘take’ of state-listed Endangered or Threatened species, is also enforced by CDFW.

#### CDFW Species of Special Concern

In addition to formal listing under FESA and CESA, plant and wildlife species receive consideration 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. CDFW tracks species in California whose numbers, reproductive success, or habitat may be threatened.

#### California Native Plant Society

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

- |          |  |
|----------|--|
| List 1A: | Plants believed extinct.   |
| List 1B: | Plants rare, threatened, or endangered in California and elsewhere.                |
| List 2:  | Plants rare, threatened, or endangered in California, but more numerous elsewhere. |
| List 3:  | Plants about which we need more information - a review list.                       |
| List 4:  | Plants of limited distribution - a watch list.                                     |

#### Natural Community Conservation Program

The Natural Community Conservation Program (NCCP) is an unprecedented effort by the State of California, as well as numerous private and public partners, which takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP, which began in 1991 under the California Natural Community Conservation Planning Act, is broader in orientation and objectives than CESA and FESA; these laws are designed to identify and protect individual species that are already listed as threatened or endangered. The primary objective of the NCCP is to conserve natural communities at the ecosystem scale, while accommodating compatible land uses (CDFG, 2003).

## Local Regulations

The following are the local government's environmental policies relevant to biological resources.

### East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan

On January 25, 2000, the Contra Costa County Board of Supervisors made a declaration of intent to participate in the development of the ECCC HCP/NCCP. On June 30, 2000, the East Contra Costa County Habitat Conservation Plan Association Agreement went into effect. The agreement established the East Contra Costa Habitat Conservation Plan Association (HCPA) as the lead agency in drafting the Habitat Conservation Plan for submittal to the governing boards and councils of member agencies, oversee compliance with CEQA and NEPA, and would serve as the lead agency under CEQA for developing the HCP/NCCP. The City of Pittsburg elected to participate in the development of the ECCC HCP/NCCP and is a member of the HCPA.

The City of Pittsburg approved the ECCC HCP/NCCP on April 16, 2007 (Resolution 07-10745), and authorized execution of the Implementation Agreement on May 1, 2007. The Joint Exercise of Powers Agreement was executed on April 19, 2007 (Resolution No. 07-10898). The U.S. Fish and Wildlife Service signed the federal permit for the HCP/NCCP on July 25, 2007, and the CDFW signed the State permit for the HCP/NCCP on August 6, 2007. Therefore, East Contra Costa County has an officially approved HCP/NCCP as of August 6, 2007. Currently, all participating jurisdictions have approved the HCP/NCCP and have adopted implementing ordinances and the fee structures set forth in the HCP/NCCP.

Based on the ECCC HCP/NCCP and the data and analyses referenced therein, there is a reasonable relationship between the use of the HCP/NCCP implementation fees authorized by the City of Pittsburg implementation ordinance and the type of development projects subject to the fees. The Development Fee is used to implement the HCP/NCCP by funding the acquisition of land, the enhancement and management of habitat and the other activities to mitigate for impacts to open space habitat and covered species caused by affected development projects. The Wetland Mitigation Fee is used to implement the HCP/NCCP by funding the restoration, creation and management of Jurisdictional Wetlands and Waters and riparian woodland/scrub and other actions in order to mitigate for impacts to Jurisdictional Wetlands and Waters and riparian areas caused by affected development projects. The HCP/NCCP implementation fees apply to development projects that impact open space, habitat suitable for one or more covered species, Jurisdictional Wetlands and Waters, or riparian areas. In this way, the HCP/NCCP implementation fees are used only for purposes reasonably related to the types of development projects that will be subject to the fees.

The proposed project site is within the ECCC HCP/NCCP inventory area. The HCP/NCCP development fee is based on the project location. The HCP/NCCP includes three Fee Zones, defined by a map that determines the fee paid by development, regardless of the land cover type within the development. The proposed project site is within the ECCC HCP/NCCP Development Fee Zone II: Natural Area Zone. Land within this zone is dominated by natural land cover types. The development fee in Zone II is \$29,422.91 per acre, as of March 2017.

### City of Pittsburg General Plan

In addition to federal and State regulations, the City of Pittsburg General Plan identifies the following goals and policies to provide further protection to biological resources within the City's limits:

Goal 9-G-1     Protect conservation areas, particularly habitats that support special status species, including species that are State or federally listed as endangered, threatened, or rare.

Goal 9-G-2     Guide development in such a way that preserves significant ecological resources.

Policy 9-P-1     Ensure that development does not substantially affect special status species, as required by State and federal agencies and listed in Table 9-1. Conduct assessments of biological resources as required by CEQA prior to approval of development within habitat areas of identified special status species.

Policy 9-P-2     Establish an on-going program to remove and prevent the re-establishment of invasive species and restore native species as part of development approvals on sites that include ecologically sensitive habitat.

Policy 9-P-3     Participate in the development of a regional Habitat Conservation Plan (HCP) and consider its adoption for preservation of native species throughout eastern Contra Costa County.

### **4.4.4     IMPACTS AND MITIGATION MEASURES**

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This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to biological resources.

#### **Standards of Significance**

Consistent with Appendix G of the CEQA Guidelines, the City's General Plan, and the Pittsburg Municipal Code, a significant impact would occur if the proposed project would result in the following:

- 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 CDFW or USFWS (Initial Study Question IV.a.);
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS (Initial Study Question IV.b.);
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to marshes, vernal pools, coastal, etc.) through

direct removal, filling, hydrological interruption, or other means (Initial Study Question IV.c.);

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Initial Study Question IV.d.);
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Initial Study Question IV.e.); or
- Conflict with the provisions of an adopted HCP, NCCP, or other local, regional, or State habitat conservation plan (Initial Study Question IV.f.).

## Method of Analysis

The Biological Evaluation Report prepared by Pacific Biology is based on a review of biological resource databases, inventories, regional literature on both plants and animals, and a reconnaissance-level field survey completed on August 22, 2017. The field survey included habitat characterization, as well as focused searches for streams and wetlands. It should be noted that the field surveys were reconnaissance in nature, and were not intended to document special-status plant taxa. In addition to the research and field surveys conducted by Pacific Biology, a previous study of the project site was completed by Moore Biological Consultants, Inc. The Moore Biological Consultants, Inc. study included reconnaissance-level field surveys, which were conducted on December 12, 2013, and April 17, June 23, and September 3, 2014. The survey dates coincide with the blooming periods of the special-status plant species in Table 4.4-1.

## Project-Specific Impacts and Mitigation Measures

The following discussion of biological resources impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

### **4.4-1 Have a substantial adverse effect, either directly or through habitat modifications, on special-status plant species. Based on the analysis below, construction activity could disturb special-status plant species, but with implementation of mitigation, the impact would be *less than significant*.**

As shown in Table 4.4-1, and discussed above, the project site is considered to provide marginal habitat for some special-status plant species. During the August 2017 site survey performed by Pacific Biology, the annual grasslands had been lightly grazed, and were dominated by tall dense grass cover. The lightly grazed grasslands are considered homogeneous habitat, which lacks microhabitats preferred by many special-status plant species such as unique soils, rock outcroppings, or vernal pools. Furthermore, the light grazing has allowed for dense grass cover over the site, further limiting the site's suitability for special-status plant species. Nonetheless, if the project site was subject to a moderate grazing regime in the future, the project site could be considered suitable habitat for species associated with common grassland habitat and clay soils, such as bent-flowered fiddleneck, big tarplant, round-leaved filaree, Mt. Diablo fairy-lantern, Mt. Diablo buckwheat, fragrant

fritillary, Diablo helianthella, Brewer's western flax, showy golden madia, Mt. Diablo cottonweed, woodland woollythreads, adobe navarretia, shining navarretia, and rock sanicle. None of the aforementioned plant species were observed during the Moore Biological Consultants field surveys in 2013 and 2014. In addition, the CNDDDB does not include any occurrences of special-status plants within two miles of the project site.

It should be noted that the seasonal wetland habitats and sufficient required buffers present in the project site are protected in an area designated as Open Space within the Draft Master Plan that would not be disturbed by temporary grading activities. Wetland areas designated as Open Space within the Draft Master Plan would not be disturbed or developed with implementation of the proposed project. Therefore, should any special-status plant species occur in the wetland area of the project site, the proposed project would not have the potential to directly disturb such special-status species.

Considering the negative survey findings, the distance between known occurrences of special-status plants and the project site, the lack of microhabitats, and the dense grass cover existing on the project site, the areas of the site anticipated for future development are not considered suitable habitat for special-status plant species. Nevertheless, the USFWS considers plant surveys to be valid for three years. Considering that surveys of the project site were conducted in 2013 and 2014, construction activities are likely to occur outside of the three-year period. Due to the amount of time between the special-status plant surveys and the potential future development of the site, special-status plant species may colonize the site. Therefore, construction activity related to potential future development within the Draft Master Plan area could result in a *significant* impact related to the disturbance of special-status plant species.

#### Mitigation Measure(s)

The proposed project's participation in the ECCC HCP/NCCP would provide a mechanism to adequately mitigate impacts to special-status plant species. The following mitigation measures would reduce the above impact to a *less-than-significant* level.

- 4.4-1(a) *Prior to the issuance of grading or construction permits for each phase of development of the project, the applicant shall pay the applicable ECCC HCP/NCCP per-acre Development Fee in effect for Zone II in compliance with Section 15.108.070<sup>7</sup> of the Pittsburg Municipal Code. The Development Fee will cover the development of habitat that primarily includes annual grassland. At the discretion of the East Contra Costa County Habitat Conservancy, the fee may also be required for the 72.9 acres of Open Space that would be temporarily disturbed by grading. Payment of the Development Fee would address the loss of potential habitat of special-status plant species associated with grasslands. The fees would be used in part to protect these affected special-status plant species by bringing existing populations of the species under protection.*

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<sup>7</sup> City of Pittsburg, Habitat Conservation Plan/Natural Community Conservation Plan Implementation Ordinance.

*Alternately, the project applicant may, in accordance with the terms of Pittsburg Municipal Code Chapter 15.108, offer to dedicate land or create and restore wetlands in lieu of some or all of the mitigation fees. All applicable mitigation fees shall be paid, or an “in-lieu-of fee” agreement executed, prior to the issuance of a grading permit for the project.*

*The Pittsburg Community Development Department and the Contra Costa County Conservancy shall approve the final method of compliance with the ECCC HCP/NCCP provisions.*

- 4.4-1(b) Prior to the issuance of grading or construction permits for each phase of development of the project, additional rare plant surveys shall be conducted for bent-flowered fiddleneck, big tarplant, round-leaved filaree, Mt. Diablo fairy-lantern, Mt. Diablo buckwheat, fragrant fritillary, Diablo helianthella, Brewer’s western flax, showy golden madia, Mt. Diablo cottonweed, woodland woollythreads, adobe navarretia, shining navarretia, and rock sanicle. The surveys shall be appropriately timed and shall cover all potentially suitable on-site habitats. If none of the species occurs in the project development area, further mitigation is not required.*
- 4.4-1(c) If any of the above species occurs in the project development area, future development plans shall be designed to avoid such species, to the maximum extent feasible. If avoidance of the identified species is unavoidable, the project applicant shall notify the East Contra Costa County Habitat Conservancy of the construction schedule so as to allow the East Contra Costa County Habitat Conservancy the option to salvage the population(s) in accordance with HCP/NCCP Conservation Measure 3.10 (Plant Salvage when Impacts are Unavoidable) described below. In addition, the project applicant shall confirm with the East Contra Costa County Habitat Conservancy that the take limits of the HCP/NCCP for the species identified in Impact 4.4-1 have not been breached (at the time of writing this EIR, the take limits have not been breached for the special-status plant species in question).*

#### *Perennial Covered Plants*

*Where removal of covered plant species cannot be avoided by approved covered activities, such as construction activities associated with development of the project site, the East Contra Costa County Habitat Conservancy has the option of salvaging the covered plants. Salvage methods for perennial species shall be tested for whole individuals, cuttings, and seeds. Salvage measures shall include the evaluation of techniques for transplanting as well as germinating seed in garden or greenhouse and then transplanting to suitable habitat sites in the field. Techniques shall be tested for each species, and appropriate methods shall be identified through research and adaptive management. Where plants are transplanted or seeds*

*distributed to the field they shall be located in preserves in suitable habitat to establish new populations. Field trials shall be conducted to evaluate the efficacy of different methods and determine the best methods to establish new populations. New populations shall be located such that they constitute separate populations and do not become part of an existing population of the species, as measured by the potential for genetic exchange among individuals through pollen or propagule (e.g., seed, fruit) dispersal. Transplanting within the preserves shall only minimally disturb existing native vegetation and soils. Supplemental watering may be provided as necessary to increase the chances of successful establishment, but must be removed following initial population establishment. See also All Covered Plants below.*

#### *Annual Covered Plants*

*For annual covered plants, mature seeds shall be collected from all individuals for which removal cannot be avoided (or if the population is large, a representative sample of individuals). If storage is necessary, seed storage studies shall be conducted to determine the best storage techniques for each species. If needed, studies shall be conducted on seed germinated and plants grown to maturity in garden or greenhouse to propagate larger numbers of seed. Seed propagation methods shall ensure that genetic variation is not substantially affected by propagation (i.e., selection for plants best adapted to cultivated conditions). Field studies shall be conducted through the Adaptive Management Program to determine the efficacy and best approach to dispersal of seed into suitable habitat. Where seeds are distributed to the field, they shall be located in preserves in suitable habitat to establish new populations. If seed collection methods fail (e.g., due to excessive seed predation by insects), alternative propagation techniques will be necessary. See also All Covered Plants below.*

#### *All Covered Plants*

*All salvage operations shall be conducted by the East Contra Costa County Habitat Conservancy. To ensure enough time to plan salvage operations, project proponents shall notify the East Contra Costa County Habitat Conservancy of their schedule for removing the covered plant population.*

*The East Contra Costa County Habitat Conservancy may conduct investigations into the efficacy of salvaging seeds from the soil seed bank for both perennial and annual species. The soil seed bank may add to the genetic variability of the population. Covered species may be separated from the soil through garden/greenhouse germination or other appropriate means. Topsoil taken from impact sites shall not be distributed into preserves because of the risk of spreading new nonnative and invasive plants to preserves. For salvage operations, the East Contra Costa County*

*Habitat Conservancy shall transplant new populations such that they constitute separate populations and do not become part of an existing population of the species, as measured by the potential for genetic exchange among individuals through pollen or propagule (e.g., seed, fruit) dispersal. Transplanting or seeding “receptor” sites (i.e., habitat suitable for establishing a new population) should be carefully selected on the basis of physical, biological, and logistical considerations (Fiedler and Laven 1996); some examples of these are listed below.*

- *Historic range of the species;*
- *Soil type;*
- *Soil moisture;*
- *Topographic position, including slope and aspect;*
- *Site hydrology;*
- *Mycorrhizal associates (this may be important for Mount Diablo manzanita);*
- *Presence or absence of typical associated plant species; and*
- *Presence or absence of herbivores or plant competitors. Site accessibility for establishment, monitoring, and protection from trampling by cattle or trail users.*

- 4.4-2 Have a substantial adverse effect, either directly or through habitat modifications, on special-status bird species, including those covered under the East Contra Costa County HCP/NCCP, such as Swainson’s hawk, tricolored blackbird, burrowing owl, and golden eagle. Based on the analysis below, the proposed project could provide foraging habitat for Swainson’s hawk, burrowing owl, golden eagle, and tricolored blackbirds and foraging or nesting habitat for other special-status avian species, but with implementation of mitigation, the impact would be *less than significant*.**

The potential for implementation of the Draft Master Plan to result in adverse effects to special-status species is discussed below. Adverse effects on Swainson’s hawks, tricolored blackbirds, burrowing owls, and golden eagles are considered separately for each species.

#### Golden Eagle

The site is mapped as suitable habitat for golden eagle as modeled in the ECCC HCP/NCCP and golden eagles are assumed to forage in the site. Golden eagle are a Fully Protected species. The ECCC HCP/NCCP provides compensatory grassland habitat within dedicated preserve areas, which may be used as foraging habitat by golden eagle. The payment of ECCC HCP/NCCP fees as a result of the project would be used, in combination with other fees, to purchase the preserve area that would act as compensatory habitat for the species.

Golden eagles have been observed foraging on the site. The on-site trees and other relatively large trees visible from the site provide poor quality nesting habitat for golden eagles. Although golden eagles are considered unlikely to nest in the project site, development of



the project site grasslands would convert suitable foraging habitat for the species. In addition, grading within open space areas of the site would result in temporary disturbance of 72.9 acres of suitable foraging habitat. Because the project site provides suitable (though poor) nesting habitat for golden eagle and is within the species' known range, the possibility exists that potential future construction activity within the proposed development area of the Draft Master Plan area could have a significant impact to individual golden eagle if the species occupies the site prior to the onset of construction.

#### Swainson's Hawk

As noted previously, the site is along the extreme west edge of the nesting range of this species and is not within an area mapped as potential breeding or foraging habitat for this species as modeled in the ECCC HCP/NCCP. Despite not being in an area mapped as potential breeding or foraging habitat for this species, should Swainson's hawks wander outside of the mapped range, the project site would be considered suitable foraging habitat. Given the proximity of the project site to the mapped range of the species, and the migratory nature of the species, individuals wandering outside of the mapped range is considered a possibility. The ECCC HCP/NCCP would use the Zone II fees required as part of Mitigation Measure 4.4-1(a) to purchase compensatory habitat for the conversion of grasslands on-site. The compensatory habitat would address impacts to suitable foraging habitat for Swainson's hawk within the ECCC HCP/NCCP area. The biological goals and objectives for Swainson's hawk under the ECCC HCP/NCCP include acquiring and managing lands with known or suitable nest sites and acquiring and managing modeled suitable foraging habitat for Swainson's hawk.

Although Swainson's hawks were not observed during the field surveys, the larger trees within the site are marginally suitable for nesting Swainson's hawks and the on-site grasslands represent marginal foraging habitat. Because the project site provides marginally suitable nesting and foraging habitat for Swainson's hawk, the possibility exists that the project construction could have a potentially significant impact to individual Swainson's hawks if they occupy the site prior to the onset of construction.

#### Burrowing Owl

Although the species prefers short grass or bare ground, and the project site was dominated by tall dense vegetation at the time of Pacific Biology's site visit, the project site is considered potential habitat for the species and is mapped as suitable habitat in the ECCC HCP/NCCP. Ground squirrel activity on the project site is limited, but existing burrows would be considered potential habitat for burrowing owls. Signs of burrowing owl activity at existing ground squirrel burrows were not noted during field surveys of the project site. Considering the time elapsed since field study of the project site and the presence of suitable habitat within the project site, the species could occur on the site.

The ECCC HCP/NCCP provides compensatory habitat within dedicated preserve areas, which may be used as habitat by burrowing owl. The payment of ECCC HCP/NCCP fees as

a result of the project would be used, in combination with other fees, to purchase preserve area, which would represent compensatory habitat for the species.

Although burrowing owl activity has not been observed on the project site, development of the project site grasslands could convert suitable habitat for burrowing owl, and grading within open space areas on the project site could disturb foraging and nesting habitat for the species. Because the project site provides suitable habitat for burrowing owl and is within the species' known range, the possibility exists that project construction could have a significant impact to individual western burrowing owl if the species occupies the site prior to the onset of construction.

#### Tricolored Blackbird

The site is mapped as primary foraging habitat for tricolored blackbirds as modeled in the ECCC HCP/NCCP and the species is assumed to forage in the site. The wetland mitigation areas located within the project site provide suitable nesting habitat for the species, and tricolored blackbirds were observed foraging near the mitigation area during a June 2014 site survey. However, the existing wetland mitigation areas on-site, which represent potential nesting habitat, would be preserved within a proposed open space area; approximately 200 feet of open space surrounding the wetland mitigation area and associated nesting habitat would be preserved within the open space area. It should be noted that grading or other disturbance would not occur within the aforementioned wetland open space area. Therefore, potential future buildout of the Draft Master Plan would not disturb the existing on-site nesting habitat. Nonetheless, development of the project site grasslands could convert suitable foraging habitat for tricolored blackbird. The ECCC HCP/NCCP provides compensatory grassland habitat within dedicated preserve areas which can be used as foraging habitat by tricolored blackbird. The payment of ECCC HCP/NCCP fees as a result of the project would be used, in combination with other fees, to purchase preserve areas. Purchase of preserve areas would provide compensatory foraging habitat for the species within the ECCC HCP/NCCP area. In addition to potential conversion of foraging habitat with implementation of the Draft Master Plan, operation of construction equipment near active tricolored blackbird nests could disrupt nesting activity. The disturbance of nesting activity would be considered a significant impact to the species.

#### Other Special-Status Avian Species

In addition to the species protected by the ECCC HCP/NCCP, the project site could represent habitat for several other special-status species. The California horned lark, white-tailed kite, loggerhead shrike, grasshopper sparrow, and ferruginous hawk could all use the on-site annual grassland habitat for foraging habitat. Additionally, the California horned-lark and grasshopper sparrows could use the grassland habitat for nesting activity, while the on-site trees and shrub vegetation located near the wetland mitigation areas represent potential nesting habitat for white-tailed kites and loggerhead shrikes. Although development of the Draft Master Plan would not include disturbance of the wetland mitigation area or surrounding vegetation, operation of construction activity near existing on-site trees would have the potential to disturb white-tailed kites or loggerhead shrikes potentially nesting in

on-site trees or shrubs. Furthermore, ground disturbance throughout the grassland areas of the project site would have the potential to disturb nesting activity of ground-nesting species, including the grasshopper sparrow and California horned-lark.

### Conclusion

In summary, the on-site grasslands provide marginally suitable foraging habitat for Swainson's hawk, burrowing owl, golden eagle, and tricolored blackbirds, as modeled in the ECCC HCP/NCCP. The project site may provide foraging or nesting habitat to other special-status avian species, including white-tailed kites, ferruginous hawks, grasshopper sparrows, California horned-larks, and loggerhead shrikes. Therefore, implementation of the proposed project could result in an adverse effect to special-status bird species, either directly or through habitat modification, causing a *significant* impact.

### Mitigation Measure(s)

The proposed project's participation in the ECCC HCP/NCCP would provide a mechanism to adequately mitigate impacts to birds covered under the ECCC HCP/NCCP, including Swainson's hawk, tricolored blackbird, burrowing owl, and golden eagle. The following mitigation measures would reduce the above impact to a *less-than-significant* level.

### *Golden Eagle*

4.4-2(a) *Implement Mitigation Measure 4.4-1(a).*

4.4-2(b) *The project shall implement the following avoidance measures for potential effects on golden eagles during construction:*

- *Based on the potential for active nests, prior to implementation of construction activities, including tree removal, a qualified biologist shall conduct a pre-construction survey to establish whether an active golden eagle nest is present on the project site. If an active nest is not present, further mitigation is not required. If an occupied nest is present, minimization requirements and construction monitoring shall be required, as detailed below.*
- *Construction activities shall be prohibited within 0.5 mile of active nests. Nests can be built and active at almost any time of the year, although mating and egg incubation occurs late January through August, with peak activity in March through July. If site-specific conditions or the nature of the construction activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be appropriate or that a larger buffer should be implemented, the East Contra Costa County Habitat Conservancy shall coordinate with CDFW/USFWS to determine the appropriate buffer size.*

- *Construction monitoring shall ensure that no construction activities occur within the buffer zone established around an active nest. Construction monitoring shall ensure that direct effects to golden eagles are avoided.*

*Swainson's Hawk*

4.4-2(c) *Implement Mitigation Measure 4.4-1(a).*

4.4-2(d) *The project applicant shall implement the following avoidance measures for potential effects on Swainson's hawk nests during construction:*

- *Prior to ground disturbing activities during the nesting season (March 15 through September 15), a qualified biologist shall conduct a pre-construction survey no more than one month prior to construction to establish whether occupied Swainson's hawk nests occur on or within 1,000 feet of the area of proposed construction. If occupied nests are not found, then further mitigation is not required.*
- *If occupied nests are found, project construction activity shall not occur within a 1,000-foot buffer zone distance from the nest unless a lesser buffer zone is approved by the City in consultation with CDFW. During the nesting season, construction activities shall be avoided within the established buffer zone to prevent nest abandonment. Construction monitoring shall be required to ensure that the established buffer zone is adhered to. If young fledge prior to September 15, construction activities can proceed normally without a buffer zone. If an active nest site is present but shielded from view and noise by other development or other features, the City may waive this avoidance measure (establishment of a buffer zone) if approved by the CDFW.*

*Burrowing Owl*

4.4-2(e) *Implement Mitigation Measure 4.4-1(a).*

4.4-2(f) *The project applicant shall implement the following measures to avoid or minimize impacts to western burrowing owl:*

- *No more than 14 days prior to initiation of ground disturbing activities, the project applicant shall retain a qualified burrowing owl biologist to conduct a take avoidance survey of the proposed project site, any off-site improvement areas, and all publicly accessible potential burrowing owl habitat within 500 feet of the project construction footprint. The survey shall be performed in accordance with the applicable sections of the March 7, 2012, CDFW's Staff*

*Report on Burrowing Owl Mitigation guidelines. If the survey does not identify any nesting burrowing owls on the proposed project site, further mitigation is not required. The take avoidance survey shall be submitted to the City of Pittsburgh Community Development Department for review. The survey periods and number of surveys are identified below:*

- If construction related activities commence during the non-breeding season (1 September to 31 January), a minimum of one take avoidance survey shall be conducted of that phase and all publicly accessible potential burrowing owl habitat within 500 feet of the construction footprint of that phase.*
- If construction related activities commence during the early breeding season (1 February to 15 April), a minimum of one take avoidance survey shall be conducted of that phase and all publicly accessible potential burrowing owl habitat within 500 feet of the construction footprint of that phase.*
- If construction related activities commence during the breeding season (16 April to 30 August), a minimum of three take avoidance surveys shall be conducted of that phase and all publicly accessible potential burrowing owl habitat within 500 feet of the construction footprint of that phase. If construction related activities commence after 15 June, at least one of the three surveys shall be completed after 15 June.*
- Because the owls are known to occur nearby and may take up occupancy on a site under construction, the take avoidance survey shall be conducted prior to the start of any new phase, and/or if construction-related activity is delayed or suspended for more than 30 days.*
- If active burrowing owl dens are found within the survey area in an area where disturbance would occur, the project applicant shall implement measures consistent with the applicable portions of the March 7, 2012, CDFW's Staff Report on Burrowing Owl Mitigation guidelines. If needed, as determined by the biologist, the formulation of avoidance and minimization approaches would be developed in coordination with the CDFW. The avoidance and minimization approaches would likely include burrow avoidance buffers during the nesting season (February to August). For burrowing owls present on-site, outside of the nesting season, passive exclusion of owls from the burrows could be utilized under a CDFW-approved burrow exclusion plan.*

4.4-2(g) *If active owl burrows are present and the project would impact active burrows, the project applicant shall provide compensatory mitigation for the permanent loss of burrowing owl habitat at a ratio of 2.5 acres of higher quality owl habitat for every one acre of suitable owl habitat disturbed. The calculation of habitat loss may exclude acres currently occupied by*

*hardscape or structures. Such mitigation may include the permanent protection of land that is deemed to be suitable burrowing owl habitat through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation mission, or the purchase of burrowing owl conservation bank credits from a CDFW-approved burrowing owl conservation bank. A record of the compensatory mitigation provided by the project applicant shall be submitted to the City of Pittsburg Community Development Department prior to initiation of ground disturbing activities.*

*Tricolored Blackbird and Other Special-Status Avian Species*

4.4-2(h) *Implement Mitigation Measure 4.4-1(a).*

4.4-2(i) *If construction activities commence anytime during the nesting/breeding season of native bird species potentially nesting on or near the project site (typically February through August in the project region), a pre-construction survey for nesting birds shall be conducted by a qualified biologist within two weeks of the commencement of construction activities.*

*If active nests are found in areas that could be directly affected or are within 500 feet of construction and would be subject to prolonged construction-related noise, a no-disturbance buffer zone shall be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them shall be a minimum of 500 feet for raptors, and a minimum of 50 feet for other species, and may be enlarged by taking into account factors such as the following:*

- Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity;*
- Distance and amount of vegetation or other screening between the construction site and the nest; and*
- Sensitivity of individual nesting species and behaviors of the nesting birds.*

- 4.4-3 Have a substantial adverse effect, either directly or through habitat modifications, on special-status mammals, including San Joaquin kit fox, San Joaquin pocket mouse, American badger, and special-status bats. Based on the analysis below, construction activity associated with the proposed project could disturb American badger dens, San Joaquin pocket mouse, and/or San Joaquin kit fox dens, but with implementation of mitigation, the impact would be *less than significant*.**

The potential impacts of the proposed project related to special-status mammal species are discussed below.

#### San Joaquin Kit Fox

San Joaquin kit fox were not observed on or adjacent to the site during the field survey, and existing ground squirrel burrows on-site did not show signs of kit fox occupancy. In addition, the project site is considered to be north of the species' accepted range. However, because the species has been known to occasionally wander several miles outside of the published species range, a remote possibility exists that the species could use burrows in the site for denning. Considering the proximity of the site to the species' published range, and the species' propensity to wander outside of the published range, the site is mapped as suitable core habitat for San Joaquin kit fox as modeled in the ECCC HCP/NCCP, and species presences is assumed in the site.

If kit foxes were to use the burrows within the project site, development within the Draft Master Plan area could result in disturbance of kit foxes, and would result in the conversion of kit fox habitat to urban uses. Therefore, impacts related to the San Joaquin kit fox as a result of the proposed project are anticipated to be significant.

#### San Joaquin Pocket Mouse

San Joaquin pocket mouse typically inhabits grasslands and blue oak woodlands with friable soils in the foothills and valley bottoms of the Central Valley. The project site does not contain the characteristic friable soils, and therefore, on-site habitat is considered of lower quality. Based on the CNDDDB, the species has been documented approximately four miles southeast of the project site. Given occurrences of the San Joaquin pocket mouse have been recorded in areas with habitat connectivity to the project site, the species has some potential to occur on the site. If the species were to occupy the site during construction activities associated with buildout of the Draft Master Plan, impacts to the species would be significant.

#### American Badger

Badger dens have not been observed on the project site, and on-site soils are not considered particularly suitable for badger denning. However, the species is known to occur in the project area, and the annual grassland habitat represents denning habitat for the species. If present in a den, the species could be harmed by construction activities. In addition, the

proposed project would result in the loss of grassland habitat potentially used by the species. Therefore, the impact to American badgers would be significant.

#### Special-Status Bats

Hoary bat could roost on the project site within trees near the existing residences that could be removed. If hoary bats were to occur on the site, the on-site individuals would likely abandon any tree roost at the onset of construction and/or tree removal and relocate to another tree in the area. Relocation of hoary bats would avoid potential impacts related to construction activity. Western red bats roost primarily in trees, and are strongly associated with riparian habitats, particularly mature stands of cottonwood/sycamore. Potential roosting habitat for western red bats is present in the wetland mitigation area, but tree removal or construction activities are not proposed in the wetland mitigation area. Suitable habitat to support large colonial bat roosts for other bat species does not occur on the project site, and, thus, other bat species are not anticipated to occur on the site. Given the above, potential impacts to roosting bats are considered less than significant.

#### Conclusion

Considering the above discussion, San Joaquin kit foxes, American badgers, hoary bats, and western red bats could use the project site as habitat. However, the proposed project would not have the potential to impact hoary bats and western red bats. Construction activity associated with development of the grassland areas within the project site would have the potential to impact American badgers and San Joaquin kit foxes through the disturbance of dens. Therefore, impacts related to special-status mammals, specifically American badgers and San Joaquin kit foxes, would be considered *significant*.

#### Mitigation Measure(s)

The proposed project's participation in the ECCC HCP/NCCP would provide a mechanism to adequately mitigate impacts to the San Joaquin kit fox. Additionally, while the American badger and San Joaquin pocket mouse are not covered species under the ECCC HCP/NCCP, the on-site grassland foraging habitat potentially used by both species is the same type and acreage of habitat whose loss would be mitigated by payment of the Development Fee pursuant to the HCP/NCCP, or execution of an "in-lieu-of fee" agreement. Therefore, payment of Development fees or execution of an "in-lieu of fee" agreement for covered ECCC HCP/NCCP species would provide similar mitigation for the American badger and San Joaquin pocket mouse. The following mitigation measures would reduce the above impact to a *less-than-significant* level.

*San Joaquin Kit Fox, San Joaquin pocket mouse, and American Badger*

4.4-3(a)      *Implement Mitigation Measure 4.4-1(a).*



*San Joaquin Kit Fox*

4.4-3(b) *The project shall implement the following avoidance measures for potential effects on San Joaquin kit fox during construction:*

- *Prior to any ground disturbance, a USFWS/CDFW-qualified biologist shall conduct a pre-construction survey within the proposed disturbance footprint and a surrounding 250-foot radius. The survey shall establish the presence or absence of San Joaquin kit foxes and/or suitable dens and evaluate use by kit foxes in accordance with USFWS survey guidelines (USFWS 1999). The pre-construction survey shall be conducted no more than 30 days prior to ground disturbance. On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 250-foot radius from the perimeter of the proposed footprint to identify San Joaquin kit foxes and/or suitable dens. Adjacent parcels under different land ownership are not required to be surveyed. The status of all surveyed dens shall be determined and mapped. Written results of pre-construction surveys shall be submitted to USFWS within 5 working days after survey completion and before the start of ground disturbance. Concurrence is not required prior to ground disturbance.*
- *If San Joaquin kit foxes and/or suitable dens are identified in the survey area, the measures described below shall be implemented.*
  - *If a San Joaquin kit fox den is discovered in the proposed development footprint, the den shall be monitored for 3 days by a USFWS/CDFW-qualified biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.*
  - *Unoccupied dens shall be destroyed immediately to prevent subsequent use.*
  - *If a natal or pupping den is found, USFWS and CDFW shall be notified immediately. The den shall not be destroyed until the pups and adults have vacated and then only after further consultation with USFWS and CDFW.*
  - *If kit fox activity is observed at the den during the initial 3-day monitoring period, the den shall be monitored for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged. For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident animal can easily escape. Once the*

*den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of the biologist, it is temporarily vacant (i.e., during the animal's normal foraging activities).*

- *If dens are identified in the survey area outside the proposed disturbance footprint, exclusion zones around each den entrance or cluster of entrances shall be demarcated. The configuration of exclusion zones should be circular, with a radius measured outward from the den entrance(s). Ground disturbance activities shall not occur within the exclusion zones. Exclusion zone radii for potential dens shall be at least 50 feet and shall be demarcated with four to five flagged stakes. Exclusion zone radii for known dens shall be at least 100 feet and shall be demarcated with staking and flagging that encircles each den or cluster of dens but does not prevent access to the den by kit fox.*

#### *San Joaquin Pocket Mouse*

- 4.4-3(c) *Grading and vegetation clearing activities shall be conducted in a uniform direction to allow mobile animals, such as San Joaquin pocket mouse, the ability to escape the disturbance area into adjacent undisturbed habitat, and to prevent creating fragmented islands of habitat that would eventually be cleared/graded. The language of this mitigation shall be included, via notation, on any grading plans approved within the Draft Master Plan development area.*

#### *American Badger*

- 4.4-3(d) *A pre-construction survey for potential den sites shall be conducted by a qualified biologist no more than four weeks before commencement of initial ground disturbance activities. If an occupied den is found (and if young are not present), then any badgers present shall be removed from the den either by trapping or the use of exclusionary devices. Prior to implementation, the removal method shall be approved by CDFW. If trapped, the badgers shall be moved to other suitable habitat. Once any badgers are trapped or excluded, the dens shall be excavated by hand and refilled to prevent reoccupation. Exclusion shall continue until the badgers are successfully excluded from the site, as determined by a qualified biologist. Badgers shall not be relocated if it is determined by the biologists that young are or may be present.*

**4.4-4 Have a substantial adverse effect, either directly or through habitat modifications, on California tiger salamanders. Based on the analysis below, through participation in the ECCC HCP/NCCP's fee program and with implementation of mitigation, the impact would be *less than significant*.**

Known CTS breeding ponds are located in the CNWS, and adult CTS have been captured in the vicinity of the existing on-site wetland mitigation areas. Additionally, CTS have previously been shown to use the southern portions of the project site as upland habitat.<sup>8</sup>

Potential on-site breeding habitat for the CTS is limited to the wetland mitigation area, which provides marginal habitat for the species due to the presence of trees and marsh vegetation. The existing wetland mitigation areas would be protected within an Open Space area of the Draft Master Plan area, and would not be disturbed during site development or grading. Thus, the proposed project would not result in the loss of CTS breeding habitat.

Moore Biological Consultants, Inc. noted that a small number of ground squirrel burrows, some large soil cracks, and pocket gopher burrows were observed within the project site, all of which provide potential upland refuge habitat for CTS. CTS using the on-site refuge habitat would likely originate in the known breeding ponds in the CNWS. Considering the known dispersal range of the CTS, development of the Draft Master Plan could result in the development of approximately 339.1 acres and the temporary disturbance of 72.9 additional acres of annual grassland habitat that provides accessible upland refuge/aestivation and dispersal habitat. Therefore, development of the proposed project would reduce upland habitat available to CTS breeding nearby the project site. Individual CTS are expected to be present in subterranean refuge habitat on portions of the project site and would be harmed by construction activities. Following construction of the project, CTS could still move on or off the site during breeding migrations and could be subject to harm or mortality while crossing roads during project operation.

By including a regional strategy for preserving core habitat and a viable population of the CTS, the ECCC HCP/NCCP anticipates and compensates for the loss of some individual CTS, their aestivation habitat, and their dispersal habitat resulting from construction associated with new development projects in the region. The ECCC HCP/NCCP does not include or recommend any avoidance or minimization measures to be implemented before, during or after construction activities for CTS. Instead the ECCC HCP/NCP only requires the payment of the Development Fee so that the East Contra Costa County Habitat Conservancy can use the collected monies to preserve and protect viable populations and their habitats in accordance with the ECCC HCP/NCCP's regional strategy or execution of an "in-lieu-of fee" agreement. Nevertheless, without participation in the ECCC HCP/NCCP's fee program, development within the Draft Master Plan area would result in a *significant* impact to CTS.

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<sup>8</sup> Orloff, Susan G. "Movement Patterns and Migration Distances in an Upland Population of California Tiger Salamander (*Ambystoma Californiense*).” *Herpetological Conservation and Biology* 6.2 (2011): 266-276. Available at: [http://www.herpconbio.org/Volume\\_6/Issue\\_2/Orloff\\_2011.pdf](http://www.herpconbio.org/Volume_6/Issue_2/Orloff_2011.pdf).

Mitigation Measure(s)

The proposed project's participation in the ECCC HCP/NCCP would provide a mechanism to adequately mitigate impacts to CTS. The following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.4-4(a) *Implement Mitigation Measure 4.4-1(a).*

4.4-4(b) *Prior to any ground disturbance, a USFWS/CDFW-approved biologist shall identify potential breeding habitat for CTS. If the project fills or surrounds suitable breeding habitat, the project proponent shall notify USFWS, CDFW, and the East Contra Costa County Habitat Conservancy of the presence and condition of potential breeding habitat, as described below. Preconstruction surveys are not required.*

*Written notification to USFWS, CDFW, and the East Contra Costa County Habitat Conservancy, including photos and breeding habitat assessment, is required prior to disturbance of any suitable breeding habitat. The project proponent shall also notify these parties of the approximate date of removal of the breeding habitat at least 30 days prior to this removal to allow USFWS or CDFW staff to translocate individuals, if requested. USFWS or CDFW must notify the project proponent of their intent to translocate CTS within 14 days of receiving notice from the project proponent. The applicant must allow USFWS or CDFW access to the site prior to construction if they request it. Restrictions under this Plan on the nature of the disturbance or the date of the disturbance do not exist unless CDFW or USFWS notify the project proponent of their intent to translocate individuals within the required time period. In this case, the project proponent must coordinate the timing of disturbance of the breeding habitat to allow USFWS or CDFW to translocate the individuals. USFWS and CDFW shall be allowed 45 days to translocate individuals from the date the first written notification was submitted by the project proponent (or a longer period agreed to by the project proponent, USFWS, and CDFW).*

**4.4-5 Have a substantial adverse effect, either directly or through habitat modifications, on California red-legged frogs. Based on the analysis below, through participation in the ECCC HCP/NCCP's fee program and with implementation of mitigation, the impact would be *less than significant*.**

California red-legged frogs have been documented within the wetland mitigation areas within the project site. However, the wetland mitigation areas are not anticipated to maintain sufficient water levels to allow for breeding of the species within the wetland areas. Given that California red-legged frogs have been documented at this location and water is present during the wet season, at a minimum the wetland mitigation area provides non-breeding habitat that may be used by adult and/or juvenile frogs.

Considering the existence of nearby breeding ponds, that non-breeding frogs have been documented on the site (in the existing wetland mitigation area), and the presence of potential habitat north of project site, the species could make overland movements across the site, occur near water troughs, use soil cracks or small mammal burrows for refuge habitat, and/or forage on the site. Should construction activities occur when frogs are present on the project site, individual California red-legged frogs could be harmed by construction activities.

The ECCC HCP/NCCP anticipates and compensates for the loss of some individual California red-legged frogs and their aestivation, foraging, and dispersal habitat due to construction associated with new development projects by including a regional strategy for preserving core habitat for the species and protecting a viable population of the species in the project region. For California red-legged frogs, the ECCC HCP/NCCP does not include or recommend any avoidance or minimization measures to be implemented before, during, or after construction activities. Instead the ECCC HCP/NCP only requires the payment of the Development Fee so that the East Contra Costa County Habitat Conservancy can use the collected monies to preserve and protect viable populations and their habitats in accordance with the ECCC HCP/NCCP's regional strategy or execution of an "in-lieu-of fee" agreement. Nevertheless, without participation in the ECCC HCP/NCCP's fee program, development within the Draft Master Plan area would result in a *significant* impact to California red-legged frogs.

Mitigation Measure(s)

The proposed project's participation in the ECCC HCP/NCCP would provide a mechanism to adequately mitigate impacts to California red-legged frog. The following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.4-5            *Implement Mitigation Measure 4.4-1(a).*

- 4.4-6 Have a substantial adverse effect, either directly or through habitat modifications, on western pond turtle. Based on the analysis below, through participation in the ECCC HCP/NCCP's fee program and with implementation of mitigation, the impact would be *less than significant*.**

The proposed development area does not contain aquatic habitat suitable for western pond turtle. The wetland mitigation area on the project site is seasonal and does not provide year-round habitat. Furthermore, the wetland mitigation area would not be disturbed by grading during development of the Draft Master Plan area. Nonetheless, as noted previously, the species has been reported from the Cistern Pond on the CNWS; the pond is approximately 3,000 feet from the project site. Within the CNWS, other ponds exist which are closer to the project site; if such closer ponds are occupied by pond turtles, the species could potentially migrate into the project site during egg laying/nesting. Therefore, construction activities associated with development of Draft Master Plan area could result in a substantial adverse effect to western pond turtle, and a *significant* impact could occur.

Mitigation Measure(s)

The proposed project's participation in the ECCC HCP/NCCP would provide a mechanism to adequately mitigate impacts to western pond turtle. The following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.4-6 *Implement Mitigation Measure 4.4-1(a).*

**4.4-7 Have a substantial adverse effect, either directly or through habitat modifications, on vernal pool invertebrates. Based on the analysis below, the impact would be *less than significant*.**

Vernal pool fairy shrimp, longhorn fairy shrimp, midvalley fairy shrimp, California fairy shrimp, molestan, and vernal pool tadpole shrimp occur in vernal pools and other seasonal wetland habitats throughout much of the Central Valley. The only wetland areas that exist on the project site are the wetland mitigation areas, which are protected within an open space area of the project site that would not be disturbed during grading or development of the project site. Vernal pools or seasonal wetlands do not exist in the areas designated for development in the Draft Master Plan. The wetlands in the wetland mitigation area along the west edge of the site provide poor quality yet potentially suitable habitat for vernal pool fairy shrimp, Conservancy fairy shrimp, vernal pool tadpole shrimp, and longhorn fairy shrimp. However, the wetlands are in an area that would remain as open space and would not be disturbed by grading during development of the Draft Master Plan area. Therefore, impacts related to vernal pool invertebrates as a result of the proposed project are deemed *less than significant*.

Mitigation Measure(s)

*None required.*

**4.4-8 Have a substantial adverse effect, either directly or through habitat modifications, on western bumble bee. Based on the analysis below, the impact would be *less than significant*.**

As noted previously, the proposed project site contains a small number of ground squirrel burrows that could potentially be used by western bumble bee for underground nests. Moore Biological Consultants noted that only, a small number of ground squirrel burrows were observed on the proposed project site. Therefore, potential nest sites on the project site are limited. In addition, most reports of nests are from areas bordered by trees, which are generally absent from the development area. Therefore, optimal habitat for the species is not present on-site. Nonetheless, given the presence of on-site ground squirrel burrows, the western bumble bee has a limited potential to occur on-site. If the species were to occupy the site during construction activities associated with buildout of the Draft Master Plan, impacts to the species would be *significant*.

Mitigation Measure(s)

While the western bumble bee is not a covered species under the ECCC HCP/NCCP, the on-site grassland foraging habitat potentially used by the species is the same type and acreage

of habitat whose loss would be mitigated by payment of the Development Fee pursuant to the HCP/NCCP, or execution of an “in-lieu-of fee” agreement. Therefore, payment of Development fees or execution of an “in-lieu of fee” agreement for covered ECCC HCP/NCCP species would provide similar mitigation for western bumble bee. Thus, the following mitigation measures would reduce the above impact to a *less-than-significant* level.

4.4-8                    *Implement Mitigation Measure 4.4-1(a).*

**4.4-9 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. Based on the analysis below, the project would have *no impact*.**

The Biological Evaluation Report prepared by Pacific Biology concluded that the project site does not contain riparian habitat. All Draft Master Plan areas designated for future development consist of annual grasslands, which are dominated by non-native grasses. Sensitive plant communities do not exist on or adjacent to the project site. Therefore, future development of the project would have *no impact* on such habitats.

Mitigation Measure(s)

*None required.*

**4.4-10 Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to marshes, vernal pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Based on the analysis below, the impact would be *less than significant*.**

Other than the two existing mitigation wetlands, which are to be protected within an area designated as Open Space within the Draft Master Plan and would not be disturbed by development or grading activities, potential Waters of the U.S. or other wetland habitats have not been observed on the project site. None of the existing on-site drainage support wetland vegetation, show defined bed/bank topography, or show indicators of wetland hydrology.

The two topographically low areas in the site are mapped on the U.S. Geological Survey (USGS) 7.5-minute topographic maps as containing intermittent “blue-line” streams. However, these USGS maps were published in 1980 and do not accurately depict current conditions. Streams do not exist on-site and these low areas do not contain creeks with defined beds or banks, nor does evidence of ordinary high water marks, scour, sediment deposits, or surface flows exist. The central and deepest parts of these low areas lack hydric soils and are uniformly vegetated with upland annual grassland and weeds. The other topographically low area in the site mapped as an intermittent “blue-line” stream is in the southeast corner of the site. Evidence of ordinary high water marks, scour, sediment deposits, or surface flows in this low area do not exist and the area is vegetated with upland annual grassland and weeds. A few other small topographically low areas between hills in

the site that drain even smaller watersheds similarly lack any indicators of wetlands or Waters of the U.S.

Overall, the only potentially jurisdictional wetlands are in an area that would remain undisturbed, in an area designated as Open Space within the Draft Master Plan area. Because the on-site wetlands would remain protected in Open Space areas of the Draft Master Plan area, implementation of the proposed project would not result in adverse effects to the on-site wetland mitigation areas, and, as such, impacts related to federally protected wetlands as a result of the proposed project would be *less than significant*.

Mitigation Measure(s)

*None required.*

**4.4-11 Substantially interfere with movement of native, resident, or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Based on the analysis below, the impact would be *less than significant*.**

Wildlife corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or manmade obstacles such as urbanization. The project site is located in an undeveloped area and is surrounded by large expanses of open space. The CNWS is located to the south and a large area of undeveloped land occurs to the east. Residential development and SR 4 occurs to the north, and SR 4 also occurs a short distance to the northwest of the project site. While the project site does not contain features, such as a riparian corridor, that are generally associated with wildlife movement corridors, wildlife is expected to currently use the on-site grasslands for local and regional movements. Given the presence of SR 4 a short distance to the north and northwest, the project site is located at the northwestern end of largely undeveloped land (and movement corridor) that extends into the Central Valley. Although undeveloped land extends to the southeast of the project site, existing urban development to the north and southwest, as well as SR 4 to the northwest limit dispersal of wildlife through the project site. Considering the surrounding land uses, movement of wildlife through the project site is currently limited by existing development. The ECCC HCP/NCCP acknowledges the low value of the site for dispersal by identifying the site as being within the “lower” priority level for acquisition effort under the ECCC HCP/NCCP’s program to establish connections within the plan area.

The proposed project would restrict wildlife movement across much of the project site. However, the portion of the CNWS bordering the site to the south is proposed to be maintained as a park (and open space) by the East Bay Regional Park District, which would provide opportunities for continued northwest-southeast wildlife movement in the area. Given that open space would be maintained south of the site, the project site is located at the western end of the movement corridor, and the site is identified by the ECCC HCP/NCCP as being within the “lower” level of acquisition effort area in regards to “Needed Regional Connections with ECCC HCP/NCCP System under the Maximum Urban Development Area”, the proposed project would not be considered to substantially interfere with the regional movement of wildlife species. Therefore, the project would not



have an effect on the movement of native, resident, or migratory fish or wildlife species or established native resident or migratory wildlife corridors, resulting in a *less-than-significant* impact.

Mitigation Measure(s)

*None required.*

**4.4-12 Indirect impacts on adjacent lands. Based on the analysis below, the proposed project could result in indirect impacts on adjacent lands related to increased light and glare, non-native plant species, increased human activity, and domestic animal presence, but with implementation of mitigation, the impact would be *less than significant*.**

Following construction and occupancy of the proposed project, the project would be surrounded by large expanses of undeveloped land to the south and east, with smaller areas of undeveloped land occurring to the north and west. The portion of the CNWS to the south that is proposed to be maintained as a park contains populations of California red-legged frogs and CTS. The open space areas bordering the project site primarily consist of grassland habitat (similar to the on-site grasslands), with scattered stock ponds, which support special-status species and are used for movements by numerous wildlife species. Potential indirect impacts on the aforementioned adjacent lands may include the following: (1) increased lighting and glare effects on wildlife species; (2) an increase in non-native plant species (that have escaped from landscaped areas), which could out-compete native species for available resources and reduce the distribution and population of native species; and (3) increased human activity and domestic animal presence that could disturb natural habitat areas and displace wildlife populations. The indirect impacts are discussed in more detail below.

Increased Light and Glare

The development of a residential community would increase the number of nighttime light and glare sources on the project site over current levels, which are non-existent in most portions of the project site. Nighttime lighting could disturb the resting and foraging behavior of a number of wildlife species and could potentially alter breeding cycles and nesting behavior. Additionally, nighttime light and glare could increase the predation risk for certain animals.

Because creeks, riparian areas, or sensitive plant communities do not exist on or adjacent to the project site, increased nighttime light and glare would not affect such areas. In addition, the existing wetland mitigation area (which provides aquatic habitat potentially used by special-status species) would be within a proposed open space area, where development or grading would not occur within, or within approximately 200 feet of the wetlands, which also would not be disturbed by grading or development. However, depending on the intensity of lighting in surrounding areas, light spillage onto the wetland area could occur, which could have adverse effects on wildlife use within that area. Also of primary concern would be light spillage into the CNWS. Due to the known presence of CTS breeding ponds in the CNWS area, approximately 250 feet and 475 feet south of the

project site, if uncontrolled, light spillage onto the ponds could result in increased predation or other adverse effects to wildlife use of the ponds. Similarly, the habitat value of the 267.2 acres of the project site proposed as open space could be diminished should excessive light and glare be introduced into such areas. Therefore, impacts on wildlife (including special-status species) from increased nighttime light and glare could be significant; however, implementation of Mitigation Measure 4.1-3 of this EIR would ensure that lighting would not trespass onto adjacent properties, thereby reducing the potential for such impacts.

#### Increased Non-native Plant Species

The project site and nearby areas currently contain a high density of non-native plant species. Because of the ability of non-native species to compete more effectively for resources, some of the non-native plant species (which are more adapted to urban environments) could increase in population and potentially displace native species. The current problem of displacement by non-native plant species could be exacerbated after project completion, but the degree of the potential increase is not known. However, because non-native and exotic plants are commonly incorporated into the landscaping plans for both common areas and private lots within new developments, a reasonable conclusion would be that the project could result in identifiable increases in non-native and/or invasive plant populations. In particular, such plant species are often adapted to a wider variety of growing conditions and can out-compete native plant populations for available nutrients, prime growing locations, and other resources. Because such plants reproduce so quickly and in such large amounts, they could quickly replace many native plant populations, resulting in lower species diversity, loss of suitable breeding and/or nesting habitat for common and special-status wildlife species, and overall reductions in habitat values. Therefore, the impact on native biological resources as a result of increased non-native plant species on the project site could be considered significant.

#### Increased Human Activity and Domestic Animal Presence

The proposed project would expand the urban limit and introduce residential development into currently undeveloped land. Such an increase in human activity would create the potential for increased human disturbances to, and degradation of, nearby habitats. The disturbances may include increased noise disturbances to wildlife, an increase in the amount of refuse and pollutants in the area, and polluted runoff. Of potential concern would be related impacts to the nearby off-site ponds on the CNWS, where California red-legged frogs and CTS could occur. Given the small number of homes (one to three dwelling units per acre) proposed in areas closest to the off-site ponds and the distance of the homes from the off-site ponds, noise levels at the off-site ponds would not be substantially elevated. However, trash associated with the homes in that area may attract urban adapted wildlife species (e.g., raccoon) that may prey on California red-legged frogs and CTS occupying the off-site ponds.

The urban development on the project site would result in a corresponding increase in the presence of domestic animals on the project site. Dogs and cats, as well as urban adapted

wildlife species (e.g., raccoons), could disturb nesting or roosting sites and disrupt the normal foraging or movement activities of wildlife, such as California red-legged frogs and CTS. Feral cats and house cats could cause substantial damage to the species composition of natural areas, including the populations of special-status species, through predation. However, areas that had high levels of coyote activity had few or no domestic cats. The Conservation Biology Institute suggested that the movement range of domestic cats depends on the health of the coyote population in the surrounding area and that, where coyotes are present, cats are still likely to cause impacts on wildlife within 100 to 200 feet of the urban/wildland edge. Cats that range farther than 100 to 200 feet from the urban edge are more likely to be killed by coyotes than those that stay close to residential yards. Thus, given the healthy coyote population in the project area, the likelihood that coyotes would largely control feral cat populations is high. Nonetheless, even in the presence of coyotes, domestic and feral cats could still have some effects on habitats bordering the urban/wildland edge. Therefore, the impact on native biological resources as a result of increased human activity and domestic animal presence on the project site could be considered significant.

#### Conclusion

Based on the above, indirect impacts on adjacent lands related to increased light and glare, non-native plant species, increased human activity, and domestic animal presence could be considered *significant*.

#### Mitigation Measure(s)

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

- 4.4-12(a) *Implement Mitigation Measure 4.1-3.*
- 4.4-12(b) *Prior to Improvement Plan approval, the project applicant shall prepare a list of recommended and prohibited landscaping plants for homes and common areas within the project site. The list shall be subject to review and approval by the City of Pittsburg Community Development Department. The list shall include a plant palette composed of non-invasive species and shall list invasive plant species that residents may not plant on the project site. The list of prohibited plants shall be compiled in cooperation with a qualified restoration specialist and distributed to future occupants of the project site as part of the Covenants, Conditions, and Restrictions (CC&R) applicable to future residential development.*
- 4.4-12(c) *In deed disclosures, the project applicant shall notify all property owners/buyers of the potential interactions that may occur between pets and native wildlife. The disclosures shall discuss the presence of native animals (e.g., coyote, bobcat, mountain lion) that could prey on pets, and state that the property owners and/or residents shall not take any actions against native animals should they prey on pets that are allowed outdoors (unless*

*danger of attacks on humans is present). The property owners shall be informed of the importance of keeping pets inside or within fenced yards for the pet's protection, as well as to protect nearby sensitive biological resources. The property owners shall also be informed of the importance of properly storing trash and not feeding wildlife so as not to attract non-native wildlife that could prey on native species.*

**4.4-13 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Based on the analysis below, the impact would be less than significant.**

The Pittsburg General Plan includes adopted goals and policies regarding the protection of natural resources in the Pittsburg Planning Area. In addition, the City of Pittsburg has approved the ECCC HCP/NCCP, which is intended to provide an effective framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species. The applicant would be required to adhere to all of the applicable goals and policies found in the City's General Plan, related to the protection of biological resources. Furthermore, the proposed project would be required to adhere to the ECCC HCP/NCCP by paying development fees for the applicable Development Fee Zone, or dedicating land in lieu of fees (see Mitigation Measure 4.4-1[a]).

The Pittsburg Municipal Code includes Article XIX, Tree Preservation and Protection, which outlines tree removal permit procedures and requirements. Because the project site contains trees near the existing home site and in the wetland mitigation area, the proposed project would be subject to the City's Tree Preservation and Protection ordinance. However, it should be noted that the wetland mitigation areas are within portions of the Draft Master Plan designated as Open Space that would not be disturbed by development or grading with implementation of the Draft Master Plan, and tree removal is not anticipated within the Open Space area. Although the trees in the vicinity of the wetland mitigation area would be preserved within the Open Space area, some of the trees near the existing residences may require removal with implementation of the proposed project. If trees within the Draft Master Plan Area are to be removed, such tree removal must be completed in compliance with Section 18.84.850 of the City's Municipal Code. Requirements of Section 18.84.850 include identifying and numbering all on-site trees, preparation of an arborist report, and consideration of the biological value of on-site trees.

Based on the above, implementation of the proposed project would not conflict with any local policies or ordinance protecting biological resources, including trees, and a ***less-than-significant*** impact would result.

Mitigation Measure(s)  
*None required.*

**4.4-14 Conflict with an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Based on the analysis below, with payment of development fees or dedication of land and with implementation of mitigation, the impact would be *less than significant*.**

The City of Pittsburg has approved the ECCC HCP/NCCP, which is intended to provide an effective framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species.

As discussed within Impacts 4.4-1 through 4.4-12, the proposed project would be required to comply with the ECCC HCP/NCCP through the implementation of avoidance and minimization measures as well as the mitigation measures included in this EIR. Of the mitigation measures included in this EIR, Mitigation Measure 4.4-1(a) requires that ECCC HCP/NCCP development fees be paid prior to issuance of grading or construction permits for each phase of the future development within the Master Plan Area. Payment of fees and implementation of the mitigation measures included in this chapter would ensure that implementation of the proposed project would be consistent with the ECCC HCP/NCCP. However, without payment of development fees or dedication of land, the proposed project would conflict with the ECCC HCP/NCCP and a *significant* impact would occur.

Mitigation Measure(s)

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

4.4-14            *Implement Mitigation Measure 4.4-1(a).*

**Cumulative Impacts and Mitigation Measures**

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area. Habitat loss resulting from the proposed project would combine with related effects resulting from cumulative development in the cumulative geographic setting. In addition, cumulative habitat loss could result in indirect adverse effects to the long-term viability of special-status species populations within the cumulative geographic setting, due to loss of their habitats.

**4.4-15 Cumulative loss of biological resources. Based on the analysis below, the proposed project could result in a loss of habitat for Swainson's hawk, tricolored blackbird, burrowing owl, golden eagle, San Joaquin kit fox, San Joaquin pocket mouse, American badgers, CTS, California red-legged frog, western pond turtle, western bumble bee, and other birds covered under the MBTA, but with implementation of mitigation, the cumulative impact would be *less than significant*.**

As defined in Section 15355 of the State CEQA Guidelines, "cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects (CEQA Guidelines 15355). Accordingly, an assessment of cumulative impacts should consider impacts identified as significant, as well as impacts identified as less-than-significant for individual projects that may become significant in a collective sense when considering the co-occurrence of multiple projects.

The Pittsburg area, like other communities in the Bay Area, has experienced urban growth over the last few years. Several housing developments are already developed or planned in the surrounding areas. Cumulatively, anticipated projects in the area would reduce common wildlife habitat and the numbers of special-status plant and animal species. The majority of the proposed project site is moderately to highly disturbed as a result of past grazing activity and other human activities. However, disturbed lands provide habitat for common species and may provide habitat for some special-status species.

The Pittsburg General Plan EIR concludes that development proposed under the General Plan has the potential to affect sensitive habitat areas and special-status species within the Pittsburg Planning Area. The General Plan EIR also states that conservation efforts proposed by the General Plan would ensure that special-status species and their habitats are protected from destruction. However, loss of sensitive habitat in the Planning Area could still occur, and would be considered potentially significant pursuant to CEQA. According to the Biological Evaluation Report prepared for the project, the site does not provide high quality habitat for any special-status species. However, implementation of the proposed project could result in a loss of habitat for Swainson's hawk, tricolored blackbird, burrowing owl, golden eagle, San Joaquin kit fox, San Joaquin pocket mouse, American badgers, CTS, California red-legged frog, western pond turtle, western bumble bee, and other birds covered under the MBTA. Consistent with the conclusions of the General Plan EIR, cumulative development, including the proposed project, would have a *significant* cumulative impact on biological resources.

Mitigation Measure(s)

The proposed project's participation in the ECCC HCP/NCCP would provide a mechanism to adequately mitigate the project's contribution to cumulative impacts to potentially-occurring sensitive species listed in the ECCC HCP/NCCP. The proposed project's individual impacts to species not covered under the ECCC HCP/NCCP would be mitigated

to a less-than-significant level with the mitigation measures required in this chapter. Therefore, the following mitigation measure would reduce the proposed project's incremental contribution to cumulative impacts to a *less-than-significant* level.

4.4-15            *Implement Mitigation Measures 4.4-1(a) through 4.4-14.*





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## 4.5 CULTURAL AND TRIBAL RESOURCES

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## 4.5

## CULTURAL AND TRIBAL RESOURCES

### 4.5.1 INTRODUCTION

The Cultural and Tribal Resources chapter of the EIR addresses known cultural and tribal resources in the project vicinity and the potential for unknown resources to exist. Cultural resources can be categorized into paleontological, prehistoric, or historic resources. Paleontological resources are fossilized remains of non-human organisms. Prehistoric resources, including tribal resources, are those sites and artifacts associated with indigenous, non-Euroamerican populations, generally prior to contact with people of European descent. Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region. The analysis summarizes the existing setting, as a result of the proposed project. The analysis identifies the thresholds of significance, describes the potential impacts associated with the project, and includes mitigation measures that would reduce impacts to a less-than-significant level, if necessary. Information for this chapter was drawn from the City of Pittsburg General Plan<sup>1</sup> and associated EIR,<sup>2</sup> as well as the Cultural Resources Assessment Report<sup>3</sup> prepared for the project by William Self Associates, Inc. (see Appendix G).

### 4.5.2 EXISTING ENVIRONMENTAL SETTING

The following existing environmental setting discussion for the project site consists of the paleontological, prehistoric, and historic context for the site, and an overview of any existing paleontological, prehistoric, or historic resources in the project area. A discussion regarding Native American Consultation is provided as well. The project area includes the proposed approximately 606-acre project site, located immediately southwest of the municipal boundary of the City of Pittsburg and within the Southwest Hills planning subarea of the Pittsburg General Plan.

#### Paleontological Context

The project site is located approximately three miles south of Honker Bay, a shallow tidal estuary located at the confluence of the Sacramento and San Joaquin Rivers that forms the entrance to the Sacramento Delta. To the west, Honker Bay leads into Suisun Bay which is drained by the Carquinez Strait, and then connects to San Pablo Bay, a northern extension of San Francisco Bay. The paths of the river channels may have varied in prehistory, but since historic times they have been stabilized.

<sup>1</sup> City of Pittsburg. *City of Pittsburg General Plan 2020: A vision for the 21<sup>st</sup> Century*. January 2001.

<sup>2</sup> City of Pittsburg. *City of Pittsburg General Plan DEIR*. January 2001.

<sup>3</sup> William Self Associates, Inc. *Cultural Resource Assessment Report for Faria/Southwest Hills Annexation Project Pittsburg, Contra Costa County, California*. September 2017.

The site is in the Los Medanos Hills, within the eastern part of the Coast Ranges province. The Coast Ranges consist of northwest-trending ranges and valleys that are geologically active within the San Andreas Fault System. The project area is made up of rounded hills, low-lying valleys, and swales. Most of the site consists of the Eocene Markley formation sandstone and siltstone, while Quaternary colluvium consisting of sand with clay is present in the low-lying areas and stream beds. The San Marco Meadows portion of the site makes up part of the Miocene San Pablo Formation, consisting of fine- to medium-grained, marine sandstone with local fossil beds and tuffaceous lenses. The bedrock additionally consists of sedimentary and minor volcanic rocks, and is covered with two to five feet of silty or sandy clay. The majority of the project site is currently covered in seasonal grasses and is used for grazing animals.

In addition, the University of California Museum of Paleontology database search performed on June 25, 2014 by Dr. Kenneth Finger, Consulting Paleontologist, identified 68 Pleistocene localities in Contra Costa County yielding 9,924 vertebrate specimens. All but one of the specimens represent the late Pleistocene Rancholabrean Land Mammal Stage (24,000 to 11,000 years before present), the exception being the middle- to late-Pleistocene fish cranium. However, the database did not list significant paleontological localities yet discovered in the Eocene Markley Sandstone of Contra Costa County.

### **Prehistoric Context**

The following section includes the prehistoric and ethnohistoric context of the region and the potential for prehistoric resources to be found on-site.

#### **Prehistoric Setting**

In prehistory, the abundance of natural resources in the delta supported large groups of native peoples along Honker Bay. Native Americans may have ventured inland on a seasonal basis to exploit available resources. Beginning with the Spanish missionaries in the 1700s, the influx of European and other immigrants into the regional area resulted in drastic changes to the natural environment. Overgrazing by domesticated livestock, introduction of non-native species, large-scale farming, and water diversions have contributed to degradation in the region.

The chronological sequence for the greater Sacramento River Valley region begins with the Windmill Pattern, encompassing what is referred to as the Early and Middle Horizons. Sites from the Early and Middle Horizons date from about 4,500 to 2,500 years ago. Although earlier sites exist, sites from the “Paleoindian Period” and dating from about 10,000 to 4,500 years ago are thought to be buried under Holocene alluvial deposits and are not well documented in Bay Area region of California. Various scholars have suggested Windmill Pattern sites are associated with an influx of peoples from outside of California who brought with them an adaptation to river-wetland environments.

Windmill Pattern sites are often situated in riverine, marshland, and valley floor settings, and atop small knolls above prehistoric seasonal floodplains. The variety of plant and animal resources within the immediate area of the project site would have attracted populations who were intent on

making efficient use of such resources. Most Windmill Pattern sites have contained burials in what may be cemeteries. Typically, the remains are extended ventrally, oriented to the west, and contain copious amounts of grave goods. Grave artifacts often include large projectile points (spear or dart points) and a variety of fishing paraphernalia such as net weights, bone hooks, and spear points, as well as the faunal remains of large and small mammals. Seed-grinding implements at the sites show that gathering and processing of seed resources was also common, and other artifacts (e.g. charmstones, quartz crystals, abalone and *Haliotis* shell beads) suggest trade and a degree of ceremonialism were practiced.

The subsequent Berkeley Pattern, previously the Middle Horizon, covers a period from about 2,500 to 1,500 years ago. The Berkeley Pattern overlaps somewhat with Windmill Pattern attributes at the beginning and Late Prehistoric artifacts at the end. Berkeley Pattern sites are much more common and well documented, and, therefore, better understood than Windmill Pattern sites. The sites are distributed in more diverse environmental settings, although a riparian focus is common. Deeply stratified midden deposits, resulting from generations of occupation, are common to Berkeley Pattern sites, as are an abundance of milling and grinding stones for the processing of vegetal resources. Projectile points are progressively smaller and lighter over time, culminating in the introduction of the bow and arrow during the late prehistoric period. As mentioned above, although the Windmill Pattern manifestations have numerous shared traits, artifacts unique to Berkeley Pattern sites include slate pendants, steatite beads, stone tubes and ear ornaments, and, most importantly, burial techniques using variable directional orientation, flexed body positioning, and a general reduction of mortuary goods.

Characterized as the Augustine Pattern, the late prehistoric period, formerly the Late Horizon, ranges from about 1,500 to 150 years ago. The Augustine Pattern is typified by intensive fishing, hunting and gathering, the latter focusing on acorns, a large population increase, increased trade and exchange networks, increases in ceremonial and social attributes, and the practice of cremation. Certain artifact types also typify the pattern: bone awls for use in basketry manufacture, small notched and serrated projectile points indicative of introduction of the bow and arrow, occasional pottery, clay effigies, bone whistles, and stone pipes. The presence of certain types of artifacts suggests a southward-moving influx of Wintuan populations into the Sacramento Valley, providing an important stimulus to the Augustine Pattern. Evidence from several sites (e.g., mutilation of skeletons and Wintuan-type barbed points imbedded in human remains) suggests the expansion was not altogether friendly. The Augustine Pattern and the late prehistoric period can be characterized as the apex of Native American cultural development in the Bay Area region of California.

### Ethnohistoric Setting

At the time of initial contact between European explorers and the native inhabitants of California, the area that is now the southern edge of the Carquinez Strait was inhabited by a people who were of Penutian linguistic stock and who spoke the Karkin language. Belonging to a larger San Francisco Bay Area ethnic group referred to as Costanoan, who reaped the benefit of living in a bountiful, temperate environment. Abundant marine and terrestrial resources made both agriculture and animal husbandry unnecessary. Evidence of the success of their hunter-gatherer

subsistence strategy may be seen in the number of flourishing village sites known to have existed at the time of contact with the Spanish. The detritus of the village sites were found in numerous locations around the shoreline of San Francisco Bay in the form of shellmounds, large accumulations of shell, ash, human artifacts, and occasionally human remains. With the influx of European settlers in the mid-19th century, most of the sites were destroyed or covered by buildings and roads. On the basis of linguistic evidence, the ancestors of the Ohlone arrived in the San Francisco Bay Area in approximately A.D. 500 from the Sacramento-San Joaquin Delta region.

Shellfish were an important staple in the Costanoan diet as were acorns of the coast, live oak, valley oak, tanbark oak and California black oak. Seeds and berries, roots, grasses, and the meat of deer, elk, grizzly, sea lion, rabbit, and squirrel also contributed to the Costanoan diet. The intensive use of shellfish, a subsistence strategy reflected in both coastal and bay shore midden deposits, was an indication of a general economic unity in the prehistoric region.

The arrival of the Spanish in the San Francisco Bay Area in 1775 led to the rapid demise of native California populations. Diseases, declining birth rates, and the effects of the mission system served to eradicate the aboriginal ways of life. Brought into the missions, the surviving Costanoan along with former neighboring groups of Esselen, Yokuts, and Miwok were transformed from hunters and gatherers into agricultural laborers. With abandonment of the mission system and Mexican takeover in the 1840s, numerous ranchos were established. Generally, the few native Californians who remained were then forced, by necessity, to work on the ranchos.

## **Historic Context**

In 1839, the Mexican government granted almost 10,000 acres, known as Rancho Los Medanos, to Jose Antone Mesa and Miguel Jose Garcia. The rancho encompassed modern-day Pittsburg and the proposed project area. The future site of Pittsburg was soon named New York of the Pacific. The gentleman who laid out the town, J. D. Stevenson, was a native of New York, and may have named the town for his home town. The area soon became known as New York Landing, and fishing and canning operations were established. When coal was discovered in the nearby hills at the turn of the century, the name of the town was changed to Black Diamond. Finally, on February 11, 1911, five years after Columbia Geneva Steel opened, the town was renamed Pittsburg, after the famous birthplace of the steel industry in Pennsylvania. In 1942, the United States Army built Camp Stoneman. For thousands of G.I.s who went to fight in the Asiatic-Pacific Theater operations during World War II, Camp Stoneman was their last contact with the United States. In 1954, the Camp was closed and the property became part of the growing City of Pittsburg. The City and surrounding area have seen significant commercial and residential development in the last half of the 20<sup>th</sup>-century.

## **Historic Setting**

A records search of the California Historical Resources Information System (CHRIS) was conducted by the North West Information Center (NWIC) at Sacramento State University to identify previous cultural resource studies in the project vicinity. According to the records search, two previously recorded sites are located within the project area (P-07-000436, and P-07- 000437).

P-07000436, the Faria Ranch Headquarters Site, and P-07-000437, the Antone Faria House, were recorded in 1988 by California Archaeological Consultants. In addition to the two previously recorded sites, six cultural resource studies have been completed that include the project area, and twelve cultural resource studies have been completed within ¼-mile of the project area. A complete list of the reports is available Appendix G.

*Faria Ranch Headquarters Site (P-07000436)*

The Faria Ranch Headquarters Site is a ranching complex originally containing 14 structures. Last recorded in 1988, the site now has eight remaining structures: the hay barn; pump house; shed; horse barn and associated corral; cow barn; machine shed; the Alvin Faria House, which was built in 1951; and the Elwin Faria House built in 1984. The original Faria Ranch House built in 1908, four sheds, blacksmith shop, bridge, and trash dump were previously removed. During the field survey of the project site conducted by William Self Associates, Inc. on September 22, 25, and 26, 2017, minor modifications to some of the existing structures was observed, such as refurbishing of the pump house and extension of the existing shed. In addition, a circular corral, small shed, and a shade structure covering tanks have been erected across the street from the house, as well as three modern Conex containers and a shelter structure located immediately west of the machine shed. The Alvin Faria House now has a sheep corral to the west and several unused, rusty farming machines around the site. The Elwin Faria house did not appear to have undergone renovations since the original recording.

An Archaeological Site Record was filled out for the Department of Parks and Recreation in 1988. Evaluation of the property's significance was not given, but the recorder noted, "The ranch complex was a working cattle ranch until the last few years. All the buildings have been modified through the years and some are in very poor condition." While the site retains the integrity of location, the oldest and most important structure, the 1908 house, was demolished along with several other structures.

*Antone Faria House (P-07000437)*

The Antone Faria House originally consisted of a house, a barn/shed structure, trash dump, windmill, and water tank. Only the windmill and water tank are present, while a newer, modern windmill with a solar panel has been constructed on the site. Two palm trees and one walnut tree were recorded in 1988 and are still present.

The site was also recorded in 1988; however, an evaluation of the property's significance was not given. The recorder noted, "The ranch complex was a working cattle ranch until the last few years. All the buildings have been modified through the years and some are in very poor condition." At that time, three structures existed: a 1923 house; a "collapsing" barn/shed, and a recent water tank and windmill. The water tank and windmill may have been installed as recently as 1980. During the field survey, only the water tank and windmill were relocated, and a modern windmill with a solar panel had been added to the site. While the site retains the integrity of location, the oldest and most important structure, the 1923 house, was demolished along with the barn/shed.

## **Native American Consultation**

The City of Pittsburg contacted the Native American Heritage Commission (NAHC) in April 2017, requesting information on sacred lands and a contact list of local tribal representatives or most likely descendants. A response was received from the NAHC on April 27, 2017 that provided a list of Contra Costa County Native American Contacts. In compliance with Assembly Bill (AB) 52 (Public Resources Code Section 21080.3.1) and Senate Bill (SB) 18, a project notification letter was distributed to the Native American Contacts provided by the NAHC. The letters were distributed on April 28, 2017, explaining the nature of the project and soliciting comments and any additional information the individuals might have regarding cultural resources in the project area. The City did not receive any response within the mandatory 30-day response period for consultation under AB 52; however, while conducting follow-up phone calls, William Self Associates, Inc. received one response from Michele Zimmer of the Amah Mutsin Tribal Band of Mission San Juan Bautista, requesting construction crews be given archaeology sensitivity training and provide Native and archaeological monitors, as needed.

### **4.5.3 REGULATORY CONTEXT**

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Many agencies have developed laws and regulations designed to protect significant cultural and tribal resources. The following discussion contains a summary review of regulatory controls pertaining to cultural resources, including federal, State, and local laws and ordinances.

#### **Federal Regulations**

The following are the federal environmental laws and policies relevant to cultural and tribal resources.

##### Section 106 for the National Historic Preservation Act of 1966 (NHPA)

Federal regulations for cultural resources are governed primarily by Section 106 of the NHPA of 1966. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in 36 Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites, which are determined eligible for listing on the National Register of Historic Places (NRHP). The criteria for determining NRHP eligibility are found in 36 CFR Part 60. Amendments to the Act (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require Section 106 compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or uses federal funding.



### National Register of Historic Places

NRHP is the nation's master inventory of known historic resources. The NRHP includes listings of resources, including: buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, State, or local level. Resources over 50 years of age can be listed on the NRHP. However, properties under 50 years of age that are of exceptional significance or are contributors to a district can also be included on the NRHP. Four criteria are used to determine if a potential resource may be considered significant and eligible for listing on the NRHP. The criteria include resources that:

- A. Are associated with events that have made a significant contribution to the broad patterns of history; or
- B. Are associated with the lives of persons significant in our past; or
- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded or may likely yield information important in prehistory or history.

A resource can be individually eligible for listing on the NRHP under any of the above four criteria, or it can be listed as contributing to a group of resources that are listed on the NRHP.

A resource can be considered significant in American history, architecture, archaeology, engineering, or culture. Once a resource has been identified as significant and potentially eligible for the NRHP, the resource's historic integrity must be evaluated. Integrity is a function of seven factors: location, design, setting, materials, workmanship, feeling, and association. The factors closely relate to the resource's significance and must be intact for NRHP eligibility.

### Paleontological Resources

Paleontological resources are classified as non-renewable scientific resources and are protected by several federal and state statutes, most notably by the 1906 Federal Antiquities Act (PL 59-209; 16 U.S.C. 431 et seq.; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands. Because the proposed project does not include any federal lands, the statute does not apply.

### **State Regulations**

The following are the State environmental laws and policies relevant to cultural and tribal resources.

### California Environmental Quality Act

State historic preservation regulations affecting the project include the statutes and guidelines contained in CEQA (Public Resources Code sections 21083.2 and 21084.1 and sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA requires lead agencies to consider the potential effects of a project on historic resources and unique archaeological resources. A “historic resource” includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript that is historically or archaeologically significant (Public Resources Code section 5020.1). Under Section 15064.5 of the CEQA Guidelines, a resource is considered “historically significant” if one or more of the following California Register of Historic Resources (CRHR) criteria have been met:

1. The resource is associated with events that have made a significant contribution to the broad patterns of California history;
2. The resource is associated with the lives of important persons from our past;
3. The resource embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
4. The resource has yielded, or may be likely to yield, important information in prehistory or history.

Integrity is generally evaluated with reference to qualities including location, design (i.e., site structure), materials, workmanship, setting, feeling, and association. A potentially eligible site must retain the integrity of the values that would make it significant. Typically, integrity is indicated by evidence of the preservation of the contextual association of artifacts, ecofacts, and features within the archaeological matrix (as would be required under Criterion 4) or the retention of the features that maintain contextual association with historical developments or personages that render them significant (Criteria 1, 2, or 3). Evidence of the preservation of this context is typically determined by stratigraphic analysis and analysis of diagnostic artifacts and other temporal data (e.g., obsidian hydration, radiocarbon assay) to ascertain depositional integrity or by the level of preservation of historic and architectural features that associate a property with significant events, personages, or styles.

CEQA requires preparation of an EIR if a proposed project would cause a “substantial adverse change” in the significance of a historical resource. A “substantial adverse change” would occur if a proposed project would result in physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (CEQA Guidelines Section 15064.5(b) (1)).

In addition to historically significant resources, which can include archeological resources that meet the criteria listed above, CEQA also requires consideration of “unique archaeological resources.” If a site meets the definition of a unique archaeological resource, the site must be treated in accordance with the provisions of Public Resources Code Section 21083.2. Under Public Resources Code Section 20183.2(g), an archaeological resource is considered “unique” if the resources:

- 1) Is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory;
- 2) Can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions;
- 3) Has a special kind or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- 4) Is at least 100 years old and possesses substantial stratigraphic integrity; or
- 5) Involves important research questions that can be answered only with archaeological methods.

CEQA also includes specific guidance regarding the accidental discovery of human remains. Specifically, CEQA Guidelines Section 15064.5(e) requires that if human remains are uncovered, excavation activities must be stopped and that the county coroner be contacted. If the county coroner determines that the remains are Native American, the coroner must contact the NAHC within 24 hours. The NAHC identifies the most likely descendent, and that individual or individuals can make recommendations for treatment of the human remains under the procedures set forth in Section 15064.5 of the CEQA Guidelines.

#### Senate Bill 18

Senate Bill (SB) 18, signed September 2004, requires local (city and county) governments to consult with California Native American tribes when amending or adopting a general plan or specific plan, or designating land as open space, in order to aid in the protection of traditional tribal cultural places. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting or mitigating impacts to cultural places. The consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.). The City of Pittsburg has carried out SB 18 consultation for the proposed project.

#### Assembly Bill 52

Assembly Bill (AB) 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. “Tribal cultural resources” are defined by CEQA as either:

- (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 California Register of Historical Resources.
  - (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.

As stated in Section 11 of AB 52, only a project that has a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015 is required to comply. The Notice of Preparation (NOP) for the Faria/Southwest Hills Annexation Project EIR was filed with the State Clearinghouse on March 9, 2017. As such, the proposed project is subject to AB 52. Accordingly, the City of Pittsburg initiated consultation with Native American tribes pursuant to AB 52 requirements. As previously discussed, only one of the tribes responded.

### **Local Regulations**

The following are the local government's environmental policies relevant to cultural and tribal resources.

#### City of Pittsburg General Plan

The Pittsburg General Plan objectives and policies relating to the protection of cultural, historical, and tribal resources that are applicable to the proposed project are presented below.

Goal 9-G-12 Encourage the preservation, protection, enhancement and use of structures that:

- Represent past eras, events and persons important in history;
- Provide significant examples of architecture;
- Embody unique and irreplaceable assets to the City and its neighborhoods;  
and
- Provide examples of the physical surroundings in which past generations lived.

Goal 9-G-13 Encourage municipal and community awareness, appreciation, and support for Pittsburg's historic, cultural, and archeological resources.

Policy 9-P-34 Encourage the preservation of varied architectural styles that reflect the cultural, industrial, social, economic, political and architectural phases of the City's history.

Policy 9-P-35 Expand the role of the City's Historical Resources Commission, currently responsible for only the New York Landing Historical District, to include all historical resources. The Commission should be responsible for designating historical resources, and acting as the community's liaison on these issues. However, the role of reviewing development proposals and remodelings in the Historical District should be transferred to the Planning Commission.

- Policy 9-P-36 Provide for the educational and cultural enrichment of this and future generations by fostering knowledge of our heritage.

Education and cultural enrichment of Pittsburg's citizens will be a key element in the preservation of Pittsburg's historical and cultural resources. The Historic Resources Commission should implement interpretive facilities within the Historical District, including displays and signs to promote education and understanding of existing historical resources.

- Policy 9-P-37 Redefine the New York Landing Historical District to designate and preserve historical structures not currently located within the district boundaries.

There are several structures outside the geographically distinct boundaries of the Historical District (See Figure 9-3: Historical Resources) that are important reflections of the City's history: for example, Black Diamond Grammar School (West Eighth and Black Diamond Streets), Pittsburg Seventh Day Adventist Church (East Ninth and Los Medanos Streets), Saint Peter Martyr Church (West Eighth and Black Diamond Streets), Presbyterian Church (East Leland Road), and Hindu Temple (Crestview Drive). While these are not part of the Historical District, these resources are important and should be protected accordingly.

- Policy 9-P-39 Ensure the protection of known archeological resources in the City by acquiring a records review for any development proposed in areas of known resources. If such resources are found, limit urban development in the vicinity or account for the resources.

- Policy 9-P-40 In accordance with State law, ensure the preparation of a resource mitigation plan and monitoring program by a qualified archeologist in the event that archeological resources are uncovered.

CEQA requires the evaluation of any archeological resource on the site of a development project. State law also protects these resources. City involvement in the identification, mitigation, and monitoring of project impacts on these resources will ensure the protection of Pittsburg's cultural heritage.

- Policy 9-P-41 If archeological resources are found during ground-breaking for new urban development, halt construction immediately and conduct an archeological investigation to collect all valuable remnants.

Policy 9-P-42 Develop an identification and preservation system for cultural resources—those places or structures that qualify as “important” or “unique” to local community, ethnic, or social groups.

#### **4.5.4 IMPACTS AND MITIGATION MEASURES**

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The Impacts and Mitigation Measures Section describes the standards of significance and methodology used to analyze and determine the proposed project’s potential impacts related to cultural and tribal resources.

##### **Standards of Significance**

Consistent with Appendix G of the CEQA Guidelines and the City’s General Plan, a significant impact would occur if the proposed project would result in any of the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 (Initial Study Question V.a.);
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5 (Initial Study Question V.b.);
- Directly or indirectly destroy a unique paleontological resource on site or unique geologic features (Initial Study Question V.c.);
- Disturb any human remains, including those interred outside of formal cemeteries (Initial Study Question V.d.); or
- Directly or indirectly disturb or destroy a unique tribal cultural resource, such as a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American tribe (Initial Study Question XVII.a. and XVII.b.).

##### **Method of Analysis**

The *Cultural Resource Assessment Report* included a CHRIS records search of the archives at the NWIC at California State University, Sacramento (CSUS) on August 24, 2017 to determine whether historic or prehistoric sites have been identified in the project area. In accordance with Section 106 of the NHPA and CEQA Sections 15064.5 and 15126.4, William Self Associates, Inc. contacted the NAHC in April 2017 to determine whether Native American resources have been identified or are known to exist in the project area. As noted in the Regulatory Context section of this chapter, tribal consultation request letters were sent out by the City to the list of individuals provided by the NAHC who may have knowledge of Native American cultural resources in the immediate project area.

Furthermore, William Self Associates, Inc. conducted a Field Survey of the entire project site on September 22, 25, and 26, 2017. The Field Survey was conducted by a two-person crew, Staff Archaeologists David Buckley and Oliver Hegge, using survey transects of not more than 30 meter intervals (except where steep terrain and dense vegetation did not allow for these intervals). Exposed ground surface within the project area was examined for the presence of historical or prehistoric site indicators.

The section below evaluates the proposed project's potential to impact cultural resources. Determinations of impacts to cultural resources were based on information from the *Cultural Resource Assessment Report* prepared by William Self Associates, Inc. (see Appendix G). Mitigation measures are identified, as necessary.

### **Project-Specific Impacts and Mitigation Measures**

The following discussion of impacts to cultural resources is based on the implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

#### **4.5-1 Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. Based on the analysis below, the impact would be *less than significant*.**

Prehistoric or historic Native American cultural resources were not identified in the project area. However, as previously discussed, two historical resources are located within the project site: P-07000436, the Faria Ranch Headquarters Site; and P-07-000437, the Antone Faria House. Under Section 15064.5 of the CEQA Guidelines, a resource is considered "historically significant" if the resource meets one or more of the California Register of Historic Resources criteria outlined in the Regulatory Context section above. A resource must be considered historically significant and possess "integrity" in order to qualify for listing in the NRHP and CRHR.

For NRHP and CRHR eligibility under CRHR Criterion 1 (NRHP Criterion A), both the Faria Ranch Headquarters Site and the Antone Faria House must be associated with one or more event or historic theme of importance. Both are related to local agriculture; however, mere association is not sufficient for eligibility. Although the Faria Ranch Headquarters Site is associated with a sequence of occupants and uses, none of the uses appear to be associated with the historic context in an important way. Although both sites housed local farming families, none of the families would be considered important in local history.

Under CRHR Criterion 2 (NRHP Criterion B), eligibility for the CRHR or NRHP would apply only to cultural resources associated with individuals whose specific contributions to history can be identified and documented as significant in our past. The importance of the individual and the length and nature of his or her association with the sites and with other sites must be determined. None of the aforementioned associations could be established for either historical resource site.

Under CRHR Criterion 3 (NRHP Criterion C), the sites could be eligible for the CRHR or NRHP if they illustrate important concepts in design and planning, if the landscape reflects an important historical trend, is distinguished in design or layout, and is the result of skilled craftsmanship. Both sites have been modified in some way and do not illustrate any of the aforementioned qualities.

To be eligible under CRHR Criterion 4 (NRHP Criterion D), the sites must have yielded or have the potential to yield important information. Previous archaeological inspections of the on-site historical resource sites and the inspection made by the project archaeologist did not locate any such information. As such, neither site is likely to be eligible for the NRHP or CRHR under Criterion 4 (NRHP Criterion D).

In addition, neither site possesses integrity in regards to the authenticity of a property's historic identity. While the Faria Ranch Headquarters Site retains the integrity of location, the oldest and most important structure, the 1908 house, was demolished along with several other structures. Similarly, while the Antone Faria House also retains the integrity of location, the oldest and most important structure, the 1923 house, was demolished along with the barn/shed. In the absence of any previous recommendations of the potential eligibility of either site as a historic property and based on the criteria for inclusion in the CRHR or NRHP, William Self Associates, Inc. has determined that neither the Faria Ranch Headquarters Site nor the Antone Faria House are eligible for the CRHR or NRHP on the basis of a lack of integrity.

For the aforementioned reasons, the two identified on-site historic resources are not eligible for the CRHR or NRHP, nor do the sites qualify as "unique archaeological resources" in the professional opinion of the archaeological consultant for the proposed project.<sup>4</sup> Because the on-site resources are not considered significant historic resources per Section 15064.5, the proposed project would have a *less-than-significant* impact related to damaging or destroying such a historic cultural resource.

Mitigation Measures(s)

*None required.*

- 4.5-2 Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 1564.5, directly or indirectly destroy a unique paleontological resource or unique geologic features, or disturb any human remains, including those interred outside of formal cemeteries. Based on the analysis below, previously undiscovered resources could be unearthed and potentially damaged or destroyed during construction of the site, but with implementation of mitigation, the impact would be *less than significant*.**

According to Figure 4.10-2 of the Pittsburg General Plan EIR, Native American archeological and historic archeological sensitive areas are located in the southern hills, south of the existing city limits and within the project area.<sup>5</sup> While development is not proposed, future development proposals would be subject to all applicable policies contained in the Resource Conservation Element of the General Plan; such policies have been specifically included in the General Plan for the preservation of historical and cultural resources.

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<sup>4</sup> William Self Associates, Inc. *Cultural Resource Assessment Report for Faria/Southwest Hills Annexation Project Pittsburg, Contra Costa County, California*. [pg. 15]. September 2017.

<sup>5</sup> City of Pittsburg. *City of Pittsburg General Plan DEIR*. [pg. 4-96]. January 2001.



The entire project site has been subject to field surveys performed in 1994, 2004, 2006, and by the project archaeologist, Ric Windmiller, in 2014. Prehistoric archaeological resources were not identified during the cultural resources assessment. Known human cemeteries or burials are not located within the project site and have not been detected through subsurface excavation or field surveys.

The *Cultural Resource Assessment Report* included a CHRIS records search, consultation with the NAHC, consultation with identified local Native American tribes, and a field survey of the entire project area. None of the methods conducted by William Self Associates, Inc. identified any archeological resources on the project site. William Self Associates, Inc. further determined that Sacred Land listings do not exist on site or on the adjacent lands. However, given the known occupation of the area by Native American tribes over the course of time, the possibility for unknown archaeological resources, including human remains, to be unearthed during construction of the project site cannot be excluded.

In addition, excavation and grading of the project site may expose evidence of prehistoric or historic sites. Indicators of prehistoric site activity include shell fragments, charcoal, obsidian or chert flakes, grinding bowls, bone, and pockets of dark, friable soils. Historic resources include glass, metal, ceramics, wood and similar debris. Should any previously undiscovered historic or prehistoric resources be found during construction, work should stop, in accordance with CEQA regulations, until such time that the resource would be evaluated by a qualified archaeologist and appropriate mitigative action could be taken.

Because previously undiscovered resources could be unearthed and potentially damaged or destroyed during construction of the site, impacts to archaeological resources, unique paleontological resources, unique geologic features, and human remains could be *significant*.

#### Mitigation Measures(s)

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

- 4.5-2(a) *In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during earth-moving activities, all work within 100 feet of the resource shall be halted, and the applicant shall consult with a qualified archeologist. Representatives of the City and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation.*

4.5-2(b) *If a human bone or bone of unknown origin is found during earth-moving activities, all work shall stop within 100 feet of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.*

4.5-2(c) *If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives.*

*If a Native American archeological, ethnographic, or a spiritual resource is discovered, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and are Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.*

*In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.*

4.5-2(d) *The applicant shall retain the services of a professional paleontologist/archaeologist to educate the construction crew that will be conducting grading and excavation at the project site. The education shall consist of an introduction to the geology of the project site and the kinds of fossils, archeological, and/or Native American resources that may be encountered, as well as what to do in case of a discovery.*

*Should any paleontological resources be unearthed by the construction crew, such as vertebrate fossils (e.g., teeth, bones), an unusually large or dense accumulation of intact invertebrates, or well-preserved plant material (e.g., leaves), then ground-disturbing activity shall be diverted to another part of the project site and the paleontologist shall be called on-site to assess the find and, if significant, recover the find in a timely matter. Finds determined significant by the paleontologist shall then be conserved and deposited with a recognized repository, such as the University of California Museum of Paleontology. The alternative mitigation would be to*

*leave the significant finds in place, determine the extent of significant deposit, and avoid further disturbance of the significant deposit. Proof of the construction crew awareness training shall be submitted to the City's Community Development Department in the form of a copy of training materials and the completed training attendance roster.*

**4.5-3      Directly or indirectly disturb or destroy a unique tribal cultural resource, such as a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American tribe. Based on the analysis below, construction within the proposed project area could result in a substantial adverse change in the significance of a tribal cultural resource if previously unknown tribal cultural resources are uncovered during grading or other ground-disturbing activities, but with implementation of mitigation, the impact would be *less than significant*.**

As previously discussed, the proposed project site does not contain any known resources listed or eligible for listing in the CRHR or NRHP, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). In compliance with AB 52, SB 18, and Section 106, a notification letter was distributed to the Amah Mutsun Tribal Band of Mission San Juan Bautista, the Indian Canyon Mutsun Band of Costanoan, the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, the Ohlone Indian Tribe, the Wilton Rancheria, and the North Valley Yokuts Tribe. The letters were distributed by the City on April 28, 2017. The City did not receive any responses to the letters during the mandatory 30-day response period for consultation under AB 52; however, while conducting follow-up phone calls, William Self Associates, Inc. received one response from Michelle Zimmer of the Amah Musin Tribal Band of Mission San Juan Bautista requesting construction crews be given archaeology sensitivity training and provide Native and archaeological monitors, as needed. As such, Mitigation Measure 4.5-2(d) is included in this EIR to ensure the project applicant retains the services of a professional paleontologist/archeologist to educate construction crews.

In addition, given similar environmental factors of the proposed project site to known Native American resource sites within Contra Costa County, a moderate potential exists for unrecorded Native American resources to be discovered within the project area. Thus, the possibility exists that construction within the proposed project area could result in a substantial adverse change in the significance of a tribal cultural resource if previously unknown tribal cultural resources are uncovered during grading or other ground-disturbing activities. Consequently, a *significant* impact to tribal cultural resources could occur.

Mitigation Measures(s)

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

**4.5-3      *Implement Mitigation Measures 4.5-2(a) through 4.5-2(d).***

## Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

While some cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface archeological find at one project site are generally not made worse by impacts from another project to a cultural resource at another site. Rather, the resources and the effects upon them are generally independent. A possible exception to this would be a cultural resource that represents the last known example of its kind or is part of larger cultural resources, such as a single building along an intact historic Main Street. For such a resource, cumulative impacts, and the contribution of the proposed project to them, may be cumulatively significant.

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

### **4.5-4 Cause a cumulative loss of cultural and tribal resources. Based on the analysis below, the cumulative impact would be *less than significant*.**

As defined in Section 15355 of the State CEQA Guidelines, “cumulative impacts” refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects (CEQA Guidelines 15355). Accordingly, an assessment of cumulative impacts should consider impacts identified as significant, as well as impacts identified as less-than-significant for individual projects that may become significant in a collective sense when considering the co-occurrence of multiple projects.

Prehistoric, historic, and Native American cultural resources are unique and non-renewable resources. Development activities continue to damage and destroy such sites and features, in many cases, before the information inherent in the site could be reviewed, recorded, and interpreted. As noted above in Impacts 4.5-2 and 4.5-3, the potential exists for unknown subsurface archaeological, paleontological, and Native American cultural resources to be unearthed during site excavation. Accordingly, the

proposed project could damage or destroy cultural or tribal resources particular to the project area. However, mitigation measures have been included in this EIR to ensure any potential impacts to cultural or tribal resources would be reduced to less-than-significant levels.

The possibility exists that future development within the City and other regional development could adversely affect cultural and tribal resources. Though the implementation of cumulative projects could collectively impact cultural or tribal resources in the geographic area, the proposed project's incremental impact when added to other past, present, and reasonably foreseeable future actions would be relatively minor, because the proposed project would not impact any known eligible resources. In addition, similar to the proposed project, all other projects in the City would be subject to the same regulations and standards required to ensure a less-than-significant impact to cultural and tribal resources.

Therefore, the project's contribution to a combined effect on cultural resources would be considered *less than significant*.

Mitigation Measures(s)

*None required.*



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## 4.6 GEOLOGY, SOILS, AND SEISMICITY

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## 4.6

## GEOLOGY, SOILS, AND SEISMICITY

### 4.6.1 INTRODUCTION

The Geology, Soils, and Seismicity chapter of the EIR describes the geologic and soil characteristics of the project site and evaluates the extent to which implementation of the proposed project could be affected by the following geologic and seismic hazards: fault-related ground surface rupture; strong seismic ground shaking; seismic-related ground failure, including liquefaction; lateral spreading, landslides; soil erosion; soil stability (creep); and expansive soils. Information sources for this evaluation include the *Pittsburg General Plan 2020*<sup>1</sup> and associated EIR,<sup>2</sup> the Natural Resources Conservation Service (NRCS) *Soil Survey for Contra Costa County* (Soil Survey),<sup>3</sup> and the *Preliminary Geologic Hazard and Geotechnical Report* prepared for the proposed project by ENGEO Inc. (see Appendix H).<sup>4</sup>

### 4.6.2 EXISTING ENVIRONMENTAL SETTING

The following background setting information focuses on the existing characteristics of the project site and surrounding area including the geology of the project site, the site's soil conditions, and the seismicity of the region.

#### Project Site Characteristics

The proposed project site is generally undeveloped and comprised of approximately 606 acres. According to the Pittsburg General Plan and General Plan EIR, the project site is located within the Hillside Zone of the City's Planning area, which is predominantly hillside, consisting of steep slopes, rocky terrain, weak adversely dipping bedrock, and large-scale landslide deposits. The site elevation ranges from approximately 435 feet to 1,000 feet above mean sea level (msl). The natural gradients of the existing slopes range from 2 to 75 percent, with much of the site experiencing slopes in excess of 30 percent. The site is covered with seasonal grasses, shrub vegetation, and very few trees. In the recent past, the project site has been used for open grazing, with several residential and farming buildings currently existing on-site. Numerous existing dirt trail roads extend throughout the undeveloped portions of the site.

<sup>1</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

<sup>2</sup> City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January 2001.

<sup>3</sup> U.S. Department of Agriculture, Soil Conservation Service. *Soil Survey of Contra Costa County, California*. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed April 4, 2014.

<sup>4</sup> ENGEO, Inc. *Preliminary Geologic Hazard and Geotechnical Report*. May 20, 2013.

## Project Site Geology

The project site is situated regionally within the eastern part of the Coast Ranges geomorphic province, which is characterized by complex folding and faulting that has resulted in a series of northwest-trending mountain ranges and intervening valleys. Active faulting found in the Coast Ranges has developed in response to the relative motion between the North American and Pacific Tectonic Plates. Along the plate boundary, currently defined as the San Andreas Fault System, the Pacific Plate is moving northwestward relative to the North American Plate at a rate of approximately one to three centimeters per year. Local faults such as the Concord and Greenville faults, which are located to the west and south of the project site, respectively, currently accommodate a portion of the motion within the crust adjacent to the plate boundary.

The project site is situated within the Los Medanos Hills, the geology of such has been strongly affected by the uplift of nearby Mt. Diablo. The bedrock units in the area consist of a sequence of sedimentary and minor volcanic rocks that have been tilted northward on the northern flank of the uplift. Tilted marine and terrestrial sedimentary and volcanic rocks that range in age from Paleocene and Pliocene form the hillside areas of the City.

According to the geotechnical report prepared by ENGEO Inc., the project site is made up of the following geologic units (see Figure 4.6-1, Project Site Geology):

- *Artificial Fill (Qaf)* – Existing artificial fill is present on the project site. The existing fills appear to be derived from on-site soils and bedrock materials. The depth of fill is not known but may range up to about ten feet in thickness.
- *Debris Flow (Df)* – One small area of debris flow was mapped on the project site, at the project's border with the non-participating property. Debris flows generally consist of materials associated with historic debris flow, which is a geologic phenomenon where water travels down a slope with gravity, carrying soil, fragmented rock, sand, and other materials, typically funneling into stream channels.
- *Colluvium (Qc)* – Quaternary colluvium has been mapped along the base of slopes and within hollows or ravines as a result of soil creep and transportation by erosion. Colluvial deposits are typically compressible and weak. The deposits consist of dark grayish brown and mottled reddish brown and dark grayish brown sand with clay.
- *Residual Soil* – In the upland areas of the site, bedrock is capped with a relatively thin layer of residual soil, which develops essentially in-place from weathering of the underlying parent material. The residual soils consisted of dark brown to brown sandy clay. The residual soil cover ranges from about 2 to 5 feet thick over bedrock. Residual soils have moderate to high plasticity and these materials are considered moderately to highly expansive. Residual soils at the study area appear to consist predominately of dark brown to dark gray, silty or sandy clay.
- *Alluvium (Qal)* – Quaternary alluvium consists of relatively young sediments that are deposited by flowing water such as rivers or streams. Alluvium (Qal) has been mapped in the more prominent drainage courses on site. The alluvium at the project site consists of silty clay, sandy clay and clayey sand. These units varied from soft or loose to stiff and medium dense.

- *Landslide* – Two types of quaternary landslides were mapped in various areas of the project site: shallow (Qls) and deep (Qlsa). Several deep-seated bedrock block slides and shallow surficial slides were identified on the project site. Figure 4.6-1 shows the direction of flow for each of the landslide areas. The extent of landsliding in the area has not been determined.
- *San Pablo Group (Tsp)* – The Miocene San Pablo Formation was encountered in the northeastern area of the San Marco Meadows portion of the project site. The San Pablo Group consists of fine to medium grained, marine sandstone with local fossil beds and tuffaceous lenses.
- *Markley Formation (Tkm)* – The Eocene Markley Formation is the predominant bedrock unit encountered on the project site. The Markley Formation has been uplifted and tilted, and the beds generally dip northward at an approximate inclination ranging from 20 to 40 degrees. Rock types of the Markley Formation consists predominantly of sandstone and siltstone beds with a distinctive component of mica; minor interbedded claystone and shale are present within the sandstone.

### On-Site Soils

According to the National Resources Conservation Service (NRCS) Soil Survey, the project site is blanketed by the following soils: Altamont-Fontana complex, 30 to 50 percent slopes; Altamont-Fontana complex, 50 to 75 percent slopes; Altamont clay, 15 to 30 percent slopes; Capay clay, two to nine percent slopes; and Lodo-rock outcrop complex. See Figure 4.6-2, On-Site Soil Map and Classification, for the approximate locations of the aforementioned soils and soil classifications. The predominant soil complexes on the project site area are described below.

#### *Altamont-Fontana complex, 30 to 50 percent slopes (AcF)*

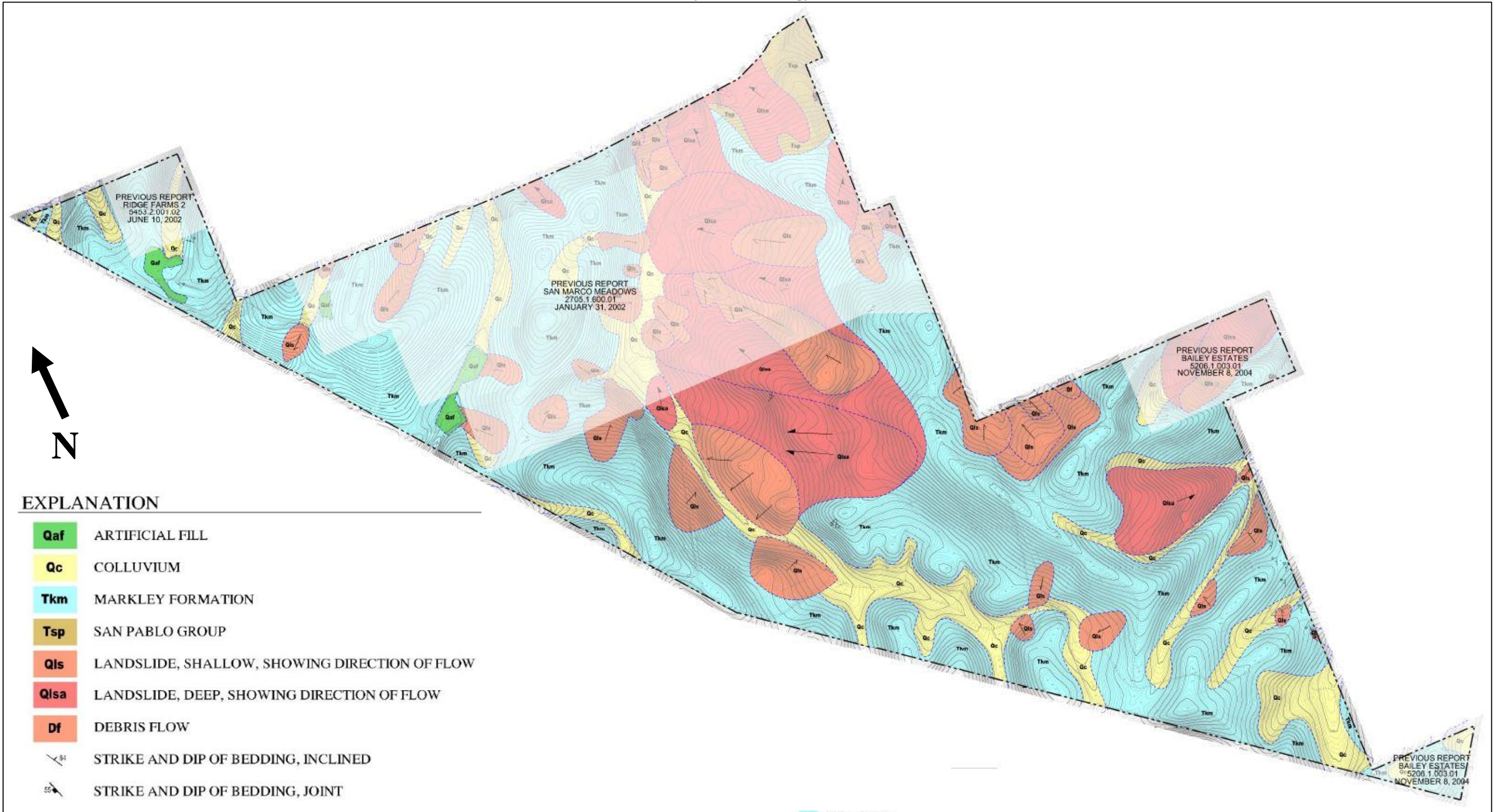
The Altamont-Fontana complex is on foothills in the eastern uplands of Contra Costa County. The complex consists of about 50 percent Altamont clay and 35 percent Fontana silty clay loam. The remaining 15 percent is Millsholm loam, Lodo clay loam, Capay clay, and Rincon clay loam. Altamont soils are on the lower part of the slopes and on north-facing slopes. Fontana soils are on ridge crests and on south-facing slopes. Millsholm and Lodo soils are less than 20 inches deep to sandstone and shale. Capay and Rincon soils are in small drainage ways and on toe slopes. Where the soils are bare, runoff is medium to rapid and the hazard of erosion is moderate to high. The soils in the Altamont-Fontana complex are used mainly for range; a few areas are used for dryland small grain.

#### *Altamont-Fontana complex, 50 to 75 percent slopes (AcG)*

The Altamont-Fontana complex is on foothills in the eastern part of Contra Costa County. The complex consists of about 40 percent Altamont clay, 40 percent Fontana silty clay loam, and 15 percent Millsholm loam. The remaining five percent is Gaviota sandy loam and Briones loamy sand. Where the soils are bare, runoff is rapid and the hazard of erosion is high.



Figure 4.6-1  
Project Site Geology

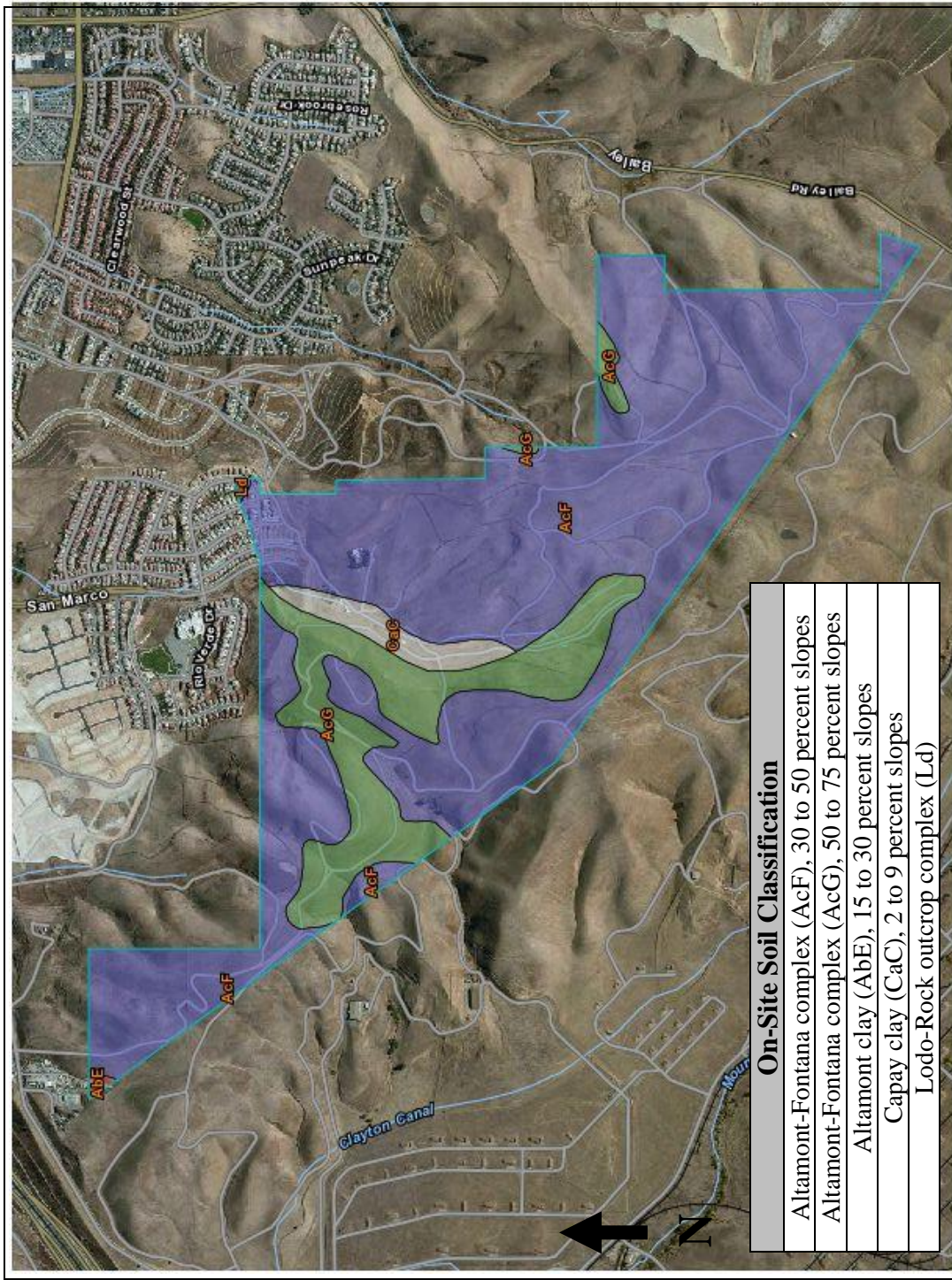


Source: ENGEO, Inc. Preliminary Geologic Hazard and Geotechnical Report. May 2013.





**Figure 4.6-2**  
**On-Site Soil Map and Classification**



Source: NRCS. Soil Survey of Contra Costa County. Accessed April 4, 2014.





The Altamont-Fontana soils make up approximately 90 percent of the project site. The remaining soil complexes identified on the site include the following: Altamont clay, 15 to 30 percent slopes; Capay clay, two to nine percent slopes; and Lodo-Rock outcrop complex. These remaining soils make up only a small portion of the project site and are located in either currently developed areas, associated with the two existing residences near San Marco Boulevard, or areas that would be preserved as open space.

### Soil Stability

The following presents a discussion of on-site soil stability, including compressible and expansive soils, as applicable to the site.

#### *Compressible Soil*

Colluvium, residual soil, and soft alluvial deposits are compressible, and, thus, susceptible to excessive, total, and differential settlement. As discussed above, and shown in Figure 4.6-1, colluvium, residual soil, and soft alluvial deposits are scattered throughout the site, including within areas identified for future development within the Draft Master Plan.

#### *Expansive Soils*

Expansive soils shrink and swell as a result of moisture changes. The shrinking and swelling could cause heaving and cracking of slabs-on-grade, pavements, and structures. Actual sampling and testing of the site soils to determine their expansion potential should occur during design-level studies.

#### *Existing Undocumented Fills*

Undocumented fills are susceptible to excessive total and differential settlement. If existing fills are encountered the risk of settlement can be reduced if these are completely removed and replaced with engineered fill. If undocumented fills do not contain debris or deleterious materials, it may be acceptable to leave a portion of the existing fills in place; however, for those areas not deemed suitable, the fill should be removed to expose native soils and replaced as engineered fill free of deleterious debris and organics. Subsurface exploration should be performed during design level studies to further characterize the site and define extent and depth of existing undocumented fills.

### Landslides and Slope Stability

A landslide is the downslope movement of soil and/or rock. Landslides can range in speed from very rapid to an imperceptible slow creep. Landslides can be caused by ground shaking from an earthquake or water from rainfall, septic systems, landscaping, or other origins that infiltrate slopes with unstable material. The likelihood of a landslide depends on an area's geologic formations, topography, ground shaking potential, and influences of man. Improper or excessive grading can increase the probability of a landslide. Land alterations such as excavation, filling, removing of vegetative cover, and introducing the concentration of water from drainage, irrigation or septic systems may contribute to the instability of a slope and increase the likelihood of a landslide.

Undercutting support at the base of a slope, or adding too much weight to the slope, can also produce a landslide.

Significant landslides in the project area have occurred as recently as June of 2007. The 2007 landslide occurred along the north-facing slopes to the southwest of the Hanauma Bay Drive area of the Vista Del Mar development. A portion of the affected slope is within the Draft Master Plan Area. Investigation of the landslide has shown that the landslide was a result of grading activity on the slope.<sup>5</sup>

According to the ENGEO, Inc. preliminary geotechnical report, the risk of instability of the identified landslides at the project site is generally considered high. Figure 4.6-1 shows the areas likely to be underlain by potential landslides (both shallow and deep-seated bedrock slides). Such areas underlain by landslides are noted as Qls and Qlsa on Figure 4.6-1, and cover much of the area of the site identified for potential future development in the Draft Master Plan. Shallower, surficial landslides typically consist of rock fragments and soil, and may be approximately 10 to 20 feet deep throughout the hills within much of the project site. Affecting the central and southern portions of the site, deep-seated bedrock landslides typically consist of large rock masses or blocks that displaced along an irregular shear surface, and may be approximately 20 to 100 feet deep.

Colluvial soil deposits mapped along the low lying valleys of the project site may be subject to slope instability. Much of the colluvial soil deposit area, mapped as Qc in Figure 4.6-1 above, is within the area identified for potential future development in the Draft Master Plan. In addition according to Figure 10-1, Geologic Hazards, of the Pittsburg General Plan, the entire project site is designated as moderately unstable, generally unstable, and over 30 percent slope. According to Figure 4-2, Major and Minor Ridgelines, of the Pittsburg General Plan, the project site does not contain any minor or major ridgelines.

In addition to the above discussion regarding non-seismically related landsliding, seismically-induced landsliding is discussed in further depth within the Project Area Seismicity Section below.

### **Project Area Seismicity**

According to the preliminary geotechnical report prepared for the proposed project, active faults are not mapped within the proposed project site limits. The project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. However, several small local faults have been mapped within the bedrock units at the project site. The smaller, local faults and fault-related shears located on-site are not generally considered capable of generating earthquakes. An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (about the last 11,000 years). Numerous small earthquakes occur every year in the San Francisco Bay region, and larger earthquakes have been recorded and should be expected to occur in the future. The nearest active fault to the site is the Concord fault, located approximately 5 miles to the west. In addition, the Hayward fault is located approximately 17 miles to the west of the project site.

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<sup>5</sup> Kleinfelder. *Draft Engineering Geologic Investigation and Slope Stability Analyses Report, Southern Slope Landslide, Vista Del Mar Residential Subdivision, Pittsburg, California*. October 7, 2016.

The U.S. Geologic Survey (USGS) evaluated the Bay Area seismicity through a study by the Working Group on California Earthquake Probabilities (WGCEP). WGCEP estimated that a 31 percent probability exists for a moment magnitude of 6.7 or greater earthquake to occur on the Hayward fault within 30 years of the publish date (2007 to 2037). Likewise, WGCEP estimated a 63 percent probability of a similarly sized earthquake in the San Francisco Bay Area, as a whole, in the same timeframe.

### Seismic Hazards

Potential seismic hazards resulting from a nearby moderate to major earthquake could generally be classified as primary and secondary. The primary effect is fault-related ground surface rupture, also called surface faulting. The common secondary seismic hazards include ground shaking and ground lurching. The following sections present a discussion of the aforementioned hazards as they apply to the project site. Based on topographic and lithologic data, the risk of regional subsidence or uplift, soil liquefaction, or lateral spreading is considered low to negligible at the site.

#### *Fault-Related Ground Surface Rupture*

As noted above, several small, local faults have been mapped within the bedrock units at the project site. However, because active faults are not known to cross the project site and the site is not located within an Earthquake Fault Special Study Zone, ground rupture is unlikely to occur at the site.

#### *Ground Shaking*

Several factors affect the intensity of ground shaking that would result from an earthquake in the Bay Area, including the magnitude of the earthquake, the distance from the earthquake epicenter, and the response of geological materials. As discussed above, the nearest active faults to the site are the Concord fault, located approximately 5 miles to the west of the project site, and the Hayward fault located approximately 17 miles to the west of the project site. The project site is not located within an Alquist-Priolo Earthquake Fault Zone and surface evidence of faulting was not observed on-site by ENGEO Inc. during site reconnaissance. However, an earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the project site.

#### *Ground Lurching*

Ground lurching is a result of the rolling motion imparted to the ground surface during energy released by an earthquake. Such rolling motion has the potential to cause ground cracks to form in weaker soils. The potential for the formation of ground cracks is considered greater at contacts between deep alluvium and bedrock. According to the preliminary geotechnical report, ground cracking is possible at the project site as in other locations in the Bay Area region; however, based on the site location, the offset of the land surface resulting from the potential ground cracking is expected to be minimal.

### *Liquefaction*

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. Based on the USGS Liquefaction Susceptibility Map, the site is mapped within an area classified as having a “low” susceptibility to liquefaction. It should be noted that the liquefaction susceptibility mapping is based on regional geologic mapping of soil and rock deposits and is not based on site-specific exploration or analyses.

### Lateral Spreading

Lateral spreading is a failure within a nearly horizontal soil zone (possibly due to liquefaction) that causes the overlying soil mass to move toward a free face or down a gentle slope. According to the geotechnical report, lateral spreading at the site is unlikely because the site soils are not considered to be susceptible to liquefaction.

### *Seismically-Induced Landsliding*

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of a landslide hazard is greatest in the late winter when groundwater levels are highest and hillside colluvium is saturated. According to the preliminary geotechnical report, the risk of seismically-induced landsliding is present at the project site to varying degrees depending on the slope conditions and time of year.

## **4.6.3 REGULATORY CONTEXT**

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The following section includes a brief summary of the regulatory context under which soils and geologic hazards are managed at the federal, State, and local levels.

### **Federal Regulations**

The following federal environmental regulations are relevant to the CEQA review process pertaining to geology, soils, and seismicity.

#### Federal Earthquake Hazards Reduction Act

Passed by Congress in 1977, the Federal Earthquake Hazards Reduction Act is intended to reduce the risks to life and property from future earthquakes. The Act established the National Earthquake Hazards Reduction Program (NEHRP). The goals of NEHRP are to educate and improve the knowledge base for predicting seismic hazards, improve land use practices and building codes, and to reduce earthquake hazards through improved design and construction techniques.

#### Uniform Building Code

The Uniform Building Code (UBC) was first published in 1927 by the International Council of Building Officials and is intended to promote public safety and provide standardized requirements

for safe construction. The UBC was replaced in 2000 by the new International Building Code (IBC), published by the International Code Council (ICC), which is a merger of the International Council of Building Officials' UBC, Building Officials and Code Administrators International's National Building Code, and the Southern Building Code Congress International's Standard Building Code. The intention of the IBC is to provide more consistent standards for safe construction and eliminate any differences between the three preceding codes. All State building standard codes are based on the IBC.

## **State Regulations**

The following State environmental regulations are relevant to the CEQA review process pertaining to geology, soils, and seismicity.

### Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (AP Zone Act) was passed in 1972 to prevent the new development of buildings and structures for human occupancy on the surface of active faults. The AP Zone Act is directed at the hazards of surface fault rupture and does not address other forms of earthquake hazards. The locations of active faults are established into fault zones by the AP Zone Act. Local agencies regulate any new developments within the appropriate zones in their jurisdiction.

The AP Zone Act regulates development near active faults so as to mitigate the hazard of surface fault rupture. The AP Zone Act requires that the State Geologist (Chief of the California Department of Mines and Geology [CDMG]) delineate "special study zones" along known active faults in California. Cities and counties affected by these zones must regulate certain development projects within these zones. The AP Zone Act prohibits the development of structures for human occupancy across the traces of active faults. According to the AP Zone Act, active faults have experienced surface displacement during the last 11,000 years. Potentially active faults are those that show evidence of surface displacement during the last 1.6 million years. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity sometimes is difficult to obtain and locally may not exist.

### Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Section 1690-2699.6) addresses non-surface rupture earthquake hazards, including liquefaction, earthquake-induced landslides, and subsidence. A mapping program is also established by this Act, which identifies areas within California that have the potential to be affected by such non-surface rupture hazards. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

## California Building Code

The State of California regulates development within the State through a variety of tools that reduce or mitigate potential hazards from earthquakes or other geologic hazards. The 2016 California Building Code (CBC) California Code of Regulations (CCR), Title 24 governs the design and construction of all building occupancies and associated facilities and equipment throughout California.<sup>6</sup> In addition, the CBC governs development in potentially seismically active areas and contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The California building standards include building standards in the IBC, building standards adapted from the IBC to meet California conditions, and building standards adopted to address particular California concerns. In particular, chapter 16 of the CBC includes structural design regulations related to soil lateral loads as well as earthquake loads, and chapter 18 includes provisions related to soils and foundations.

## **Local Regulations**

The following section includes local environmental goals and policies relevant to the CEQA review process pertaining to geology, soils, and seismicity.

### City of Pittsburg General Plan

The Pittsburg General Plan establishes the following goals and policies applicable to geology, soils, and seismicity.

Policy 4-P-11	Limit Grading of hillside areas over 30 percent slope (see Figure 10-1 [of the General Plan]) to elevations less than 900 feet, foothills, knolls, and ridges not classified as major or minor ridgelines (see Figure 4-2 [of the General Plan]). During review of development plans, ensure that necessary grading respects significant natural features and visually blends with adjacent properties
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Goal 10-G-1 Minimize risk to life and property from geologic and seismic hazards.

Goal 10-G-2 Establish procedures and standards for geotechnical review of projects located in areas of steep slopes, unstable soils, or other geologic or seismic risks.

Goal 10-G-3 Minimize the potential for soil erosion by wind and stormwater runoff.

Goal 10-G-4 Mitigate potential seismic hazards, including landsliding and liquefaction, during the design and construction of new development.

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<sup>6</sup> California Building Standards Commission. *California Building Standards Code (Title 24, California Code of Regulations)*. Effective July 1, 2014.

- Goal 10-G-5 Limit urban development in high-risk areas (such as landslide areas, flood zones, and areas subject to liquefaction) to low-occupancy or open forms of land use.
- Goal 10-G-6 Limit development on slopes greater than 30 percent (as delineated on Figure 10-1 [of the General Plan]) to lower elevations, foothills, and knolls.
- Policy 10-P-1 Ensure preparation of a soils report by a City-approved engineer or geologist in areas identified as having geological hazards in Figure 10-1, as part of development review.
- Policy 10-P-2 Restrict future development from occurring on slopes greater than 30 percent (as designated in Figure 10-1 [of the General Plan]) over the 900 foot elevation contour, and on major and minor ridgelines (as delineated in Figure 4-2 [of the General Plan]).
- Policy 10-P-3 Regulate the grading and development of hillside areas for new urban land uses. Ensure that such new uses are constructed to reduce erosion and landsliding hazards:
- Limit cut slopes to 3H:1V (Horizontal to Vertical), except where a Certified Engineering Geologist can establish that a steeper slope would perform satisfactorily over the long term.
  - Encourage use of retaining walls or rock-filled crib walls as an alternative to high cut slopes.
  - Ensure re-vegetation of cut-and-fill slopes to control erosion.
  - Ensure blending of cut-and-fill slopes within existing contours, and provision of horizontal variation, in order to mitigate the artificial appearance of engineered slopes.
- Policy 10-P-5 Ensure that Bay Area Air Quality Management District requirements are implemented around construction sites to reduce wind velocity and soil transport at the sites.
- Policy 10-P-6 Encourage the use of water-sprinkling trucks at large construction sites to keep the exposed soil moist during construction.
- Policy 10-P-7 As part of the development approval process, restrict grading to only those areas going into immediate construction as opposed

to grading the entire site, unless necessary for slope repair or creek bed restoration. On large tracts of land, avoid having large areas bare and unprotected; units of workable size shall be graded one at a time.

- Policy 10-P-8      During development review, ensure that new development on unstable slopes (as designated in Figure 10-1 [of the General Plan]) is designed to avoid potential soil creep and debris flow hazards. Avoid concentrating runoff within swales and gullies, particularly where cut-and-fill has occurred.
- Policy 10-P-9      Ensure design-level geotechnical studies are conducted prior to development approval in geologic hazard areas, as shown in Figure 10-1 [of the General Plan]. Contract comprehensive geologic and engineering studies of critical structures regardless of location.
- Policy 10-P-10     As part of development approval, ensure that a Certified Engineering Geologist be available at the discretion of the City Engineer to review reports submitted by applicants in the geologic hazard areas identified in Figure 10-1 [of the General Plan]. Project proponents shall pay all costs associated with engineering studies related to geologic hazards.
- Policy 10-P-11     Form geological hazard abatement districts (GHADs) prior to development approval in unstable hillside areas (as designated in Figure 10-1 [of the General Plan]) to ensure that geotechnical mitigation measures are maintained over the long-term, and that financial risks are equitably shared among owners and not borne by the City.
- Policy 10-P-15     Develop standards for adequate setbacks from potentially active fault traces (as designated in Figure 10-2 [of the General Plan]) for structures intended for human occupancy. Allow roads to be built over potentially active faults only where alternatives are impractical.
- Policy 10-P-16     Ensure compliance with the current Uniform Building Code during development review. Explore programs that would build incentives to retrofit unreinforced masonry buildings.

Unreinforced masonry buildings are particularly vulnerable to earthquakes. Possible programs to encourage retrofit could include transfer taxes on property sales, which can be used by the owner to pay for seismic retrofit work; reduced permit fees; and grants or low-interest loans to offset retrofit costs. However,



special consideration should be given to masonry buildings that are in the City's historic core. The City's Building Division should work with building owners to maintain and reserve such structures.

Policy 10-P-17    Ensure detailed analysis and mitigation of seismic hazard risk for new development in unstable slope or potential liquefaction areas (as designated in Figure 10-1 [of the General Plan]). Limit the location of critical facilities, such as hospitals, schools, and police stations, in such areas.

### City of Pittsburg Municipal Code

The Pittsburg Municipal Code includes the following applicable section.<sup>7</sup>

#### *Chapter 15.08, Building Code, Section 15.08.010: Adoption*

Pursuant to Sections 50022.1 through 50022.10, inclusive, of the Government Code, the City Council adopts and enacts as the building code of the City, the 2010 California Building Code, California Code of Regulations, Title 24, Part 2, Volumes 1 and 2, and Appendix (based on the 2009 International Building Code published by the International Code Council).

#### *Chapter 15.88, Grading Erosion and Sediment Control*

The City adopted Chapter 15.88 to protect natural resources and the public health through minimizing the adverse effects of grading, cut and fill operations, water runoff and soil erosion. Section 15.88 includes permitting requirements and grading regulations designed to prevent soil erosion, and the creation of hazards due to unstable slopes and improper grading. Grading permits sought under Chapter 15.88 are subject to prior review and written approval by the City Engineer.

## **4.6.4    IMPACTS AND MITIGATION MEASURES**

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The section below describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to geology, soils, and seismicity. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

### **Standards of Significance**

Consistent with Appendix G of CEQA Guidelines, an impact is considered significant if the proposed project would result in any of the following:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

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<sup>7</sup> City of Pittsburg. *City of Pittsburg Municipal Code, Chapter 15.08, Building Code*. October 21, 2013.

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault (Initial Study Question VI.a.i.);
- Strong seismic ground shaking (Initial Study Question VI.a.ii.);
- Seismic-related ground failure, including liquefaction (Initial Study Question VI.a.iii.);
- Landslides (Initial Study Question VI.a.iv.);
- Result in substantial soil erosion or the loss of topsoil (Initial Study Question VI.b.);
- 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 (Initial Study Question VI.c.); or
- Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (Initial Study Question VI.d.).

#### Issues Not Discussed Further

It should be noted that as presented in the Introduction to Analysis chapter of this EIR, the Initial Study prepared for the proposed project (see Appendix C) determined that development of the proposed project would result in no impact related to having 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 (Initial Study Question VI.e.). Accordingly, impacts related to such are not further addressed within this chapter.

#### **Method of Analysis**

Analysis of the proposed project's impacts related to geology, soils, and seismicity is based on a review of the Pittsburg General Plan and associated EIR, and the *Preliminary Geologic Hazard and Geotechnical Report* prepared for the proposed project. Other documents reviewed include, but were not limited to, the NRCS Soil Survey.

The preliminary geotechnical report prepared by ENGEO Inc. is comprised of a number of analytical tasks, including site reconnaissance and preliminary mapping, review of aerial photographs, review of available reports in the area, review of USGS regional liquefaction maps, historical aerial photographs, and geotechnical analyses. Information from the geotechnical report utilized previous reports prepared by ENGEO Inc. for the project area and neighboring sites, including the San Marco Meadows development, the Bailey Estates development, and the Ridge Farms development. The ENGEO report is a geologic feasibility and preliminary geotechnical study and not a design-level geological/geotechnical engineering study. This preliminary study did not include subsurface exploration or detailed characterization of large-scale landslides. In the following discussion, it is assumed that a design-level engineering geologic/geotechnical report will be prepared for the site as a mitigation measure. Since the development is still at the EIR stage of planning, the design-level geotechnical engineering study and grading plans shall be submitted for peer review and to the written satisfaction of the City Engineer prior to approval of subsequent applications.

The proposed project's components are compared to the existing conditions of the project site, and the Standards of Significance identified above to determine the severity of potential impacts.

Addressed at a program level throughout the technical chapters of this EIR, the proposed project is generally consistent with the existing City of Pittsburg General Plan policies. However, the project would not be consistent with existing City of Pittsburg General Plan policies related to restricting future development and/or grading from occurring on slopes greater than 30 percent. Therefore, the project would require approval of a General Plan Amendment (GPA) to amend goals and policies relevant to grading on slopes greater than 30 percent.. It should be noted that the proposed GPA would not substantially alter the type and intensity of development permitted within the project site. Rather, the GPA redefines the areas of open space and development. Should the Pittsburg City Council approve the requested annexation and GPA included in the proposed project, the proposed development would be consistent with the all applicable goals and policies.

### Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

**4.6-1 The project site is subject to seismic risks including fault rupture, strong ground shaking, and liquefaction that could adversely affect future development. Based on the analysis below, site-specific liquefaction potential is currently unknown and could occur within areas underlain by alluvial soils the project site. Based on the analysis below, with implementation of mitigation, the impact would be *less than significant*.**

Future development of Draft Master Plan areas designated for residential uses would require grading for single-family structures and related improvements within the approximately 606-acre project site. As discussed previously, active faults are not located at the project site. Several small, local faults have been mapped within the bedrock units at the project site; however, such faults are not considered seismogenic sources capable of generating their own earthquakes.<sup>8</sup> The nearest active fault is the Concord fault located approximately 5 miles west of the site. The potential hazards specific to the project site are discussed in further detail below.

#### Fault-Related Ground Surface Rupture

Active faults are not known to cross the property and the site is not located within an Earthquake Fault Special Study Zone. While small, local faults do cross the bedrock underlying the project site, the local faults are not anticipated to have the potential to cause ground rupture. The assertion that the existing local faults are not anticipated to have the potential to cause ground rupture is supported by the absence of observed surface evidence of faulting. Therefore, fault-related ground surface rupture is unlikely at the subject property, and fault-related ground surface rupture represents a less-than-significant impact on the proposed project

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<sup>8</sup> ENGEO, Inc. *Preliminary Geologic Hazard and Geotechnical Report*. May 20, 2013.

### Ground Shaking and Ground Lurching

The project site is not located within an Alquist-Priolo Earthquake Fault Zone and surface evidence of faulting has not been observed on-site. However, an earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the project site. Considering the setting of the project site, seismic ground shaking would not be anticipated to result in impacts related to ground lurching.<sup>9</sup>

Future design of all proposed structures would be required to adhere to the provisions of the 2016 CBC. Compliance with the 2016 CBC would ensure that all future structures are designed and built in accordance with adopted seismic construction standards. Conformance to the CBC requirements would ensure that structural damage due to an earthquake would be less than significant.

### Liquefaction

As discussed previously, the project site is within an area generally classified as having a “low” susceptibility to liquefaction. However, liquefaction susceptibility mapping is based on regional geologic mapping of soil and rock deposits and is not based on site-specific exploration or analyses. Consequently, the site-specific likelihood of liquefaction is not currently known. In order to ensure that the project site would not be susceptible to liquefaction, a site-specific, design-level study, including subsurface exploration of on-site soils would be required.

Lateral spreading is a failure within a nearly horizontal soil zone related to liquefaction, which causes the overlying soil mass to move toward a free face or down a gentle slope. Therefore, lateral spreading would only be anticipated to occur in areas where liquefaction is likely.

Although the project site is located in an area generally considered not susceptible to liquefaction, a site-specific survey would be required to determine the likelihood of liquefaction, and lateral spreading, within the project site. As such, soil borings and/or cone penetration test soundings would be required in order to evaluate the on-site potential for liquefaction and lateral spreading. If liquefaction or lateral spreading risks are identified, the study shall also identify engineering techniques to reduce the risks in future development. This impact is potentially significant.

### Conclusion

As mentioned above, the CBC contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The proposed project would be required to comply with the CBC. Compliance with the CBC would help to ensure that all future structures are designed and built sufficient to minimize the potential effects of an earthquake. Future development within the Draft Master Plan area would further be

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<sup>9</sup> ENGEO, Inc. *Preliminary Geologic Hazard and Geotechnical Report*. May 20, 2013.

required to comply with Draft Master Plan Section 3.C, including the policies discussed above related to proper grading and GHADs.

Hazards from seismic ground shaking would be reduced by compliance with the CBC. If liquefaction or lateral spreading risks are identified, the design-level study will also identify engineering techniques to reduce the risks in future development. There are widely accepted engineering measures that could be implemented to mitigate liquefaction and lateral spreading hazard if they are determined to be present on the project site. Adherence to these recommendations for development under the CBC, refined and updated where necessary based on final site designs and the design-level geotechnical report, would help to minimize the impacts of earthquakes or other geologic hazards. Therefore, with mitigation, these impacts would be *less than significant*.

Mitigation Measure(s)

Implementation of the following mitigation measure would provide the necessary information to characterize the seismic risks on the project site. A design-level geotechnical report will identify mitigation measures to reduce potential seismic hazards. All recommendations shall be incorporated into grading and building designs and included on all grading and building plans, and all future development would be required to comply with the recommendations of the design-level report. If mitigation measures are implemented, then the impact would be *less than significant*.

*4.6-1 As part of any future development application, the project applicant shall undertake a design-level geotechnical report that will include a subsurface exploration of soil borings and/or cone penetration tests within the development areas and laboratory soil testing to provide data for preparation of specific recommendations regarding grading, foundations, and drainage for the proposed construction. A California Registered Civil Engineer or Geotechnical Engineer shall produce a design-level geotechnical engineering report subject to prior review and written approval by the City Engineer. The report shall address the following:*

- 1. The magnitude of remedial grading needed for the site;*
- 2. Construction of high cut slopes and relatively deep fills;*
- 3. The existence of adverse bedrock bedding;*
- 4. The potential presence of artificial, undocumented fills;*
- 5. The potential presence of compressible alluvial soils;*
- 6. The liquefaction potential within alluvial-filled valley areas;*
- 7. The anticipated effects of local groundshaking on the proposed development; and*
- 8. Identification of the extent of liquefaction and lateral spreading in the potential development area.*

*Furthermore, the design-level geotechnical engineering report shall include project design measures and engineering techniques to avoid risks to people and structures from identified liquefaction and lateral spreading;*

*address structures, structural foundations, and grading practices consistent with the CBC and any applicable City building and grading standards; and address both construction and operation of the project, as applicable. Design measures and engineering techniques may include, at a minimum, the following:*

- *Recommendations for strengthened foundations to resist excessive differential settlement associated with seismically-induced liquefaction;*
- *Removal and replacement of potentially liquefiable soils; and/or*
- *Densify potentially liquefiable soils with an in-situ ground improvement technique.*

*The Design Level Geotechnical Report shall identify the portions of the project site that cannot be graded and developed to meet CBC standards. Development shall not be allowed within those areas. The report shall be completed by a consultant selected and hired by the City of Pittsburg. The developer shall be responsible for the full cost of the report. Prior to the issuance of any Grading Permit and approval of a Tentative Map, the City Engineer shall review the Design Level Geotechnical Report and determine that the proposed grading conforms to the CBC.*

*Prior to issuance of building permits, the City shall site-inspect to ensure that construction is in accordance with the approved plans and incorporates all required design measures and engineering techniques, and that such measures perform as identified in the design-level geotechnical engineering report and conforms to the standards of the CBC.*

**4.6-2 Implementation of the project could result in substantial erosion or loss of topsoil. Based on the analysis below, erosion and the loss of topsoil could occur during construction and operation of the proposed project, but with implementation of mitigation, the impact is *less than significant*.**

According to the Pittsburg General Plan EIR, erosion potential of the soils within the Hillside Zone is moderate to high due to the sloping topography and the nature of the soils. The proposed project area is in the Hillside Zone and is comprised of hills, valleys, and swales. Until more detailed development plans are submitted in the next stage of application review, this Draft EIR assumes that all of the areas pre-zoned for residential development would be graded and developed to some degree. As part of future site preparation, topsoil would be exposed due to grading of the site.

Once development is complete, buildings, structures, landscaping and improvements would reduce the amount of exposed soils. Developed areas would be required to comply with Chapter 13.28, Stormwater Management and Discharge Control, of the City's Municipal Code. Chapter 13.28 includes specific requirements regarding the control of

stormwater discharge, which would include measures to reduce erosion and discharge of eroded material. Furthermore, Chapter 15.88, Grading, Erosion and Sediment Control, of the City's Municipal Code, places further requirements on the control of erosion, which would help prevent the loss of topsoil during construction and operation of developments within the Draft Master Plan area. Draft Master Plan Policy C.3. generally limits potential future grading in areas with slopes in excess of 30 percent. Areas with slopes exceeding 30 percent would be anticipated to have a high potential to experience erosion during grading; thus, limiting such grading activity would be likely to limit erosion from such areas. Where grading does occur, Draft Master Plan Policy C.5. requires that graded areas be replanted, which would reduce erosion post grading.

Notwithstanding the foregoing City and Draft Master Plan policies, soils would be exposed during potential future development of the Draft Master Plan area and could be subject to wind and water erosion that could inadvertently transport eroded soils to downstream drainage facilities. Furthermore, after development of the Draft Master Plan area, erosion could continue in developed areas if proper design measures are not implemented. Therefore, the proposed project would result in a *significant* impact related to erosion and the loss of topsoil.

Mitigation Measure(s)

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

4.6-2      *As part of any future development application, the project applicant shall submit an erosion control plan subject to prior review and written approval by the City Engineer to limit the erosion effects during construction of the proposed project. Measures shall be identified to limit and control the amount of erosion, and the transport of soils or sediment off of the construction site. Measures could include, but are not limited to:*

- *Hydro-seeding exposed soils;*
- *Placement of erosion control measures within drainageways and ahead of drop inlets;*
- *The temporary lining (during construction activities) of drop inlets with "filter fabric" (a specific type of geotextile fabric);*
- *The placement of straw wattles along slope contours and back-of-curb prior to installation of landscaping;*
- *Directing subcontractors to a single designation "wash-out" location (as opposed to allowing them to wash-out in any location they desire);*
- *The use of siltation fences; and*
- *The use of sediment basins and dust palliatives.*

**4.6-3 Implementation of the project could result in risks to people and structures associated with compressible soil, undocumented fill, expansive soils, and/or corrosive soil. Based on the analysis below, with implementation of mitigation, the impact would be less than significant.**

The proposed project would require site grading and development of single-family structures on the portions of the approximately 606-acre project site designated for residential development, some of which would occur in hillside areas. Future construction and development on the project site has the potential to be affected by compressible soil, undocumented fill, soil corrosivity, and expansive soil. The preliminary geotechnical report determined that the project site consists of moderately to highly expansive soil and a variety of soil types ranging from fine grain sands to clay. The potential compressible soil, undocumented fill, soil corrosivity, and expansive soil on the project site are discussed in further detail below.

Compressible Soil

Colluvium, residual soil, and soft alluvial deposits are scattered throughout the site; these deposits could be compressible, and, thus, susceptible to excessive, total, and differential settlement. This is a potentially significant impact.

Undocumented Fill

Undocumented fill is soil of varying origin, for which the compaction records are not available, and, thus, the quality of the fill is unknown. Such undocumented fill can be susceptible to total and differential settlement. If existing undocumented fill is encountered at the project site, the risk of settlement could be reduced if the fill is completely removed and replaced with engineered fill. If any undocumented fill found on the site does not contain debris, compressible material, or organic material, a portion of the existing fill could be left in place; otherwise, fill should be removed to expose native soil and replaced with engineered fill free of deleterious debris and organics. This is a potentially significant impact.

Soil Corrosivity

Some soil is corrosive to concrete and steel and, thus, could affect the potential building materials and the locations of buildings or structures. Existing soil and bedrock material on-site have not been characterized for corrosivity characteristics; therefore, the corrosivity of on-site soil is currently unknown. This is a potentially significant impact.

Expansive Soil

Expansive soil shrinks and swells as a result of moisture changes. The shrinking and swelling could cause heaving and cracking of slabs-on-grade, pavements, and structures. Building damage due to volume changes associated with expansive soil could typically be reduced by techniques including but not limited to deepening the foundations to below the



zone of moisture fluctuation with deep foundations, or by using mat foundations that are designed to resist the deflections associated with the expansive soil. This is a potentially significant impact.

### Conclusion

According to the preliminary geotechnical report, in order to reduce settlement resulting from on-site compressible soil or existing undocumented fill, and avoid potential impacts related to soil corrosivity or expansion, specific engineering techniques would be required. In order to ensure that the project would not involve any risks to people or structures associated with compressible or expansive soils, further design-level sampling and testing of the soils would be required. If any of these hazards are determined to be present on the project site, well-accepted engineering techniques are available to mitigate the hazard. Adherence to these recommendations for development, refined and updated where necessary based on final site designs and the design-level geotechnical report, would help to minimize the impacts of soil corrosivity or expansion. Therefore, with mitigation, the impact would be *less than significant*.

### Mitigation Measure(s)

Implementation of the following mitigation measure would provide the necessary information to characterize the potential for compressible soil, undocumented fill, corrosive soil, and expansive soil on the project site. The design-level geotechnical report will identify any compressible soil, undocumented fill, corrosive soil, and/or expansive soil present on the project site and will identify the proper mitigation for these hazards, as necessary. If compressible soil, undocumented fill, corrosive soil, and expansive soil are determined to be present on the project site, well-accepted engineering techniques are available to mitigate the hazard. All recommendations shall be incorporated into grading and building designs and included on all grading and building plans, and all future development would be required to comply with the recommendations of the report. If mitigation measures are implemented, then the impact would be *less than significant*.

4.6-3      *The design-level geotechnical engineering report required by Mitigation Measure 4.6-1 shall address the potential for compressible soil, undocumented fill, corrosive soil, and expansive soil on the project site and shall identify engineering techniques to reduce any identified impacts to less than significance. The techniques shall include but not be limited to the following:*

- *Undocumented fill - the over-excavation of a minimum of three feet of soil to remove existing non-engineered fill in order to place engineered fill;*
- *Corrosive soil – If on-site soil is found to be corrosive to concrete, preventative measures such as protective treatment of concrete surfaces or the use of corrosion resistant materials shall be included in site design; and*

- *Expansive soil – The use of post-tensioned concrete mat foundations or similarly stiffened foundations systems which are designed to resist the deflections associated with soil expansion.*

*The Design Level Geotechnical Report shall identify the portions of the project site that cannot be graded and developed to meet CBC standards. Development shall not be allowed within those areas. The report shall be completed by a consultant selected and hired by the City of Pittsburg. The developer shall be responsible for the full cost of the report. Prior to the issuance of any Grading Permit and approval of a Tentative Map, the City Engineer shall review the Design Level Geotechnical Report and determine that the proposed grading conforms to the CBC.*

*Prior to issuance of building permits, the City shall site-inspect to ensure that construction is in accordance with the approved plans and incorporates all required design measures and engineering techniques, and that such measures perform as identified in the design-level geotechnical engineering report to address compressible soil, undocumented fill, corrosive soil, and expansive soil impacts and conforms to the CBC.*

**4.6-4 Implementation of the project could result in risks to people and structures associated with landslides. Based on the analysis below, with implementation of mitigation, the impact would be less than significant.**

A large area of the project site, much of which is designated by the Draft Master Plan for potential future development, has experienced documented landsliding in the past, as shown in Figure 4.6-1, and is considered to have a high landslide potential depending on steepness of the slopes and underlying formations. Colluvial soil deposits mapped along the side slopes of the project site may also be subject to slope instability. As such, areas mapped as having colluvial soil deposits are considered at high risk of landslide.<sup>10</sup> In addition to the landslide and colluvial areas shown in Figure 4.6-1, in June of 2007 a landslide occurred along the north-facing slope of a hill south of the Vista Del Mar subdivision. A portion of the hill affected by the 2007 landslide is within the project site boundaries.

Within the project site, the Draft Master Plan designates portions of the hill that experienced landsliding in 2007 as developed area and area to be disturbed during grading; as such, development would potentially occur over some of the previous landslide area within the project site. The area affected by the 2007 landslide is considered seismically unstable and future development in the area affected by the 2007 landslide or other areas of the project site where seismically-induced landsliding could occur would experience a high risk due to seismically-induced landsliding.

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<sup>10</sup> ENGEO, Inc. *Preliminary Geologic Hazard and Geotechnical Report*. May 20, 2013.

In addition to portions of the project site affected by the 2007 landslide, other areas of the project site have experienced landslides in the past and/or are considered unstable or otherwise prone to future landslides as shown in Figure 4.6-1. Thus, development of the proposed project would expose future development to possible damage from landslides. Although landslides related to slope instability and seismic activity could pose a potential hazard, slope instability can be mitigated by proper investigation, characterization, grading techniques, including but not limited to maximum slope gradients, structure setback, slope rebuilding, and construction of debris benches between rear property lines and open space slopes. Section 15.88 of the City's Municipal Code requires that proper grading techniques be applied to reduce landslide and slope instability within areas of the City with steep slopes, including those areas with slopes exceeding 30 percent. Additional landslide and slope stability mitigation would be provided through Section C, Grading Design, of the Draft Master Plan, which includes several measures to protect slope stability, thus reducing landslide potential. For instance, Draft Master Plan Policy C.2. requires that new developments take measures to avoid soil creep and debris flows through proper drainage in areas of cut-and-fill. Furthermore, Policy C.1. requires that GHADs be used in hillside areas of the project site that have been identified as being unstable in General Plan Figure 10-1 to ensure proper geotechnical mitigation measures be maintained. Policy C.4. of the Draft Master Plan limits engineered slopes to a maximum slope of 30 percent, unless a Geotechnical Engineer or Certified Engineering Geologist can establish that a steeper slope can be engineered to provide ongoing slope stability protection. Further recommendations regarding increasing slope stability and reducing landslide potential are provided in the geotechnical report prepared for the proposed project.<sup>11</sup>

Additional information is needed to determine the way in which the proposed project would comply with the above policies. With corrective grading and the application of the policies within Section C of the Draft Master Plan, the risks associated with seismically-induced landsliding affecting the proposed project are unclear at this time, pending further investigation and review. The design-level geotechnical report required by Mitigation Measure 4.6-4(a) shall include measures to reduce the risk from landslides and verify compliance with the aforementioned General Plan policies.

Corrective grading to allow for development within the area affected by the 2007 landslide is not considered feasible.<sup>12</sup> Therefore, without an established GHAD for the area affected by the 2007 landslide, development within the 2007 landslide area would expose future development to significant hazards related to slope instability or seismically-induced landsliding.

In order to minimize potential hazards from landslides and slope instability in other areas of the site, many factors should be considered in the project design, including the size and type of landsliding, development layout, and risk to development.<sup>13</sup> Well-accepted

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<sup>11</sup> ENGEO, Inc. *Preliminary Geologic Hazard and Geotechnical Report*. May 20, 2013.

<sup>12</sup> Kleinfelder. *Draft Engineering Geologic Investigation and Slope Stability Analyses Report, Southern Slope Landslide, Vista Del Mar Residential Subdivision, Pittsburg, California*. October 7, 2016.

<sup>13</sup> Kleinfelder. *Preliminary Geotechnical Technical Peer Review for the Planned Faria Residential Development in Pittsburg, California*. January 24, 2017.

engineering techniques are available to mitigate the hazards associated with landslides and slope instability. Potential engineering techniques to address landslides and slope instability include structure setbacks, construction of a toe buttress fill and debris bench of sufficient width to act as a run-out or catchment area for potential upslope debris. Adherence to these recommendations for development, refined and updated where necessary based on final site designs and the design-level geotechnical report, would help to minimize the impacts of landslides and slope stability. Without the use of proper grading techniques, and considering the recent history of landsliding on the project site, impacts related to landslides would be considered significant. However, if mitigation measures are implemented properly, then the impact would be *less than significant*.

Mitigation Measure(s)

Implementation of the following mitigation measures would ensure that further investigation of the potential for landslides to occur on-site is conducted prior to implementation of the proposed project and would provide the necessary information to characterize the potential for landslides and slope instability on the project site. The design-level geotechnical report will identify any potential for landslides and slope instability present on the project site and will identify the proper mitigation for these hazards, as necessary. If potential landslides are determined to be present on the project site, well-accepted engineering techniques are available to mitigate the hazard. All recommendations shall be incorporated into grading and building designs and included on all grading and building plans, and all future development of the proposed project would be required to comply with the findings and recommendations of design-level geotechnical investigations. If potential landslides are determined to be present on the project site, well-accepted engineering techniques are available to mitigate the hazard. If mitigation measures are implemented properly, then the impact would be *less than significant*.

4.6-4(a) *The design-level geotechnical engineering report required by Mitigation Measure 4.6-1 shall address the existing landslides and the potential for landslides to occur throughout the project site. In addition, the design-level geotechnical engineering report shall include and address the following:*

- 1. Characterization and remediation of existing large-scale landslides;*
- 2. Description of the proximity of the project site and development areas to existing graded parcels;*
- 3. Settlement and deflection of deep fills; and*
- 4. Potential erosion of high cut slopes and fill slopes.*

*Furthermore, the design-level geotechnical engineering report shall include design measures to reduce the risks from landslides, which may include, but are not limited to, the following techniques:*

- Graded cut and fill slopes over 15 feet in vertical height should be no steeper than 3H:1V (Horizontal:Vertical). Cut and fill slopes up*

*to 15 feet in vertical height may be constructed at slope gradients no steeper than 2H:1V;*

- Graded cut and fill slopes exceeding 30 feet in height may be provided with intermediate benches on the slope surface spaced no greater than 30 feet vertically. Benches should be at least at 8 feet wide with a concrete-lined J or V-ditch to intercept surface runoff;*
- Mass grading should begin with construction of toe keys and subdrains. All fills should be adequately keyed into firm natural materials unaffected by shrinkage cracks. Recommended keyway sizes and locations will be determined by the Geotechnical Engineer and will be approximately shown in the final remedial grading plans. Additionally, where fills are placed along slopes, subexcavated benches should be planned above toe keys as filling progresses. The Geotechnical Engineer will determine the actual size of the keyways during plan review and supplemental recommendations provided during grading. Toe keyways should also be used along where debris benches are recommended in design-level geotechnical studies; and*
- A Geotechnical Engineer shall prepare all grading and slope stability plans.*

*The Design Level Geotechnical Report shall identify the portions of the project site that cannot be graded and developed to meet CBC standards. Development shall not be allowed within those areas. The report shall be completed by a consultant selected and hired by the City of Pittsburgh. The developer shall be responsible for the full cost of the report. Prior to the issuance of any Grading Permit and approval of a Tentative Map, the City Engineer shall review the Design Level Geotechnical Report and determine that the proposed grading conforms to the CBC.*

*Prior to issuance of building permits, the City shall site-inspect to ensure that construction is in accordance with the approved plans and incorporates all required design measures and engineering techniques, and that such measures perform as identified in the design-level geotechnical engineering report to address landsliding and slope stability impacts and compliance with the CBC.*

**4.6-4(b)**

*The project applicant shall establish a GHAD encompassing the area within a 1,000-foot radius of the area affected by the 2007 landslide south of Vista Del Mar. Establishment of the GHAD shall ensure that potential future development or grading activity conducted within the vicinity includes proper mitigation techniques to ensure long-term stability of the area and reduce potential impacts related to slope instability. Specific grading techniques to ensure slope stability may include, but are not limited to the techniques outlined in Mitigation Measure 4.6-4(a) of this EIR.*

## Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

While some geologic features may affect regional construction practices, such as seismicity or soil elasticity, impacts and mitigation measures are site-specific and project-specific. For example, impacts resulting from development on expansive soils or undocumented fill at one project site are not worsened by impacts from development on expansive soils or undocumented fill at another project site. Rather, the soil conditions, and the implications of those conditions for each project, are independent.

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

### **4.6-5 Cumulative increase in the potential for geological related impacts and hazards. Based on the analysis below, the proposed project has the potential to cause impacts related to slope instability and landslides, but with implementation of mitigation, the impact is *less than significant*.**

The proposed project includes the annexation and zoning of the approximately 606-acre project site into the City of Pittsburg. Future development of the proposed project would require substantial ground disturbance. Site preparation would also result in temporary and permanent topographic changes that could affect erosion rates or patterns. However, potentially adverse environmental effects associated with geologic or soils constraints, topographic alteration, and erosion, are usually site-specific and generally would not combine with similar effects that could occur with other projects in Pittsburg. The exception to this generalization would occur where a large geologic feature (e.g., fault zone, massive landslide) might affect an extensive area, or where development effects from the project would affect the geology or an off-site location. The aforementioned circumstances would not occur as a result of the proposed project, with the exception of potential landslides.

As previously discussed, not only have slopes along the project boundary been mapped as having colluvial soil deposits considered to be a high risk for slope instability and landslides, but a portion of the project site was previously affected by a landslide in June of 2007. Such conditions could pose as a potential hazard to the geology of the surrounding areas. However, the EIR includes Mitigation Measures 4.6-1(a) and 4.6-1(b) that require the use of proper grading techniques to address slope instability and landslides in order to

ensure that hazards related to landslides and slope instability are reduced to a less-than-significant level.

It should be noted that all future development projects within the City would be required to undergo their own site-specific environmental review, comply with the CBC, the City of Pittsburg General Plan policies, and all other applicable regulations. Nonetheless, because the proposed project has the potential to cause impacts related to slope instability and landslides without proper grading techniques, the project's incremental contribution to cumulative impacts related to geology and soils could be considered *significant*.

Mitigation Measure(s)

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

4.6-5            *Implement Mitigation Measures 4.6-1(a), 4.6-3, 4.6-4(a), and 4.6-4(b).*





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## 4.7 HAZARDS AND HAZARDOUS MATERIALS

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## 4.7

## HAZARDS AND HAZARDOUS MATERIALS

### 4.7.1 INTRODUCTION

The Hazards and Hazardous Materials chapter of the EIR describes existing and potentially occurring hazards and hazardous materials within the proposed project site and the potential impacts posed by such hazards to the environment, workers, visitors, and residents within and adjacent to the project site. The Hazards and Hazardous Materials chapter is primarily based on information drawn from the *Phase I Environmental Site Assessment* (ESA) prepared for the project site by ENGEO Inc. (see Appendix I),<sup>1</sup> as well as the Pittsburg General Plan<sup>2</sup> and associated EIR.<sup>3</sup>

### 4.7.2 EXISTING ENVIRONMENTAL SETTING

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if the material appears on a list of hazardous materials prepared by a federal, State, or local regulatory agency or if the material has characteristics defined as hazardous by such an agency.

The California Department of Toxic Substances Control (DTSC) defines hazardous waste, as found in the California Health and Safety Code, Section 25141(b), as follows:

[...] its quantity, concentration, or physical, chemical, or infectious characteristics:  
(1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating 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.

#### Regional Setting

According to the City of Pittsburg General Plan EIR, Contra Costa County is one of the largest generators of hazardous waste in the State; the majority of which comes from industries located along the Bay waterfronts. Approximately two-thirds of hazardous waste generated in the County is treated on-site, while one-third is transported to hazardous waste management facilities.

<sup>1</sup> ENGEO, Inc. *Phase I Environmental Site Assessment*. March 14, 2014.

<sup>2</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

<sup>3</sup> City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January, 2001.

Many of the industrial operations in the City of Pittsburg involve the use or production of hazardous materials, most significantly the petroleum and chemical processing plants in the northeastern portion of the City. Potential hazards associated with the processing plants include the toxicity, flammability, and explosivity of petroleum and chemical materials. The proposed Faria/Southwest Hills Annexation Project is located just southwest of the municipal boundary of the City of Pittsburg, within the Southwest Hills planning subarea of the Pittsburg General Plan, over three miles from the majority of the intensive industrial operation sites in the City.

### **Project Site Conditions**

ENGEO Inc. performed a records review of previous environmental assessments, historical aerial photographs, USGS topographic quadrangle maps, regulatory agencies files and records, reasonably ascertainable city directories, and a search for Sanborn Fire Insurance Maps (SFIMs), which were utilized to assess the history of the project site. In addition, a site reconnaissance was performed on February 21, 2014 to identify any storage, use, production, or disposal of hazardous materials, as well as superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential sources of soil or groundwater contamination.

The project site comprises approximately 606 acres of predominately vacant land and is located west of Bailey Road and south of State Route 4 (SR 4), in Pittsburg, California. The project site is generally undeveloped and comprised of rounded hills, valleys and swales. The project site historically has been operated as a cattle ranch, with the majority of the site used for grazing. During the site reconnaissance, two residences, two pole-mounted electrical transformers, a barn, various storage sheds, and other out-structures were observed on-site. Two above-ground storage tanks (ASTs) containing petroleum products, three water supply wells, one piezometer, and two septic systems were also observed within the project site. According to the Phase I ESA and based on the review of the historical aerial photographs, one of the existing on-site residences was constructed in the early 1980s, while the other on-site residence, sheds, and barn structures appear to have been built prior to 1952.

According to the Phase I ESA, the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) on-line database identified eleven former natural gas wells on the project site. However, the wells were plugged and abandoned between 1959 and 1996. A Report of Well Abandonment (Form 159) was filed for each well in accordance with DOGGR regulations. The Concord Naval Weapons Station (CNWS) is located southwest of the project site. According to the California State Water Resources Control Board (SWRCB) GeoTracker website, seven military underground storage tank (UST) sites have been identified within the CNWS site. However, the cleanup status of all seven of the UST sites are identified as “*Completed – Case Closed.*”

#### **4.7.3 REGULATORY CONTEXT**

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Many agencies regulate hazardous substances. The following discussion contains a summary of regulatory controls pertaining to hazardous substances, including federal, State, and local laws and ordinances.

## **Federal Regulations**

Federal agencies that regulate hazardous materials include the U.S. Environmental Protection Agency (USEPA), the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health (NIH). The following federal laws and guidelines govern hazardous materials:

- Federal Water Pollution Control Act;
- Clean Air Act;
- Occupational Safety and Health Act;
- Federal Insecticide, Fungicide, and Rodenticide Act;
- Comprehensive Environmental Response, Compensation, and Liability Act;
- Guidelines for Carcinogens and Biohazards;
- Superfund Amendments and Reauthorization Act Title III;
- Resource Conservation and Recovery Act;
- Safe Drinking Water Act; and
- Toxic Substances Control Act.

Prior to August 1992, the principal agency at the federal level regulating the generation, transport and disposal of hazardous waste was the USEPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California DTSC was authorized to implement the State's hazardous waste management program for the USEPA. The USEPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

## **State Regulations**

The California Environmental Protection Agency (Cal-EPA) and the California SWRCB establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State laws include the following:

- Public Safety/Fire Regulations/Building Codes;
- Hazardous Waste Control Law;
- Hazardous Substances Information and Training Act;
- Air Toxics Hot Spots and Emissions Inventory Law;
- Underground Storage of Hazardous Substances Act; and
- Porter-Cologne Water Quality Control Act.

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL). The SWRCB delegates enforcement to regional water quality control boards and the project site is located within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.

## **Local Regulations**

### City of Pittsburg General Plan

The following goals and policies regarding hazards and hazardous materials are included in the Health and Safety Element of the Pittsburg General Plan.

Goal 10-G-9 Minimize the risk to life and property from the generation, storage, and transportation of hazardous materials and waste by complying with all applicable State regulations.

Goal 10-G-10 Encourage redevelopment of areas with potential hazardous materials issues. Pursue a leadership role in the remediation of brownfield sites throughout Pittsburg.

Policy 10-P-31 Cooperate with other public agencies in the formation of a hazardous materials team, consisting of specially-trained personnel from all East County public safety agencies, to address the reduction, safe transport, and clean-up of hazardous materials.

Contra Costa Water District is supportive of the formation of a hazardous materials team, particularly as it relates to the Contra Costa Canal system and Suisun Bay/Sacramento River Delta water quality.

Policy 10-P-32 Designate and map brownfield sites to educate future landowners about contamination from previous uses. Work directly with landowners in the clean-up of brownfield sites, particularly in areas with redevelopment potential.

Policy 10-P-33 Prevent the spread of hazardous leaks and spills from industrial facilities to residential neighborhoods and community focal points, such as Downtown.

Policy 10-P-34 Identify appropriate regional and local routes for transport of hazardous materials and wastes. Ensure that fire, police, and other emergency personnel are easily accessible for response to spill incidences on such routes.

Goal 10-G-11 Ensure emergency response equipment and personnel training are adequate to follow the procedures contained within the Emergency Response Plan for a major earthquake, wildland fire, or hazardous substance event.

Goal 11-G-8 Require development in areas of high fire hazard to be designed and constructed to minimize potential losses and maximize the ability of fire personnel to suppress fire incidents.

Policy 11-P-25 Review and amend ordinances that regulate development in potentially hazardous locations to require adequate protection, such as fire-resistant roofing, building materials, and landscaping.

Using fire-resistant construction materials and landscaping will both slow the pace at which fire spreads and improve the likelihood that the structure will survive a fire incident.

Policy 11-P-29 Ensure adequate road widths in new development for fire response trucks, per the subdivision regulations.

#### **4.7.4 IMPACTS AND MITIGATION MEASURES**

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The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to hazards and hazardous materials. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

##### **Standards of Significance**

In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of this EIR, an impact is considered significant if the proposed project would:

- 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 (Initial Study Question VIII.b.);
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Initial Study Question VIII.c.);
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Initial Study Question VIII.g.); or
- Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (Initial Study Question VIII.h.).

##### **Issues Not Discussed Further**

It should be noted that, as presented in the Introduction to Analysis chapter of this EIR, the Initial Study prepared for the proposed project (see Appendix C) determined that development of the proposed project would result in either no impact or a less-than-significant impact related to the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Initial Study Question VIII.a.);

- 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 (Initial Study Question VIII.d.);
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area (Initial Study Question VIII.e.); and
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area (Initial Study Question VIII.f.).

Accordingly, impacts related to the above are not further analyzed or discussed in this EIR chapter.

### Method of Analysis

Site conditions and impacts analysis in this chapter are based on the Phase I ESA prepared for the project site. The objective of the Phase I ESA was to identify any recognized environmental conditions (RECs), including hazardous substances and petroleum products, in connection with the project site (including soils, surface waters, and groundwater). As part of the Phase I ESA, a site reconnaissance, which included visual observation of the site and surrounding properties, was conducted by ENGEO Inc. on February 21, 2014.

Historical information pertaining to the site was also reviewed to learn about permits granted or citations issued (including well and/or underground storage tank permits), prior uses of the site and properties immediately adjacent to the site, and local geologic and hydrogeologic data, as appropriate. Topographic maps, fire insurance maps, and reasonably obtainable historical aerial photos were reviewed to assess historical land uses on and near the site. In addition, an environmental site assessment questionnaire was completed by the project applicant regarding the project site and the non-confidential portions of reasonably obtainable and practically reviewable records retained by federal, State, and local agencies for properties in the project area were reviewed for potential environmental liability.

### Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

#### **4.7-1 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. Based on the analysis below, impacts could occur associated with asbestos-containing materials, lead-based paint, ASTs, on-site water wells, and on-site septic systems, but with the implementation of mitigation, the impact would be less than significant.**

According to the Phase I ESA prepared for the project site, two pole-mounted electrical transformers were identified on-site. Transformers could be considered a health concern if



they utilized Polychlorinated Biphenyls (PCBs). PCBs were used in electrical transformers because of their useful quality as being a fire retardant; however a number of adverse health effects are associated with PCBs. Transformers containing PCBs were manufactured between 1929 and 1977. Since the early 1980s, PG&E has initiated a policy of installing PCB-free equipment. During the reconnaissance of the project site conducted by ENGEO Inc., evidence of leaking or ground contamination was not observed at the two transformer locations. As a result, the project site is not expected to be affected by any PCBs associated with the transformers. However, the project site does contain structures constructed prior to 1952, making the presence of asbestos-containing materials and lead-based paint possible on the project site. In addition, during the reconnaissance of the project site conducted by ENGEO Inc., ASTs, water wells, and septic systems were found on-site. Although not considered RECs, the potential environmental concern associated with each of the aforementioned features is discussed in further detail below.

#### Asbestos-Containing Materials and Lead-Based Paint

Historically, asbestos was commonly used in heating and electrical insulation because of the material's resistance to fire and heat. However, later discoveries found that, when inhaled, the material caused serious illness. Asbestos is now well recognized as a health hazard and is highly regulated by both OSHA and USEPA. Breathing asbestos fibers often results in the loss of lung function and cancer of the lung that progresses to disability and potentially death in humans.<sup>4</sup> For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR 1926.1101) states that all thermal system insulation (boiler insulation, pipe lagging, and related materials) and surface materials must be designated as "presumed asbestos-containing material" unless proven otherwise through sampling in accordance with the standards of the Asbestos Hazard Emergency Response Act.

Lead is also a highly toxic material that may cause a range of serious illnesses, and in some cases death. Lead was most commonly used in paint. In 1978, the Consumer Product Safety Commission banned the use of lead as an additive to paint. Currently, the USEPA and the U.S. Department of Housing and Urban Development are proposing additional lead-based paint regulations. Lead-based paints could be present in structures built prior to 1970. Typically, exposure of construction workers to lead from older vintage paint could occur during renovation, maintenance, or demolition work.

The project site includes an on-site residence, a barn, and various storage sheds and other structures that were built prior to 1952, making the presence of asbestos-containing materials and lead-based paint on-site possible. Because implementation of the proposed project would include demolition of the existing on-site structures, exposure of workers to asbestos-containing materials or lead-based paint could occur.

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<sup>4</sup> Occupational Safety and Health Administration. *Safety and Health Topics – Asbestos*. Available at: <https://www.osha.gov/SLTC/asbestos/>. Accessed on: August 18, 2014.

### Above-Ground Storage Tanks

According to the Phase I ESA prepared for the project site, two ASTs are located on-site. The ASTs are currently used to store diesel and unleaded gasoline. At the time of the site reconnaissance, evidence of leakage or staining was not seen near the two on-site ASTs. However, in order to ensure that a significant hazard to the public or the environment through reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment associated with any of the on-site ASTs, further action would be required prior to development of the proposed project.

### On-Site Water Supply Wells

The Phase I ESA prepared for the project identified three water supply wells located within the project site. The proposed project would be supplied water by the Contra Costa Water District (CCWD) via new connections to the existing public water infrastructure in the vicinity of the project site. Accordingly, development of the proposed project would not require use of the existing wells, and the wells would need to be abandoned.

### On-Site Septic Systems

According to the Phase I ESA prepared for the project site, two septic systems and associated leach fields are located near the two existing residences on the project site. Septic systems have the potential to affect subsurface soils associated with the effluent from the systems and/or any potentially faulty septic tanks. The proposed project would include connection to the existing City sewer system via the existing system within the San Marco subdivision located to the north of the project site, and the existing sewer system located along Bailey Road southeast of the project site. As a result, development of the proposed project would not require use of the existing on-site septic systems, and the systems would need to be removed and abandoned.

### Conclusion

According to the Phase I ESA prepared for the project site, the two pole-mounted transformers located on-site did not show visible signs of PCB leakage; therefore, development of the project would not result in any impacts related to PCBs. However, based on the above analysis, implementation of the proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment associated with asbestos-containing materials, lead-based paint, ASTs, on-site water wells, and on-site septic systems. As a result, impacts could be considered *significant*.

### Mitigation Measure(s)

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

#### *Asbestos-Containing Materials*

- 4.7-1(a) *Prior to issuance of a demolition permit for any on-site structures, the project applicant shall provide a detailed assessment to the City Planning Department pertaining to the potential presence of asbestos-containing materials in existing on-site structures to be demolished. If asbestos-containing materials are not detected, further mitigation is not required. If asbestos-containing materials are detected, the applicant shall prepare and implement an asbestos abatement plan consistent with federal, State, and local standards, subject to review and approval by the Bay Area Air Quality Management District and the City Planning Department.*

#### *Lead-Based Paint*

- 4.7-1(b) *Prior to issuance of a demolition permit for any on-site structures, the project applicant shall provide a detailed assessment to the City Planning Department pertaining to the potential presence of lead-based paint in existing-on-site structures to be demolished. If lead-based paint is not detected, further mitigation is not required. If lead-based paint is found, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with federal, State, and local regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint in accordance with federal, State, and local regulations subject to review and approval by the Bay Area Air Quality Management District and the City Planning Department.*

#### *Above-Ground Storage Tanks*

- 4.7-1(c) *Prior to issuance of any grading permits, the applicant shall hire a qualified geotechnical engineer to remove and abandon the two on-site ASTs in accordance with federal, State, and local guidelines, pursuant to review and approval by the City Engineer and the Contra Costa Health Services Department. In addition, an evaluation of the area surrounding the storage tanks for unusual odors, visible discoloration, or other indications of soil contamination shall be conducted. If soils suspected of being contaminated are encountered, they shall be stockpiled on plastic sheeting. Stockpiled soils shall be sampled in accordance with the San Francisco Bay Regional Water Quality Control Board guidelines, and the findings forwarded to the San Francisco Bay Regional Water Quality Control Board for review. Further remediation, if necessary, and disposal of the soils shall be conducted in accordance with State and federal guidelines.*

#### *On-Site Water Supply Wells*

- 4.7-1(d) *Prior to initiation of any ground disturbing activities within 50 feet of a well on the project site, the applicant shall hire a licensed well contractor to obtain a well abandonment permit from the Contra Costa Health Services Department, and properly abandon the on-site wells in accordance with regional and local standards, pursuant to review and approval by the City Engineer and the Contra Costa Health Services Department.*

#### *On-Site Septic Systems*

- 4.7-1(e) *Prior to initiation of any ground disturbing activities within 50 feet of a septic tank on the project site, the applicant shall hire a qualified geotechnical engineer to obtain a septic system abandonment permit from the Contra Costa Health Services Department, and properly abandon the on-site septic systems, pursuant to review and approval by the City Engineer and the Contra Costa Health Services Department.*

- 4.7-2 Emit hazardous emissions or handle hazardous materials within one-quarter mile of a school. Based on the analysis below, the proposed project site could result in upset or accidental release of hazardous materials within one-quarter mile of an existing school, but with implementation of mitigation, the impact would be *less than significant*.**

The project site is located approximately one-quarter mile south of the nearest school, which is Delta View Elementary School. The proposed project has been analyzed with the potential buildout of 1,500 single-family residential units. Residential land uses are not typically associated with emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste. As such the Initial Study prepared for the proposed project (see Appendix C) determined that development of the proposed project would result in a less-than-significant impact related to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The project would, however, have the potential for upset or accidental release of hazardous materials associated with development of the proposed project, as discussed in Impact 4.7-1. Because the proposed project site is within one-quarter mile of an existing school, this impact could be considered *significant*.

#### Mitigation Measure(s)

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

- 4.7-2 *Implement Mitigation Measures 4.7-1(a-e).*

**4.7-3 Impair implementation of or physically interfere with an adopted emergency response or evacuation plan. Based on the analysis below, the impact would be *less than significant*.**

The City has recently prepared and adopted the 2017 Hazard Mitigation Plan, which assesses the natural, technological, and human-caused risks to Pittsburg in order to reduce the potential impact of the hazards by creating mitigation strategies. In addition, the City's 2014 Emergency Operations Plan explains how the City would respond to a major emergency or disaster. The project would not significantly alter the existing street system. Instead, the project would connect to the existing roadway network, and, thus, provide increased roadway connectivity within the City. Furthermore, the Draft Master Plan includes multiple design review requirements related to the provision of adequate circulation and site access. For example, Draft Master Plan Policy B.3 requires that fire and emergency access be maximized through the provision of through-roads and multiple connection points between neighborhoods. Provision of adequate emergency access would be further ensured through design checks performed by the East Contra Costa Fire Protection District. Because the project would not involve physical changes that would significantly alter the existing roadway network in a manner that would interfere with circulation, and would provide adequate access to future developments within the Draft Master Plan Area, the proposed project would not be anticipated to interfere with any emergency response or evacuation plan. As such, the project would not impair implementation of or physically interfere with any adopted emergency response or evacuation plan, and impacts would be considered *less than significant*.

Mitigation Measure(s)

*None required.*

**4.7-4 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Based on the analysis below, the proposed project could be susceptible to wildland and urban-interface fire hazards, but with the implementation of mitigation, the impact would be *less than significant*.**

The project site is located in the southwest hills of the City, just within the adopted Urban Limit Line and would be the southerly extent of the City upon annexation. The site also contains and is adjacent to designated open space. The Draft Master Plan Area and surrounding undeveloped land is predominantly open grassland, including the Concord Naval Weapons Base to the southwest of the Draft Master Plan Area. Given the existing grasslands and open space adjacent to the Draft Master Plan Area and the undeveloped nature of the Draft Master Plan Area, the California Department of Forestry and Fire Protection (CALFIRE) identifies the site as being in a moderate to high fire hazard severity zone.<sup>5</sup> Development areas within the Draft Master Plan would be bordered by wildlands to the north, northeast, and along the entire southern boundary of the Plan Area. Additionally,

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<sup>5</sup> California Department of Forestry and Fire Protection. *Contra Costa County Fire Hazard Severity Zones in SRA*. November 7, 2007.

open space would be interspersed throughout the development area, which would further intermix the proposed urban residential developments with wildlands.

Landscaping placed between open spaces and developed areas of the project site would have the potential to transfer wildland fires to the developed areas of the project site. However, landscaping within the proposed project would be required to adhere to City of Pittsburg Municipal Code Section 18.84.300, which advises that landscaping plantings be selected for fire resistance, where appropriate. Furthermore, Section 2(A)(4)(c) of the Draft Master Plan requires that fire resistant landscaping be maintained within 100 feet of structures that are exposed to wildlands, open spaces, or agricultural lands. Wildland fires in the immediate vicinity of the proposed project would be ground fires (i.e., grass fires versus large stand-replacing crown fires in heavily wooded areas). The maintenance of fire resistant landscaping adjacent to exposed structures would reduce the likelihood that fires would spread from wildlands to adjacent developed areas.

In addition, development of the proposed project would include the installation of fire suppression systems (e.g., fire hydrants, fire sprinklers, smoke detectors) and would be designed in accordance with the latest requirements of the California Fire Code. In accordance with State standards, the project would be required to maintain defensible space to provide a fire break that would prevent the spread of ground fires and protect on-site structures. The proposed project would also be subject to fire safety requirements of the Contra Costa County Fire Protection District, which would review all plans as part of the City's Building Permit review process. Fire sprinklers, vegetative buffer zones, and other fire-safe measures may be required as part of their review. Compliance with such would ensure that the potential hazards associated with wildland fires to the proposed buildings and structures would be reduced.

Nonetheless, because portions of the future development within the Draft Master Plan Area would be located adjacent to open spaces, the proposed development would be located in and create a wildland urban interface. Because, future development related to implementation of the Draft Master Plan could be susceptible to wildland and urban-interface fire hazards, this impact is *significant*.

Mitigation Measure(s)

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

- 4.7-4(a)      *Development of the proposed project shall include the installation of fire suppression systems (e.g., fire hydrants, fire sprinklers, smoke detectors) and be designed in accordance with the latest requirements of the California Fire Code. All project development plans shall be subject to review by the Contra Costa County Fire Protection District as part of the future discretionary development applications and Building Permit review processes to ensure the provisions of the California Fire Code are included in the plans. Fire-resistant roof construction, fire-resistant attachments,*

*vegetative buffer zones, and other fire-safe measures may be required as part of their review.*

4.7-4(b) *The Master Plan shall include the following language under Section 2(A)(4):*

- e) *Defensible space in accordance with the guidelines of the California Fire Protection Standards shall be maintained in all portions of the Master Plan Area adjacent to open space areas. If the required defensible space distances cannot be attained, structures within the defensible space shall be constructed with fire-resistant materials and practices.*

### **Cumulative Impacts and Mitigation Measures**

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Hazardous materials and other public health and safety issues are generally site-specific and/or project-specific, and would not be significantly affected by other development inside or outside of the City. The following discussion of cumulative impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects within the City’s Planning Area under the cumulative context would include buildout of the City’s General Plan, as well as development of the most recent planned uses within the vicinity of the Draft Master Plan Area.

**4.7-5 Cumulative increase in the number of people who could be exposed to potential hazards associated with potentially contaminated soil and groundwater and an increase in the transport, storage, and use of hazardous materials from development of the proposed project in combination with other reasonable foreseeable projects in the region. Based on the analysis below, the impact would be *less than significant*.**

Impacts associated with hazardous materials are project- and site-specific and generally do not affect, or are not affected by, cumulative development. Cumulative effects could be considered if the project was, for example, part of a larger development in which industrial processes that would use hazardous materials are proposed. However, this is not the case with the proposed project, as the proposed project is a residential development. Furthermore, any future proposed development project would be subject to the same federal, State, and local hazardous materials management requirements as the proposed project. Therefore, potential risks associated with increased hazardous materials use in the community, including potential effects, if any, on the proposed project, would not cumulate to become a significant impact.

The proposed project would introduce new people and structures to the area, which would create additional wildland urban interface areas within the City. Although the project would add people and structures to the area, measures are in place to minimize the community's impact from wildland fire. In addition, evacuation procedures in the event of an emergency, such as during a wildfire, as discussed above, are related to circulation and emergency access. The potential impacts related to evacuation circulation is address in Chapter 4.12, Transportation, Traffic, and Circulation of this EIR.

Therefore, implementation of the proposed project would have a *less-than-significant* incremental contribution towards cumulative hazardous materials use and wildfire hazards.

Mitigation Measure(s)

*None required.*



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## 4.8 HYDROLOGY AND WATER QUALITY

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## 4.8

## HYDROLOGY AND WATER QUALITY

### 4.8-1 INTRODUCTION

The Hydrology and Water Quality chapter of the EIR describes existing drainage and water resources for the project site, and evaluates potential impacts of the proposed project with respect to flooding, surface water resources, and groundwater resources. Information for the Hydrology and Water Quality chapter was primarily drawn from the Pittsburg General Plan<sup>1</sup> and associated EIR<sup>2</sup>, the *Preliminary Geologic Hazards and Geotechnical Engineering Report*<sup>3</sup> prepared for the proposed project by ENGEO Inc., and the Faria Property Storm Drainage Memo<sup>4</sup> prepared by Isakson & Associates Inc.

### 4.8-2 EXISTING ENVIRONMENTAL SETTING

The section below describes the existing hydrological features of the project site and the surrounding region, sources of water supply and wastewater, and the water quality of the existing resources in and around the project site.

#### Project Area Drainage

The City of Pittsburg's existing drainage system is comprised primarily of channelized creeks fed by surface runoff and underground storm drains. The City maintains the system within incorporated areas. Annual rainfall in the area is approximately 13.33 inches with nearly all of the precipitation occurring between November and April, the winter rainy season. The City is responsible for maintaining the flood control system within the incorporated area. In the unincorporated parts of the Planning Area, the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) maintains major channels and creeks over which they hold land rights, while the County Department of Public Works maintains road drainage systems and several detention basins.

According to the Pittsburg General Plan, the project site is located in the Lawlor Creek watershed (see Figure 4.8-1).

<sup>1</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. January, 2001.

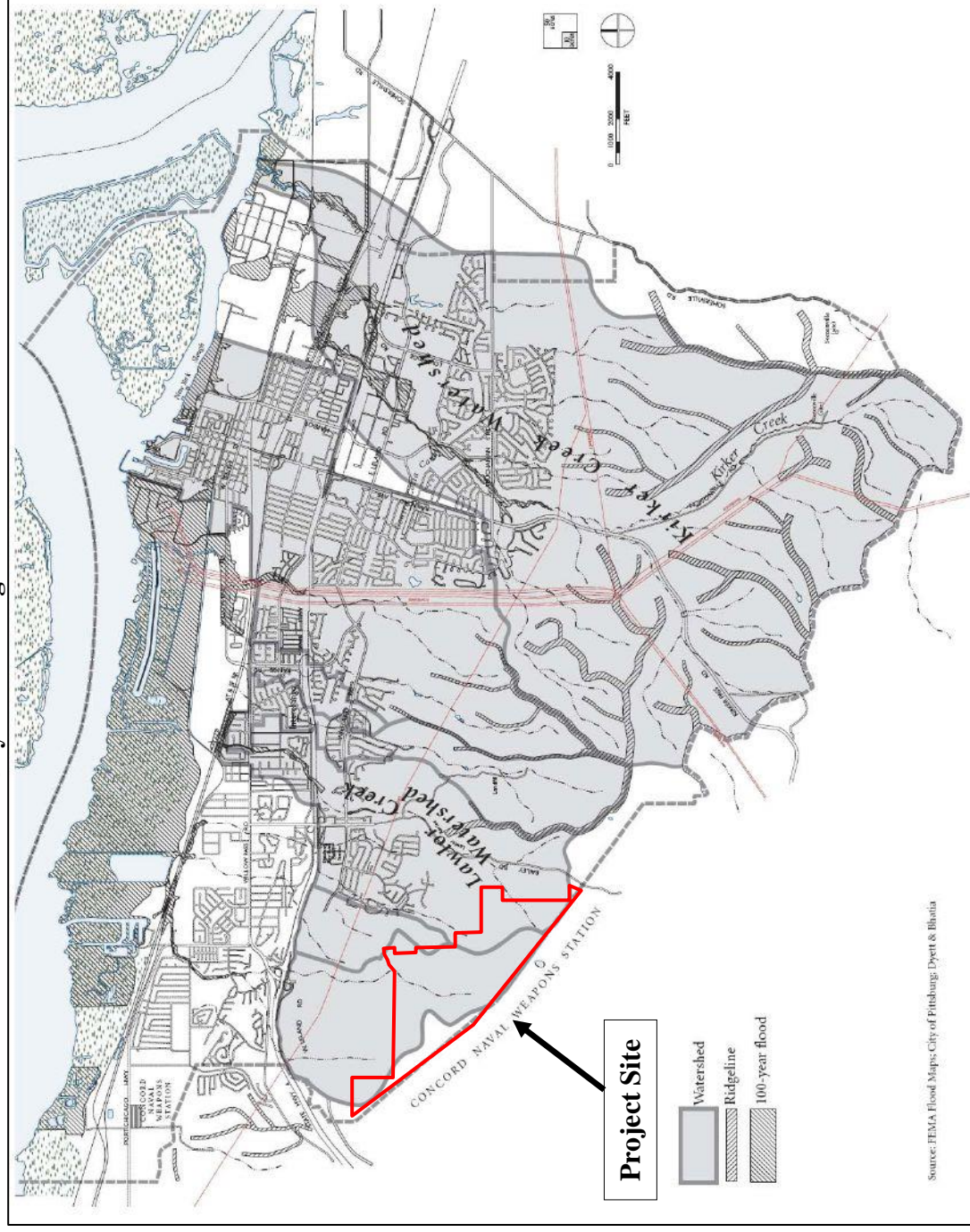
<sup>2</sup> City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January, 2001.

<sup>3</sup> ENGEO Inc. *Preliminary Geologic Hazards and Geotechnical Engineering Report*. May 20, 2013.

<sup>4</sup> Isakson & Associates Inc. *Faria Property Storm Drainage Memo*. December 27, 2013.



**Figure 4.8-1**  
**City of Pittsburg Watersheds**



Source: City of Pittsburg General Plan [Figure 9-2].



The Lawlor Creek watershed drains into Suisun Bay. Most of the Lawlor Creek watershed south of Bay Point is undeveloped, though some residential development exists south of State Route (SR) 4. Most runoff is conveyed by natural channels, except for storm drains located in developed areas and culverts under SR 4. Minor watersheds are located west of Lawlor Creek, between Lawlor and Kirker Creeks, and adjacent to the northeastern boundary of the Kirker Creek watershed north of SR 4. The minor watersheds are drained by small natural channels without official names. Additionally, the Contra Costa Coastal Canal intersects both the Lawlor Creek and Kirker Creek watersheds.

According to the Storm Drainage Memo prepared for the proposed project by Isakson & Associates Inc., the project site consists of two tributary drainage areas, the northerly portion of the project site and the southerly portion of the project site. The northerly portion of the site is within the Contra Costa County Flood Control Drainage Area 48B (DA 48B). DA 48B drains through the existing San Marco Project located to the north, then under SR 4 and through the Bay Point area to Suisun Bay. The drainage system within the San Marco Project development area has been designed and constructed to accommodate the developed flow from the northerly portion of the proposed project site. The series of detention basins within the San Marco project development area would regulate the flow of drainage from the San Marco Project and the northerly portion of the proposed project site such that peak flows would not exceed 199 cubic feet per second, which would be consistent with what has been anticipated per the Contra Costa County DA 48B Boundary Map and Drainage Plan.

The southerly portion of the proposed project site naturally drains through the undeveloped Bailey Estates project area to the east into a drainage system that crosses under Bailey Road into Lawlor Ravine, which drains under SR 4 through the Bay Point Area to Suisun Bay. In accordance with applicable federal and state standards, the drainage system of the southerly portion of the project site would be designed such that the peak storm drainage flow leaving the site after development does not exceed the existing undeveloped storm drainage flow. The proposed project would likely require permanent detention facilities to be constructed on-site in order to meet such design requirements. Regardless of the specific stormwater facilities included in the proposed project, stormwater currently runs off of the project site and onto the nearby Bailey Estates project site. The Bailey Estates project would be required to accept and convey the stormwater currently running onto the Bailey Estates site from the proposed project site by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) regulation "Provision C.3".

Therefore, both the northern and southern drainage areas of the project site connect to existing or planned drainage systems prior to eventual discharge in surface waters of Suisun Bay.

## **Water Quality**

Water is essential to recreation, the viability of agriculture, and the development of housing, commerce, and industry, as well as the maintenance of high-quality fish and wildlife habitats. Land uses and activities that the City must consider in protecting the quality of the City's water include construction activities, agricultural land uses, and post-construction urban runoff.

### Construction Activities

Construction grading can impact water quality because such activity exposes bare soil. Rainfall on bare soil can cause erosion and sedimentation into nearby water bodies. Unstabilized soil can be washed or wind-blown into nearby surface water. Construction activities can also result in petroleum products and other pollutants from construction equipment, entering nearby drainages.

### Post-construction Urban Runoff

Urban runoff from residential communities includes household chemicals (including pesticides, herbicides, and paints), as well as petroleum products from automobiles and landscaping equipment.

### **Groundwater**

According to the Pittsburg General Plan EIR, groundwater in the project area can be found on two levels: shallow and deep. Shallow groundwater from seasonal saturation occurs in the upper five to ten feet of surface soil and underlying bedrock. The shallow groundwater tends to be saline with high mineral concentrations and eventually drains into streams and natural drainage channels at the end of the rainy season. Further below ground is a second layer of groundwater that exists year-round between 40 and 80 feet below the surface. The City's General Plan does not indicate areas of substantial groundwater recharge within the planning area.

The project site is located in the vicinity of the Clayton Valley and Pittsburg Plain Groundwater Basins. According to the Pittsburg General Plan EIR, the source of groundwater for the Pittsburg Plain Groundwater Basin is rainwater absorbed into the ground through pervious bedrock deposits in stream channels located in the southern hills. The groundwater flows in a northerly direction following the slope of the land to the below sea-level aquifer that is part of the Sacramento/San Joaquin groundwater system. The Pittsburg Plain Groundwater Basin lies within the two major drainage basins of Kirker Creek and Willow Creek, discussed above, both of which discharge into Suisun Bay.

Groundwater extracted from the Pittsburg Plain Groundwater Basin serves local domestic, municipal, and industrial water needs. Both the City of Pittsburg and Bay Point conjunctively manage groundwater and surface water as a means for increasing the reliability of available resources and reducing costs to users. According to the Pittsburg Plain Groundwater Basin Groundwater Management Plan, groundwater accounts for five to 15 percent (approximately 1,500 to 2,000 acre-feet per year) of the City's water supply and eight to ten percent (approximately 240 to 270 acre-feet per year) of water demand of the Bay Point system.<sup>5</sup> Other groundwater pumping from the Pittsburg Groundwater Basin serves industrial and small-scale domestic use. The City of Pittsburg is the largest groundwater pumper within the Pittsburg Plain Groundwater Basin area. Groundwater use from the Pittsburg Plain Groundwater Basin is currently under a groundwater management plan created by the City of Pittsburg in October 2012. See Chapter 4.11, Public

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<sup>5</sup> City of Pittsburg. *Pittsburg Plain Groundwater Basin Groundwater Management Plan*. October 2012.



Services and Utilities, of this EIR for a complete discussion regarding the City's groundwater and water supply.

According to the SFBRWQCB,<sup>6</sup> the Clayton Valley Groundwater Basin is bounded by Suisun Bay on the north, Mt. Diablo Creek on the east, the Concord Fault on the west, which divides the Clayton Valley Groundwater Basin from the Ygnacio Valley Groundwater Basin, and the foothills of Mount Diablo on the south. The cities of Concord and Clayton overlie the Clayton Valley Basin. The Clayton Fault, Contra Costa Canal, Concord Naval Weapons Station and the US Naval Weapons Station are also within the Clayton Valley Groundwater Basin. Marsh Creek flows through the Clayton Valley Groundwater Basin before emptying into the Suisun Bay.

Aquifers in the Clayton Valley Groundwater Basin are hydrologically connected to Suisun Bay. Limited data exists regarding the occurrence and movement of groundwater in the Clayton Valley Groundwater Basin. In addition, a groundwater management plan does not currently exist for the Clayton Valley Groundwater Basin.

## **Flooding**

The Federal Emergency Management Agency (FEMA) categorizes flood prone areas based on the frequency of occurrence. The project site is within Flood Insurance Rate Map (FIRM) numbers 06013C0113H and 06013C0302G.<sup>7</sup> According to the FIRMs, the project site is within Flood Hazard Zone X, which is described by FEMA as an area of minimal flood hazard, usually above the 500-year flood level. As such, the proposed project would not place housing or structures within a 100-year floodplain or expose people or structures to risks involving flooding.

### **4.8-3 REGULATORY CONTEXT**

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The following is a description of federal, State, and local environmental laws and policies that are relevant to the review of hydrology and water quality under the California Environmental Quality Act (CEQA) process.

## **Federal Regulations**

### Federal Emergency Management Agency (FEMA)

The FEMA is responsible for determining flood elevations and floodplain boundaries based on U.S. Army Corps of Engineers studies. FEMA is also responsible for distributing the FIRMS, which are used in the National Flood Insurance Program. The FIRMs identify the locations of special flood hazard areas, including the 100-year floodplains.

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<sup>6</sup> San Francisco Bay Regional Water Quality Control Board. *Clayton Valley Groundwater Basin, California's Groundwater, Bulletin 118*. Updated February 27, 2004.

<sup>7</sup> FEMA. *Federal Emergency Management Agency. Flood Insurance Rate Map Numbers 06013C0113H and 06013C0302G*. March 21, 2017. Available at <https://msc.fema.gov/portal/search?AddressQuery=pittsburg%2C%20ca#searchresultsanchor>. Accessed March 24, 2017.

FEMA allows non-residential development in the floodplain; however, construction activities are restricted within flood hazard areas, depending upon the potential for flooding within each area. Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR). These standards are implemented at the State level through construction codes and local ordinances; however, these regulations only apply to residential and non-residential structure improvements. Although roadway construction or modification is not explicitly addressed in the FEMA regulations, the California Department of Transportation (Caltrans) has also adopted criteria and standards for roadway drainage systems and projects situated within designated floodplains. Standards that apply to floodplain issues are based on federal regulations (Title 23, Part 650 of the CFR). At the State level, roadway design must comply with drainage standards included in Chapters 800-890 of the Caltrans Highway Design Manual. Section 60.3(c)(10) of the CFR restricts cumulative development from increasing the water surface elevation of the base flood by more than one foot within the floodplain.

#### Federal Clean Water Act

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the federal Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the U.S. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

Nonpoint sources are diffuse and originate over a wide area rather than from a definable point. Nonpoint pollution often enters receiving water in the form of surface runoff, but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such nonpoint sources are generally exempt from federal NPDES permit program requirements. However, two types of nonpoint source discharges are controlled by the NPDES program – nonpoint source discharge caused by general construction activities, and the general quality of stormwater in municipal stormwater systems. The 1987 amendments to the CWA directed the federal EPA to implement the stormwater program in two phases. Phase I addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by EPA that are not included in Phase I.

Section 402 of the CWA mandates that certain types of construction activities comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than one acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the State Water Resources Control Board (SWRCB), implemented and enforced by the nine Regional Water Quality Control Boards (RWQCBs).

As of July 1, 2010, all dischargers with projects that include clearing, grading or stockpiling activities expected to disturb one or more acres of soil are required to obtain compliance under the NPDES Construction General Permit Order 2009-0009-DWQ. The General Permit requires all dischargers, where construction activity disturbs one or more acres, to take the following measures:

1. Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to include a site map(s) of existing and proposed building and roadway footprints, drainage patterns and storm water collection and discharge points, and pre- and post- project topography;
2. Describe types and placement of Best Management Practices (BMPs) in the SWPPP that will be used to protect storm water quality from construction-related pollution and other non-point sources of pollution;
3. Provide a visual and chemical (if non-visible pollutants are expected) monitoring program for implementation upon BMP failure; and
4. Provide a sediment monitoring plan if the area discharges directly to a water body listed on the 303(d) list for sediment.

To obtain coverage, a SWPPP must be submitted to the RWQCB electronically and a copy of the SWPPP must be submitted to the City of Pittsburg. When project construction is completed, the landowner must file a Notice of Termination. Construction of the proposed project would be subject to these regulatory requirements.

#### *Construction Site Runoff Management*

In accordance with NPDES regulations, in order to minimize the potential effects of construction runoff on receiving water quality, the State requires that any construction activity affecting one (1) acre or more must obtain a General Permit for Stormwater Discharges Associated with Construction Activity. Permit applicants are required to prepare a SWPPP and implement BMPs as described above to reduce construction effects on receiving water quality by implementing erosion and sediment control measures.

### **State Regulations**

#### State Water Resources Control Board

The SWRCB and the RWQCBs are responsible for ensuring implementation and compliance with the provisions of the federal CWA and California's clean water act, the Porter-Cologne Water Quality Control Act. The project site is situated within the jurisdictional boundaries of the SFBRWQCB (Region 2). The SFBRWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within their jurisdiction.

The SFBRWQCB issued an Order requiring all municipalities within Contra Costa County (and the County itself) to develop more restrictive surface water control standards for new development projects as part of the municipal regional NPDES Permit. Known as "Provision C.3," new development or redevelopment projects that disturb one or more acres of land area must contain and treat stormwater runoff from the site. The proposed project is a C.3 regulated project and is

required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment and flow control measures.

## **Local Regulations**

### City of Pittsburg Municipal Code

The following sections of the Pittsburg Municipal Code are applicable to the hydrology and water quality aspects of the proposed project.<sup>8</sup>

#### *Section 13.28.050: Stormwater Control Plan Required*

- A. Every application for a development project, including but not limited to a rezoning, tentative map, parcel map, conditional use permit, variance, site development permit, design review, or building permit that is subject to the development runoff requirements in the City's NPDES permit shall be accompanied by a stormwater control plan that meets the criteria in the most recent version of the Contra Costa Clean Water Program Stormwater Section C.3 Guidebook.
- B. Implementation of an approved stormwater control plan and submittal of an approved stormwater control operation and maintenance plan by the applicant shall be a condition precedent to the issuance of a certificate of occupancy for a project subject to this section.
- C. All stormwater management facilities shall be designed in a manner to minimize the need for maintenance and reduce the chances of failure. Design guidelines are outlined in the guidebook.

#### *Section 13.28.090: Best Management Practices and Standards*

- A. Generally. Any person owning or operating premises that may contribute pollutants to the City's stormwater system shall undertake best management practices to reduce the potential for pollutants entering the system to the maximum extent practicable. Examples of such premises include, but are not limited to, parking lots, gasoline stations, industrial facilities, and other commercial enterprises. Examples of best management practices include, but are not limited to, those described in publications by the United States Environmental Protection Agency, the California Water Boards, the California Stormwater Quality Association, the Bay Area Stormwater Management Agencies Association, the Contra Costa Clean Water Program, and the City of Pittsburg.
- F. Construction Activities. All construction projects shall incorporate site-specific BMPs, which can be a combination of BMPs from the California BMP Handbook, Construction, January 2003, the Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices Manual, March 2003, the San Francisco Bay Regional Water Quality Control Board Erosion and Sediment Control Field Manual 2002, the City's

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<sup>8</sup> City of Pittsburg. *Pittsburg Municipal Code, Chapter 13, Water and Sewers*. Passed October 21, 2013.

grading and erosion control ordinance and other generally accepted engineering practices for erosion control as required by the director. The director may establish controls on the rate of stormwater runoff from new developments and redevelopment as may be appropriate to minimize the discharge and transport of pollutants.

#### City of Pittsburg General Plan

The following goals and policies of the Pittsburg General Plan are applicable to the hydrology and water quality aspects of the proposed project.

Goal 9-G-4 Minimize the runoff and erosion caused by earth movement by requiring development to use best construction management practices.

Goal 9-G-5 Preserve and enhance Pittsburg's creeks for their value in providing visual amenity, drainage capacity, and habitat value.

Goal 9-G-6 Preserve and protect the Contra Costa Canal from storm drainage and runoff contaminating the City's municipal water supply.

Policy 9-P-15 As part of development plans, require evaluation and implementation of appropriate measures for creek bank stabilization as well as necessary BMPs to reduce erosion and sedimentation. Encourage preservation of natural creeks and riparian habitat as best as possible.

Policy 9-P-16 Establish development standards for new construction adjacent to riparian zones to reduce sedimentation and flooding. Standards should include:

- Requirements that low berms or other temporary structures such as protection fences be built between a construction site and riparian corridor to preclude sheet-flooding stormwater from entering the corridors during the construction period.
- Requirements for installing of storm sewers before construction occurs to collect stormwater runoff during construction.

Policy 9-P-17 To prevent flood hazards in the Kirker Creek watershed, ensure that new development minimizes paved areas, retaining large blocks of undisturbed, naturally vegetated habitat to allow for water infiltration.

Additional flood control mitigation may include intermixing areas of pavement with the naturally vegetated infiltration

sites to reduce the concentration of stormwater runoff from pavement and structures.

Policy 9-P-18      Require an encroachment permit from Contra Costa Water District (CCWD) for any storm drain facility crossing or encroaching onto Contra Costa Canal rights-of-way. Require all crossings to be constructed in accordance with CCWD standards and requirements.

Policy 9-P-19      As part of the City's Zoning Ordinance, establish regulations for the preservation of mature trees. Include measures for the replacement of all mature trees removed.

Trees are valuable along creeks and watersheds because their root systems help stabilize topsoil and reduce erosion.

Policy 9-P-21      As part of project review and CEQA documentation, require an assessment of downstream drainage (creeks and channels) and City storm-water facilities impacted by potential project runoff.

Calculate potential sedimentation and runoff based on the maximum storm event and determine necessary capacity of the downstream drainage system. If the project presents potential downstream sedimentation, runoff or flooding issues, require additional mitigation including but not limited to limitations on grading, construction only in dry seasons, and funding for downstream improvements, maintenance, and repairs.

Goal 9-G-7      Comply with Regional Water Quality Control Board regulations and standards to maintain and improve the quality of both surface water and groundwater resources.

Policy 9-P-22      Continue working with the Regional Water Quality Control Board in the implementation of the National Pollutant Discharge Elimination System (NPDES), with specific requirements established in each NPDES permit.

Policy 9-P-23      Require new urban development to use Best Management Practices to minimize creek bank instability, runoff of construction sediment, and flooding.

The City's BMPs will ensure that new development projects consider the effects of construction debris and sediment on local water supplies. However, it is imperative that the City

review and update the BMPs to promote state-of-the-art construction practices.

Policy 9-P-24      Reduce sedimentation and erosion of waterways by minimizing site disturbance and vegetation removal along creek corridors.

Policy 9-P-25      Encourage rehabilitation and revegetation of riparian corridors and wetlands throughout the City to contribute to bioremediation and improved water quality.

Policy 9-P-26      Monitor water quality in the local creek and reservoir system to ensure clean supplies for human consumption and ecosystem health.

Policy 9-P-27      Protect water quality by reducing non-point sources of pollution and the dumping of debris in and near creeks, storm drains, and Contra Costa Canal. Continue use and implementation of the City's storm drain marking program in newly developed or redeveloped areas.

The quality of groundwater and water flowing into the City's creeks is most likely to be affected by non-point pollution sources in Pittsburg. Urban development can potentially pose a threat to surface and groundwater quality through construction sediment, use of insecticides and herbicides, and related increases in automobile use.

Policy 9-P-28      Prepare and disseminate information about the harmful effects of toxic chemical substances and safe alternative measures.

Brochures and a page on the City's web site describing the harmful effects of toxic chemicals and alternatives, including information about safe alternatives to toxics for home and garden use, should be made available to residents of Pittsburg.

Goal 10-G-8      Ensure that new development mitigates impacts to the City's storm drainage capacity from storm water runoff in excess to runoff occurring from the property in its undeveloped state.

Policy 10-P-18      Evaluate storm drainage needs for each development project in the context of demand and capacity when the drainage area is fully developed. Ensure drainage improvements or other mitigation of the project's impacts on the storm

drainage system appropriate to the project's share of the cumulative effect.

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| Policy 10-P-19 | Assure through the Master Drainage Plan and development ordinances that proposed new development adequately provides for on-site and downstream mitigation of potential flood hazards.   |
| Policy 10-P-20 | <p>Develop and implement a Storm Flooding Mitigation Fee Program to fund required drainage improvements during construction of new development.</p> <p>Cooperate with the County Flood Control District in developing a Storm Flooding Mitigation Fee Program for incorporated and unincorporated lands within the City's watersheds.</p>  |
| Policy 10-P-23 | Ensure that all new development (residential, commercial, or industrial) contributes to the construction of drainage improvements in the Kirker Creek and other watersheds in the Planning Area, as required by the City's adopted ordinances.   |
| Policy 10-P-24 | <p>Allow the construction of detention basins as mitigation in new developments. Ensure that detention basins located in residential neighborhoods, schools, or child-care facilities are surrounded by a gated enclosure, or protected by other safety measures.</p> <p>The enclosure of detention basins, particularly in areas where small children are present, is necessary to ensure the safety of local residents when recessed areas are saturated with floodwaters.</p> |
| Policy 10-P-25 | Ensure adequate minimum setbacks to reduce potential for property damage from storm flooding.  |
| Policy 10-P-26 | Reduce the risk of localized and downstream flooding and runoff through the use of high infiltration measures, including the maximization of permeable landscape.  |
| Policy 10-P-27 | Adopt practices for development and construction on sites where the erosion potential is moderate to severe.   |
| Policy 10-P-28 | Bench terraces should be used where areas of long slopes may create a stormwater gradient flow. Berms should be  |



constructed between any riparian corridor and the construction site to preclude sediment-laden stormwaters from entering riparian zones.

Policy 10-P-30      Encourage residential development that includes post-construction Best Management Practices to minimize runoff from the site to the stormdrain system (for example, using permeable surfaces for parking lots, sidewalks, and bike paths, or using roof runoff as irrigation).

#### Pittsburg Plain Groundwater Basin Management Plan

Groundwater use in the Pittsburg Plain Groundwater Basin is currently under a groundwater management plan created by the City of Pittsburg in October 2012. Because the project site is located within the Pittsburg Plain Groundwater Basin, all discharges to groundwater are subject to the Pittsburg Plain Groundwater Basin Management Plan requirements. The requirements of the Basin Management Plan include, but are not limited to, the following: comply with the County's well construction and destruction policies and State permitting requirements as stipulated by the California Department of Public Health; employ BMPs to limit potential sources of contamination in the environment; identify locations of point sources of contamination; identify major non-point sources of contamination; seek to avoid and/or mitigate potential impacts on groundwater quality resulting from point or non-point sources of contamination; and seek to avoid and/or mitigate groundwater contamination to the extent that the water supply is not adversely affected.

#### SFBRWQCB Municipal Regional Stormwater NPDES Permit

The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District (the Contra Costa Permittees) have joined together to form the Contra Costa Clean Water Program. The Permittees submitted a permit application (Report of Waste Discharge), dated September 30, 2003, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Contra Costa Permittees' jurisdictions. The application was approved and the Contra Costa Permittees are currently subject to NPDES Permit No. CAS612008, issued by Order No. R2-2009-0074 on October 14, 2009, which pertains to stormwater runoff discharge from storm drains and watercourses within their jurisdictions.<sup>9</sup>

As discussed above, the proposed project is a C.3 regulated project and future development is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment and flow control measures. The goal of Provision C.3 is for the NPDES Permittees to use their planning authorities to include appropriate source control, site design, and

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<sup>9</sup> California Regional Water Quality Control Board, San Francisco Bay Region. *Municipal Regional Stormwater NPDES Permit, NPDES Permit Number CAS612008*. October 14, 2009. Available at: [http://www.swrcb.ca.gov/rwqcb2/board\\_decisions/adopted\\_orders/2009/R2-2009-0074.pdf](http://www.swrcb.ca.gov/rwqcb2/board_decisions/adopted_orders/2009/R2-2009-0074.pdf).

stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. The goal is to be accomplished primarily through the implementation of low impact development (LID) techniques. The Permittees require all projects to implement LID source control, site design, and stormwater treatment on-site or at a joint stormwater treatment facility in accordance with Provisions C.3.c and C.3.d, unless the Provision C.3.e alternate compliance options are invoked.

The goal of the LID techniques are to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to the source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to the LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes. Future development plans will identify the proposed site- and project-specific source control, site design, and stormwater treatment measures, which will be evaluated as part of future discretionary development application reviews.

#### CCCFCWCD

The CCCFCWCD provides a variety of services related to flood protection within Contra Costa County. Such services include flood control planning and maintenance, development review and infrastructure financing fees, development of flood control standards, data collection and hydraulic modeling, and technical review of developments and environmental documents. The CCCFCWCD is separated into formed drainage areas, and new developments within drainage areas are assessed drainage fees. The proposed project is located in drainage area 48B, and is subject to the relevant CCCFCWCD fees for that drainage area.

#### **4.8-4     IMPACTS AND MITIGATION MEASURES**

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The following section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to hydrology and water quality. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

##### **Standards of Significance**

Consistent with Appendix G of the CEQA Guidelines and the City's General Plan, a significant impact would occur if the proposed project would result in any of the following:

- 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 (Initial Study Question IX.e.);

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site (Initial Study Question IX.d.);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site (Initial Study Question IX.c.);
- Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality (Initial Study Question IX.a. and IX.f.); and
- Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or lowering of the local groundwater table level (Initial Study Question IX.b.).

#### Issues Not Discussed Further

It should be noted that, as presented in the Introduction to Analysis chapter of this EIR, the Initial Study prepared for the proposed project (see Appendix C) determined that development of the proposed project related to the following would result in no impact or a less-than-significant impact:

- Placing housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map (Initial Study Question IX.g.);
- Placing within a 100-year floodplain structures which would impede or redirect flood flows (Initial Study Question IX.h.);
- Exposing people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Initial Study Question IX.i.); and
- Inundation by seiche, tsunami, or mudflow (Initial Study Question IX.j.).

Accordingly, impacts related to the above topics are not further analyzed or discussed in this EIR chapter. However, it should be noted that while mudflows are not considered a potential impact related to the proposed project, mudslides are discussed in further depth in Chapter 4.6, Geology and Soils, of this EIR.

#### **Method of Analysis**

The information contained in the Hydrology and Water Quality chapter of this EIR was derived primarily from the Pittsburg General Plan and associated EIR, the Preliminary Geologic Hazards and Geotechnical Engineering Report prepared for the proposed project by ENGEO Inc, and the Storm Drainage Memo prepared by Isakson & Associates Inc. Determinations of significance were made based on the existing or planned infrastructure's ability to accommodate the residential use and density of potential future development.

Annexation and the requested rezoning of the proposed project site does not include development applications at this time; therefore, the project has been evaluated at a program-level in accordance with existing available information.

## **Project Impacts and Mitigation Measures**

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

### **4.8-1 Substantially alter the existing drainage pattern of the site or area, or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Based on the analysis below, the proposed project could contribute stormwater runoff in excess of the capacity of existing or planned stormwater infrastructure, but with implementation of mitigation, the impact would be *less than significant*.**

Development of the proposed project would result in new impervious surfaces and, thus, an incremental reduction in the amount of natural soil surfaces available for the infiltration of rainfall and runoff. The reduction in infiltration area for stormwater would alter the existing drainage pattern of the site, and result in an increase in the amount of runoff from the site during storm events. In addition, development of the proposed project would most likely involve cut and fill of slopes and depressions, which would further affect the drainage pattern of the site.

In recognition of the potential alteration to site drainage patterns, the Draft Master Plan includes multiple policies regarding drainage during future development of the project site. Policy A.11 encourages the protection of existing creeks and storm drainages, and continued valuation of such features as shared natural community resources. Per Policy A.11 and Policy A.4, potential future development within the project site would be required to preserve existing creeks and other natural features. Specific design considerations would include, but not necessarily be limited to, avoiding concentrating runoff where such concentration could cause or exacerbate geologic hazards (as discussed in Draft Master Plan Policy C.2). Furthermore, use of permeable materials such as grasscrete, stone, stamped concrete pavers, and decomposed granite is encouraged by Draft Master Plan Policy D.3. The use of permeable paving materials would reduce the overall amount of impermeable materials used during potential future development of the project area and reduce alteration of the existing drainage pattern of the site.

According to the Storm Drainage Memo, the San Marco Storm Drain Draft Master Plan anticipated the annexation and development of the Faria/Southwest Hills project site. The drainage system within the San Marco Project development area has been designed and constructed to accommodate the developed flow from the northerly portion of the proposed project site. According to analysis performed by Isakson & Associates Inc., peak flows following development of the proposed project site would not exceed what has been anticipated per the Contra Costa County DA 48B Boundary Map and Drainage Plan.

The southerly portion of the proposed project site naturally drains through the undeveloped Bailey Estates project area to the east. When developed, the Bailey Estates Project would be required, by the C.3 regulations to accept and convey the peak flow from the southern portion of the project site to Lawlor Ravine. The C.3 regulations would further require that the drainage system of the southerly portion of the project site would be designed such that the peak storm drainage flow leaving the site after development does not exceed the existing undeveloped storm drainage flow.

Provision C.3 requires that post-development runoff flows from the Draft Master Plan Area do not increase as compared to pre-development flows. To ensure that runoff flows do not increase, potential future development within the Draft Master Plan Area would be required to include source control, site design, and stormwater treatment measures to control post-development runoff. Consequently, while the development of the proposed project would alter the drainage pattern of the site, the project would be designed to ensure that post-development flows do not exceed pre-development flows and are consistent with existing and planned stormwater control capacity. Detailed site and drainage plans will be submitted with and reviewed as part of future development applications, as detailed in the Chapter 3, Project Description, of this EIR.

However, because detailed site and drainage plans do not currently exist, future project design, and, thus, compliance with Provision C.3, and the aforementioned Draft Master Plan policies is not currently known. Without compliance with Provision C.3, development of the proposed project would have the potential to alter the existing drainage pattern of the project site, which would have the potential to result in stormwater runoff that could exceed the capacities of the existing or planned infrastructure capacities in San Marco Project and Bailey Estates. Therefore, the proposed project would be considered to have a **significant** impact related to contributing stormwater runoff in excess of the capacity of existing or planned stormwater infrastructure.

Mitigation Measure(s)

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

4.8-1      *As part of any development application, the applicant shall submit a site-specific drainage study which shall identify site design measures, source controls, and stormwater treatment and flow control measures showing that the project runoff will not exceed the capacity of existing and planned stormwater drainage systems and will not result in flooding on- or off-site. The study shall include, but not be limited to, the following:*

- *Calculations of pre-development runoff conditions and post-development runoff conditions, using appropriate engineering methods;*
- *An assessment of downstream drainage and City storm-water facilities impacted by potential project runoff in accordance with General Plan Policy 9-P-21, which requires the following:*

- Calculate potential sedimentation and runoff based on the maximum storm event and determine necessary capacity of the downstream drainage system. If the project presents potential downstream sedimentation, runoff, or flooding issues, the drainage study shall require additional mitigation including, but not limited to, limitations on grading, construction only in dry seasons, and funding for downstream improvements, maintenance, and repairs;
- Assessment of existing drainage facilities within the project area and an inventory of necessary upgrades, replacements, redesigns, and/or rehabilitation in order to accommodate the proposed project;
- Recommendation of appropriate design measures required to meet C.3 requirements, and relevant requirements from Chapter 13.28 of the City's Municipal Code; and
- A proposed maintenance program for the on-site drainage system.

**4.8-2 Violate any water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality through erosion during construction. Based on the analysis below, with the preparation of a SWPPP for qualifying construction activity and with implementation of mitigation, the impact would be *less than significant*.**

Construction would require grading, excavation, and other construction-related activities that could cause soil erosion, especially during storm events. As such, construction activities have the potential to degrade downstream water quality and contribute to localized violations of water quality standards if stormwater runoff from construction activities enters receiving waters.

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

Because potential future development of the project site would include construction activities that would result in a land disturbance greater than one acre, the applicant would be required by the State to obtain the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit), which pertains to pollution from grading and project construction. Compliance with the Construction General Permit requires the project applicant to file a Notice of Intent with the SWRCB and prepare a SWPPP prior to construction. The SWPPP would incorporate BMPs to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project, including post-construction impacts.

Because potential future development of the Draft Master Plan Area would have the potential to disturb more than one acre of land, all future development within the Draft Master Plan Area would be required to prepare a SWPPP for construction activity. Without the preparation of a SWPPP for qualifying construction activity within the Draft Master Plan Area, future development within the Draft Master Plan Area would have the potential to impact water quality through the disturbance of on-site soils and subsequent runoff. Therefore, the proposed project could result in a **significant** impact related to water quality.

Mitigation Measure(s)

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

4.8-2      *Prior to issuance of grading permits, the contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The developer shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of Best Management Practices (BMPs). Construction BMPs included in the SWPPP may include, but are not limited to, the following measures:*

- *Silt fencing;*
- *Fiber Rolls;*
- *Vehicle washout areas and trackout control;*
- *Desilting Basins;*
- *Gravel Bag Berms; or*
- *Storm Drain inlet protection.*

*The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to*

*reduce pollutants in stormwater discharges to the maximum extent practicable.*

**4.8-3 Violate any water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality during operations. Based on the analysis below, with confirmation that the proposed project would conform to Provision C.3 and the Municipal Regional Stormwater NPDES Permit and with implementation of mitigation, the impact would be *less than significant*.**

Future project facilities (e.g., homes, paved driveways, and roads) would involve a substantial amount of new impervious surface, which could increase the amount of surface runoff and non-point-source contaminants conveyed to drainage infrastructure during storm events. Drainage infrastructure in the project area drains to Suisun Bay; thus, implementation of the proposed project could increase the amount and impact the quality of stormwater reaching Suisun Bay surface waters, thereby degrading surface water quality.

During the dry season, vehicles and other urban activities release contaminants onto the impervious surfaces, where they would accumulate until the first storm event. During the initial storm event, or first flush, the concentrated pollutants would be transported via runoff to stormwater drainage systems. Anticipated runoff contaminants associated with the proposed project include sediment, pesticides, oil and grease, nutrients, metals, bacteria, and trash. It should be noted that some of these contaminants may be expected in the existing agricultural runoff from the project site.

Potential future development within the Draft Master Plan Area is required to comply with the Provision C.3 requirements, including preparing a site-specific Stormwater Control Plan. The Stormwater Control Plan must show that the proposed project would not result in any new or increased impacts that would impair the beneficial uses of downstream waters.

In addition, potential future development within the Draft Master Plan Area would comply with the requirements of the Municipal Regional Stormwater NPDES Permit, which would include BMPs to maximize stormwater quality. The BMPs would include a combination of source control, structural improvements, and treatment systems to the extent required to ensure compliance with the applicable CWA regulations.

However, because detailed site and drainage plans for the Draft Master Plan Area do not currently exist, future project design, and, thus, compliance with Provision C.3 and the Municipal Regional Stormwater NPDES Permit cannot be confirmed at this time. Without confirmation that future development within the Draft Master Plan Area would conform to the aforementioned regulations, operations within the Draft Master Plan Area would have the potential to violate water quality standards through increased waste discharge. Thus, the proposed project could result in a *significant* impact.



Mitigation Measure(s)

The following mitigation identifies measures to ensure that detailed site and drainage plans will be submitted with discretionary land use applications for future development, showing how project design will prevent urban pollutants within runoff from being transported off-site. The site-specific drainage study required in Mitigation Measure 4.8-1 shall include design, construction, and improvement measures to reduce and control urban runoff in compliance with the Contra Costa Clean Water Program Stormwater Section C.3 Guidebook standards. Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.8-3            *Implement Mitigation Measure 4.8-1.*

**4.8-4 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted). Based on the analysis below, the impact would be *less than significant*.**

Future development would involve an increase in impervious surfaces (e.g., roads, driveways, and homes), which would reduce the infiltration to groundwater under the project site. As noted earlier, the City is not a source of substantial groundwater recharge, so the reduced infiltration would not be a significant impact. The majority of runoff from the project would drain through an on-site drainage system, which would be designed to meet Provision C.3 and City of Pittsburg Municipal Code requirements. The flows would run to local off-site drainage facilities and eventually to Suisun Bay. Potential on-site detention basins, vegetated swales, and pervious pavement would allow percolation through the soil and would contribute to the minimal amount of groundwater recharge in the area. However, the existing soil types on the project site are mostly clayey, not pervious, and the hilly terrain is not conducive to groundwater recharge. Therefore, the project site is not considered to currently function as a substantial groundwater recharge area.

Implementation of the proposed project is not anticipated to increase the demand on groundwater supplies, and the Draft Master Plan would not include construction or operation of on-site wells. Thus, the proposed project is not anticipated to impact production rates of preexisting wells. See Chapter 4.11, Public Services and Utilities, for a complete discussion regarding the City's groundwater and water supply.

Because the proposed project is not in an area of substantial groundwater recharge, impacts to groundwater recharge from increased impervious surfaces would be considered *less than significant*.

Mitigation Measure(s)

*None required.*

## Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area. Cumulative development in the surrounding principal watersheds would lead to combined effects of increasing runoff volumes and rates, which could lead to increases in downstream inundation and ponding, as well as greater potential for entry of pollutants into receiving waters via construction and operation of future projects.

### **4.8-5 Cumulative impacts to hydrology and water quality within the City of Pittsburg. Based on the analysis below, the impact would be *less than significant*.**

The following discussion analyzes the proposed project’s potential cumulative impact to drainage, water quality, and groundwater recharge.

#### Drainage and Water Quality

While continued development within the City of Pittsburg could result in additional stormwater runoff and entry of pollutants into receiving waters through construction and operation of future projects, each project is required to comply with federal, state and the City’s regulatory stormwater documents, standards, and requirements. Compliance with these requirements would ensure that each project provides adequate storage capacity for the additional stormwater runoff generated, as well as incorporate sufficient BMPs to successfully remove pollutants from site runoff during the construction and operational phases. As discussed above, any potential impacts from the proposed project to drainage and water quality would be mitigated to less-than-significant levels, as would other potential development projects’ impacts. Thus, the cumulative effects on the City’s existing storm drainage system and downstream waterways would be considered less than significant.

#### Groundwater

The Pittsburg General Plan does not identify any substantial groundwater recharge areas within the project area. Detention basins and active stream channels provide the majority of groundwater recharge for the region. As discussed above, the proposed project, as well as all future development, would be required to provide adequate storage capacity on-site for the additional stormwater runoff generated, typically via on-site detention basins, and

would connect to the City's existing drainage system, which eventually discharges to Suisun Bay. Accordingly, the proposed project, as well as all future projects, would cumulatively contribute to regional groundwater recharge by allowing percolation of stormwater through on-site detention basins and/or by directing stormwater to active stream channels where the majority of groundwater recharge in the region occurs. Thus, the cumulative effects on groundwater and groundwater recharge would be less than significant.

#### Conclusion

As demonstrated above, the proposed project would not result in significant cumulative impacts to hydrology or water quality. As a result, the project's contribution to cumulative hydrology and water quality impacts would be considered *less than significant*.

#### Mitigation Measure(s)

*None required.*



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## 4.9 LAND USE AND PLANNING

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## 4.9

## LAND USE AND PLANNING

### 4.9.1 INTRODUCTION

Section 15125(d) of the CEQA Guidelines states that “[...] the EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans.” As such, the purpose of the Land Use and Planning chapter of the EIR is to examine the proposed project’s compatibility with existing and planned land uses in the area. The chapter includes a description of the existing land use setting of the project site and the adjacent area, including the identification of existing land uses and current General Plan policies and zoning designations. In addition, the chapter includes a discussion of the project’s compatibility with General Plan goals and policies that are relevant to the proposed project. It should be noted that future development within the project site would require Tentative Map approval and would be subject to Design Review; therefore, this Draft EIR presents a program-level review. The information contained in this analysis is based on the Pittsburg Municipal Code, as well as the Pittsburg General Plan<sup>1</sup> and associated EIR.<sup>2</sup>

### 4.9.2 EXISTING ENVIRONMENTAL SETTING

Section 15125 of the CEQA Guidelines states that “[...] an EIR must include a description of the physical environmental conditions in the vicinity of the project [...] and shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans.” The following provides the existing land uses on the project site, as well as the existing land use and zoning designations.

#### Project Site Characteristics

The proposed project site is located just southwest of the municipal boundary of the City of Pittsburg and within the Southwest Hills planning subarea of the Pittsburg General Plan (see Figure 4.9-1). The City of Pittsburg is located along the Sacramento River in eastern Contra Costa County, and is bordered by Concord to the west, Antioch to the east, and is located north of Clayton. The northern portion of the City is relatively flat, increasing in elevation to the southern hills. The hills form the northern tip of the Diablo Range, which extends from Contra Costa County to Santa Clara County.

The project site is generally characterized as hillside land that consists of undeveloped vacant grasslands, with the exception of two single-family homes located near the terminus of San Marco Boulevard.

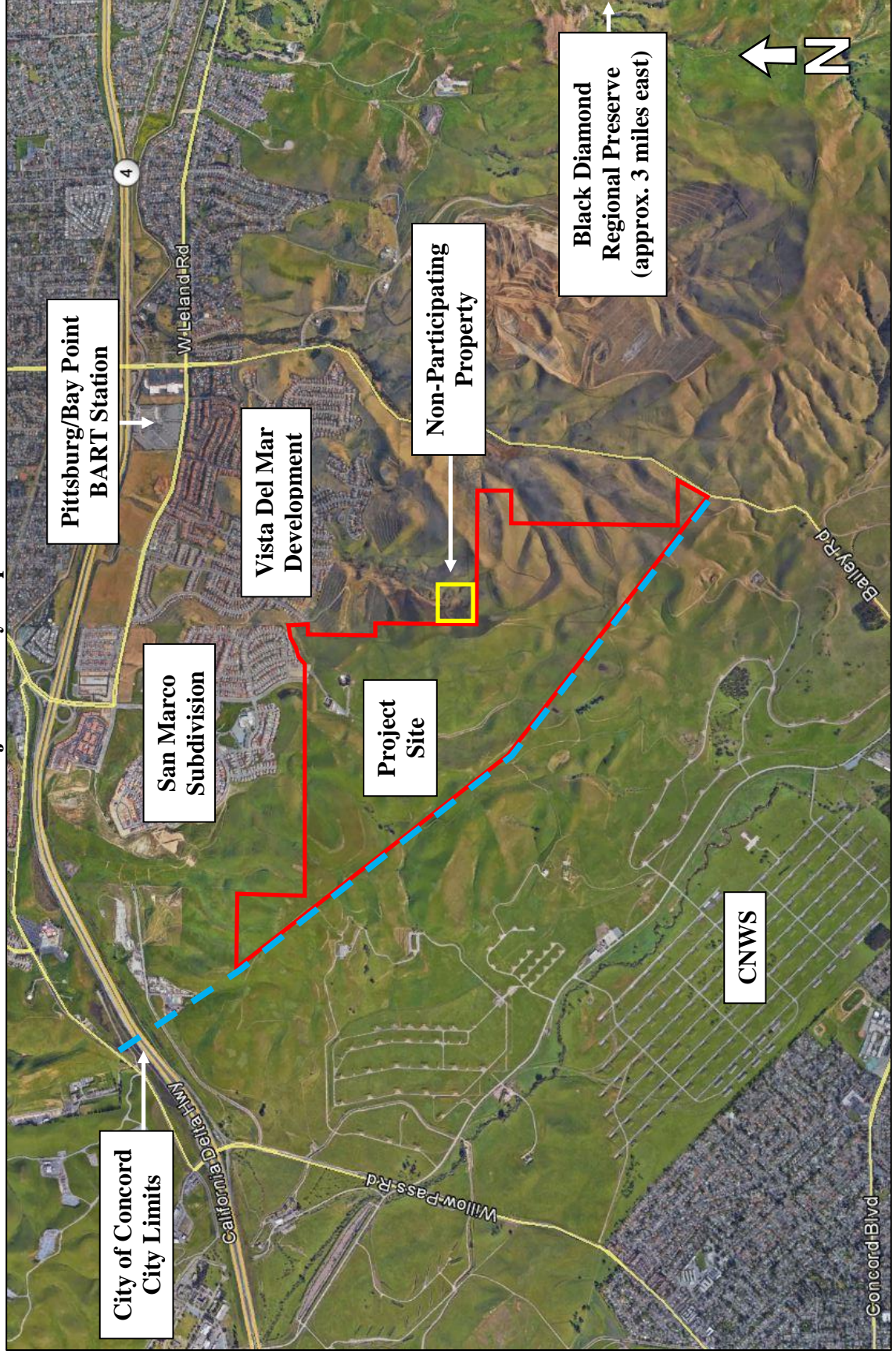
<sup>1</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

<sup>2</sup> City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January, 2001.





Figure 4.9-1  
Project Vicinity Map





According to the Pittsburg General Plan, the project site does not contain designated major ridgelines.<sup>3</sup> However, several smaller ridgelines traverse portions of the site. The elevation of the site ranges from approximately 480 feet at the lowest point to approximately 860 feet at the highest.

Pittsburg's Planning Area includes 41.1 square miles of land. Several geographic features distinguish the Planning Area, including the Sacramento River that forms the northern boundary, and steep hills that reach an elevation of almost 1,900 feet that provide a distinctive backdrop to the south and define the limits of urban development. The Black Diamond Mines Regional Preserve abuts the southeastern limits of the Planning Area.

The site consists of approximately 606 acres of grazing land. With the exception of two single-family homes located near the terminus of San Marco Boulevard, the site is vacant and undeveloped. The northeast portion of the site is bordered by existing residential development (San Marco and Vista Del Mar subdivisions), while the remainder of the site is bordered primarily by undeveloped areas. The western boundary of the site is directly adjacent to the City of Concord city limits. Bailey Road is located to the east of the site, and the recently closed Concord Naval Weapons Station (CNWS) is located to the south. State Route (SR) 4 is situated to the north of the site.

### **Pertinent City of Pittsburg Land Use Background for the Project Site**

A number of prior actions have led up to the submittal of the current application under consideration at this time. In November 2005, the voters of the City of Pittsburg approved a ballot initiative entitled "Measure P" (City of Pittsburg Voter Approved Urban Limit Line and Rezoning Act), which established a new Urban Limit Line (ULL) for the City, rezoned certain properties as a first step in annexing such lands to the City, and provided that the rezoning could be changed by a majority vote of the City Council. Included in the properties was the entire approximately 606-acre project site. On May 3, 2006, the City entered into a Memorandum of Understanding (MOU) that called for the City to conduct a General Plan Study in order to, among other things, establish guidelines for the development of a permanent greenbelt buffer along the inner edges of the voter approved ULL. The City Council, on January 16, 2007, adopted Resolution No. 07-10700, which included a new General Plan policy, 2-P-91, to ensure that a greenbelt buffer would be established on the project site as part of the development review process in accordance with the terms of Measure P and the May 3<sup>rd</sup> MOU.

On July 8, 2009, the Contra Costa LAFCo approved an extension of the Pittsburg Sphere of Influence (SOI) to include the proposed project site. As part of the action, the SOI for the sanitation district Delta Diablo (DDSD) and the Contra Costa Water District (CCWD) were also expanded to include the proposed project site. On September 24, 2010, the project site's property owner submitted an application requesting the City begin processing a request for annexation of the site to bring the property into the City of Pittsburg City Limits. In addition to the request for annexation to the City, the application also included requests for the project site to be annexed to the DDSD and CCWD service areas.

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<sup>3</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century* [pg. 9-3]. November 16, 2001.

## **Existing CCC General Plan Land Use Designations and Zoning for the Project Site**

As discussed above, while the project site has been assigned City of Pittsburg General Plan Land Use Designations and rezoning, the approximately 606-acre project site remains within Contra Costa County. As a result, Contra Costa County General Plan Land Use and zoning designations currently apply to the site.

### Contra Costa County General Plan Land Use Designations

According to the 2005-2020 Contra Costa County General Plan Land Use Element Map, the approximately 606-acre project site is designated Agricultural Lands (AL). The 2005-2020 Contra Costa County General Plan states that the purpose of the AL land use designation is to preserve and protect lands capable of and generally used for the production of food, fiber, and plant materials. The uses that are allowed in the Agricultural Lands designation include all land-dependent and non-land dependent agricultural production and related activities. The maximum allowable density for the designation is one dwelling unit per five acres.

### Contra Costa County Zoning Designation

According to the Contra Costa County Zoning Map, the entire project site is zoned Agricultural Preserve – Parcel 20-acre minimum (A-4). Permitted uses for the A-4 zoning district include all types of commercial and agricultural production, including general farming and other specified uses.

## **Existing Pittsburg General Plan Land Use Designations and Zoning for the Project Site**

The existing City of Pittsburg General Plan land use and zoning designations that apply to the proposed project site are discussed below.

### Pittsburg General Plan Land Use Designations

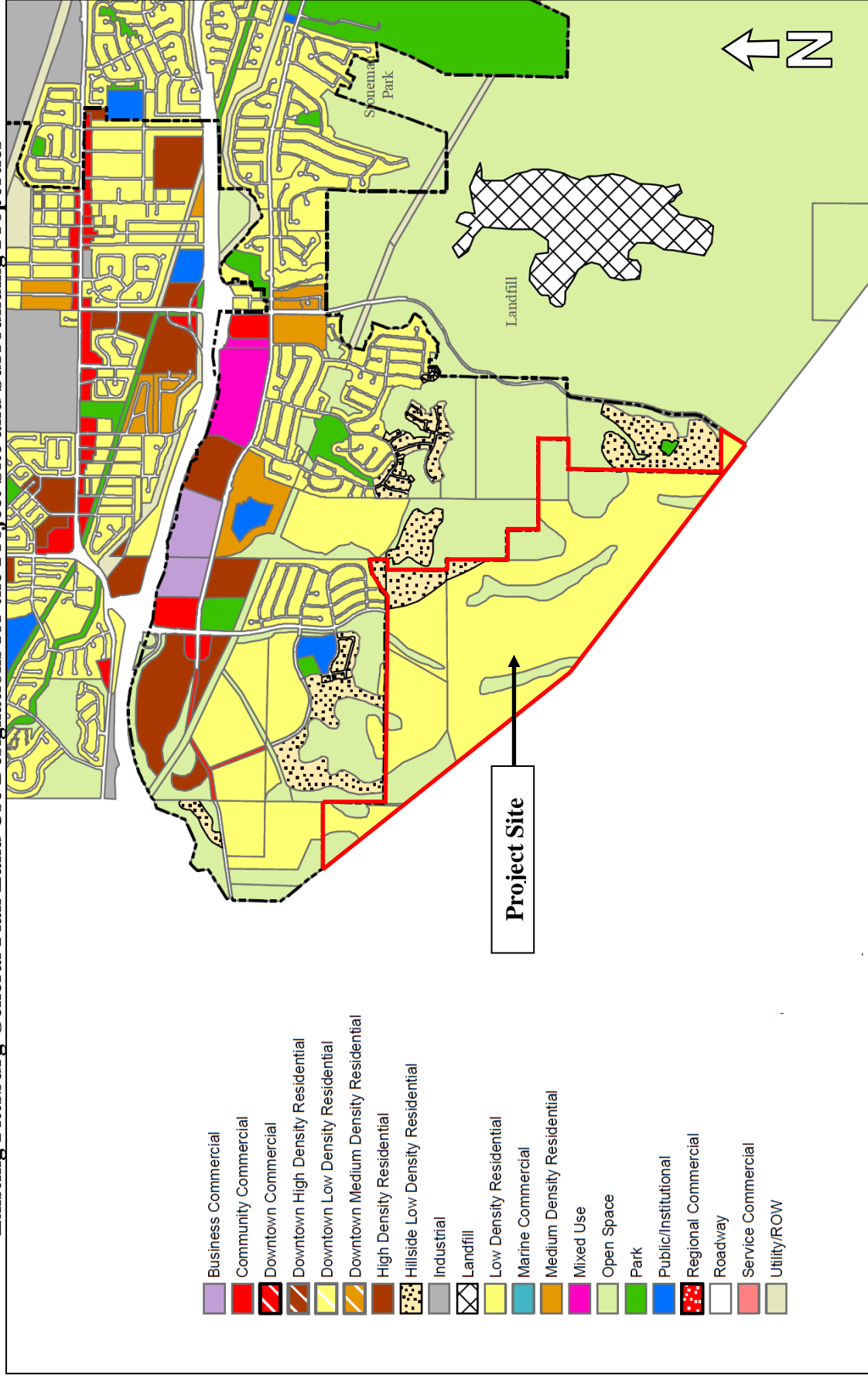
The project site is within the City of Pittsburg's SOI and includes City General Plan land use designations of Low Density Residential (LDR), Hillside Low Density Residential (HLDR), and Open Space (OS) (See Figure 4.9-2). The Pittsburg General Plan defines the designations as follows:

#### *Low Density Residential*

The LDR land use designation allows for single-family residential units built at a density of 1 to 7 units per gross acre. General Plan Policy 2-P-96 is specific to the project site and further limits the maximum buildout to 1,500 dwelling units. The LDR classification is mainly intended for detached single-family dwellings, but attached single-family units in selected or all areas may be permitted, provided that each unit has ground-floor living area, and private or common outdoor open space.



**Figure 4.9-2**  
**Existing Pittsburg General Plan Land Use Designations for the Project Site and Surrounding Properties**



Source: City of Pittsburg, 2011.



### *Hillside Low Density Residential*

The HLDR land use designation along the north central border of the site allows for single-family (attached or detached) residential development in the southern hills built at a density of less than five units per gross acre.

Maximum densities are allowed only in flatter, natural slope areas or non-environmentally sensitive level areas. An open, natural character is encouraged by clustering homes and minimizing cut-and-fill of natural hillsides. The average density assumed for General Plan buildout calculations is three units per gross acre.

### *Open Space*

Much of the City's Planning Area comprises rural privately-owned land that falls within the OS designation. The OS classification accommodates any greenbelts and/or urban buffer areas that may be designated in the future. Greenbelts are open space, parkland, and agricultural areas located outside urban areas, as opposed to urban parks located within developed areas. Generally, two primary criteria identify lands as open space:

- Resource Conservation -- Includes sites with environmental and/or safety constraints, such as riparian corridors, sensitive habitats, and wetlands. Development is limited to one housing unit per existing legal parcel, and no construction is allowed on land within the parcel that is unsuitable for development.
- Agriculture and Resource Management -- Includes orchards and cropland, grasslands, incidental agricultural or related sales, and very low-density rural residential areas, not to exceed one housing unit per 20 acres. One housing unit may be built on each existing parcel, and agriculture is allowed with fewer restrictions on keeping animals than in the residential classifications.

Permitted residential development may be clustered in locations with minimal environmental constraints. However, land area with the OS designation is not to be used in calculating allowable density. The OS designated land within the project site consists mostly of undeveloped grassland.

### City of Pittsburg Zoning Designations

The proposed project site is currently rezoned as Hillside Planned Development (HPD) and Open Space (OS) (see Figure 4.9-3). The Pittsburg Zoning Code defines the zoning designations as follows:

#### *Hillside Planned District*

The HPD zone covers approximately 487.8 acres of the site and establishes development standards that ensure any future development within the hillside areas would be compatible with the special sensitivity of the hillside areas.









The HPD requires approval of a Hillside Planned Development permit prior to any development, and would be among the second phase of development applications for the site. The stated goals of the HPD district are as follows: to encourage desirable future development; protect public health, safety, and welfare in regard to hillside development; protect natural topographic features and visual resources; protect adjacent properties from potential adverse impacts associated with grading and drainage; and to encourage compatibility with the terrain of hillside areas.

### *Open Space*

The OS zone covers approximately 129.2 acres of the site and provides a suitable classification for large public or private sites permanently designed for park or open space use, and to protect public health and safety by limiting land subject to flooding, slides, or other hazards to open space use. The OS zone allows the Planning Commission and City Council to consider the most appropriate use of a site following discontinuance of a large public or private open space use without the encumbrance of a base zoning district that may or may not provide appropriate regulations for development of the site.

### **Surrounding Land Use and Zoning Designations**

The areas adjacent to the project site are under the jurisdiction of the City of Pittsburg and the City of Concord. The existing zoning and General Plan land use designation of each of the areas is summarized in Table 4.9-1 below.

<b>Table 4.9-1 Summary of Adjacent General Plan Land Use and Zoning Designations</b>			
<b>Relationship to Project Site</b>	<b>Jurisdiction</b>	<b>General Plan Land Use Designation</b>	<b>Zoning Designation</b>
North	Pittsburg	LDR OS HLDR	OS Planned Development (PD) HPD
South	Concord	Concord Reuse Project Conservation Open Space (CRP-OS)	Study District (S)
West	Concord	CRP-OS	S
East	Pittsburg	HLDR OS	Single Family–6,000 sf lot (RS-6) OS

### Description of Surrounding Land Use Designations

The City of Pittsburg land use designations have been described above. The City of Concord General Plan defines the other aforementioned land uses as follows:

#### *Concord Reuse Project Conservation Open Space*

Per the Land Use Element of the City of Concord General Plan, the CRP-OS land use designation includes portions of the Concord Reuse Project identified for long-term preservation as open space. The CRP-OS area includes environmentally sensitive lands and other natural areas in the Los



Medanos Hills and along Mount Diablo Creek. Additional details regarding the Concord Reuse Project are included below.

### Description of Surrounding Zoning Designations

The City of Pittsburg OS and HPD zoning designations have been described above. The remaining zoning designations for the surrounding areas within the cities of Pittsburg and Concord are discussed below.

#### *Planned Development (City of Pittsburg)*

Per Chapter 18.62 of the PMC, the purposed of the PD district is to accomplish the following:

- A. Establish a procedure for the development of large parcels of land in order to reduce or eliminate the rigidity, delay, and inequity that otherwise would result from application of zoning standards and procedures designed primarily for small parcels;
- B. Ensure orderly and thorough planning and review procedures that will result in quality urban design;
- C. Encourage variety and avoid monotony in large developments by allowing greater freedom in selecting the means to provide access, light, open space and amenity;
- D. Provide for flexibility, consistent with the general plan, from the rigid land use and development regulations found in base districts in order to take advantage of unique land use or site characteristics;
- E. Encourage allocation and improvement of common open space in residential areas, and provide for maintenance of the open space at the expense of those who will directly benefit from it;
- F. Encourage the preservation of serviceable existing structures of historic value or artistic merit by providing the opportunity to use them imaginatively for purposes other than that for which they were originally intended;
- G. Encourage the assembly of properties that might otherwise be developed in unrelated increments to the detriment of surrounding neighborhoods. [Ord. 07-1284 § 3 (Exh. D), 2007; Ord. 979 § 2 (Exh. A), 1990.]

#### *Single Family–6,000 sf lot (City of Pittsburg)*

Per Chapter 18.50 of the PMC establishes a number of residential districts, including the RS-6 zoning designation. The purpose of the RS-6 zoning designation is to provide opportunities for single-family detached residences in neighborhoods or in conjunction with agricultural pursuits.

### *Study District (City of Concord)*

Per the Chapter 18.65 of the City of Concord Municipal Code, the purpose of the S zoning district is to provide an interim zoning district for the Concord Reuse Project. A planning and environmental review process will determine future uses and development standards for the area. Detailed standards will be developed through a Specific Plan or equivalent mechanism at a future date, subject to approval by the City of Concord Planning Commission and City Council. According to the City of Concord Community Reuse Project Final EIR, the City of Concord assumed the Concord Zoning Ordinance would be updated for consistency with the City of Concord General Plan after the Concord General Plan has been amended to reflect the Reuse Plan.<sup>4</sup> The City of Concord Reuse Project Area Plan was adopted by the Concord City Council on January 24, 2012.<sup>5</sup> However, pursuant to the City of Concord Zoning Map, the area to the south and west of the project site remains designated S zoning district.<sup>6</sup>

### **Surrounding Land Uses**

As noted above, the proposed project site is located within the Southwest Hills subarea, which consists primarily of undeveloped, rolling hills. The site is situated south of the 640-acre San Marco residential development, which includes both low and high-density residential units. The Oak Hills and Alves Ranch residential subdivisions are located directly to the east of San Marcos. The Pittsburg/Bay Point BART Station is located north of Oak Hills along SR 4.

Furthermore, the proposed project site is adjacent to a number of approved, but not yet developed, residential developments. The Montreux residential subdivision would be located south of the existing City limits, along the west side of Kirker Pass Road.<sup>7</sup> The Bailey Estates residential development would be located north of the CNWS and east of Bailey Road, adjacent to the eastern boundary of the proposed project site.<sup>8</sup> A more detailed description of the land uses currently surrounding the project site is provided in Table 4.9-2 below.

<b>Table 4.9-2 Neighboring Land Uses</b>		
<b>Relationship to Project Site</b>	<b>Jurisdiction</b>	<b>Land Use</b>
North	Pittsburg	San Marco residential subdivision
		Vista Del Mar mixed-use development
South	Concord	CNWS
West	Concord	CNWS
East	Pittsburg	Bailey Estates (planned)
		Keller Canyon Landfill

<sup>4</sup> City of Concord. Concord Community Reuse Plan Final Environmental Impact Report [pg.3-18]. January 2010.

<sup>5</sup> City of Concord. Concord Reuse Project Area Plan. Adopted January 24, 2012.

<sup>6</sup> City of Concord. City of Concord Interactive Mapping. Available at: <http://concord.zoomprospector.com/>. Accessed November 16, 2017.

<sup>7</sup> City of Pittsburg. *Planning, Environmental Review, Montreux Residential Subdivision*. Available at: <http://www.ci.pittsburg.ca.us/index.aspx?page=747>. Accessed July 31, 2017.

<sup>8</sup> City of Pittsburg. *Bailey Road Estates Project, Final Environmental Impact Report, SCH #2001022016*. September 2002.

### San Marco Residential Subdivision

The partially developed San Marco residential subdivision is located along the northern boundary of the project site. At buildout, the development would contain 2,938 residential units, including 1,363 single-family units, 1,575 multi-family units, a 36-acre community park, a pedestrian trail system, and various other improvements. The subdivision is separated from the project site by a steep, hilly area designated as OS and HPD in the City's General Plan. The topography of the area is similar to the topography of much of the project site.

### Vista Del Mar Residential Subdivision

The Vista Del Mar mixed-use project is located east of the existing San Marco subdivision, south of SR 4. At buildout, the Vista Del Mar subdivision would ultimately a total of 1,100 housing units, including 563 multi-family units and 537 single-family units, approximately 257,500 square feet of commercial floor space, an 11.33-acre school/park site, and approximately 117.68 acres of permanent hillside open space.<sup>9</sup> With the exception of future commercial and high-density residential areas of the development to be located north of West Leland Road, a majority of the Vista Del Mar project has been built-out.

### Concord Naval Weapons Station

Immediately west of the project site, is land designated for open space and habitat protection in the adopted Concord Community Reuse Plan (adopted 2010) which designates land uses for the entire former CNWS 5,046-acre site. The CNWS is bounded on the east by a ridgeline which separates the City of Concord from the project site. The Concord Community Reuse Plan approved a mixed-use community with development in the westerly portions of the plan area. The plan precludes development within the City of Concord eastern hillsides to preserve the greenbelt between the Cities of Concord and Pittsburg. In addition, the Plan identifies a new 2,600-acre regional park within the eastern hillside area that would be dedicated to the East Bay Regional Park District, consisting of new hiking and biking trails, picnic areas, and environmental and historic interpretive opportunities.

### Bailey Estates

The approved, but not yet constructed, Bailey Estates is located adjacent to the project site to the east. The 122-acre development is designated Hillside Low Density Residential, Park, and Open Space in the Pittsburg General Plan, and would consist of 319 single-family residential units

### Keller Canyon Landfill

The Keller Canyon Landfill is located approximately one-half mile to the east of the project site. Keller Canyon Landfill disposes of industrial non-recyclable waste from Pittsburg, and has been in continuous operation since May of 1992.

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<sup>9</sup> City of Pittsburg. *Final Environmental Impact Report for the Vista Del Mar Project*, SCH Number: 2004012097. December 4, 2004.

### 4.9.3 REGULATORY CONTEXT

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The existing State and local environmental laws and policies that are relevant to the CEQA review process concerning land use and planning are listed below, as applicable. Contra Costa County has jurisdiction over the subject property while it is in the process of being considered for annexation to the City of Pittsburg.

#### State Regulations

##### Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code §56000 et seq.)

In California, the establishment and revision of local government boundaries is governed by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (hereafter referred to as “CKH”). The CKH was a comprehensive revision of the Cortese-Knox Local Government Reorganization Act of 1985, which was itself a consolidation of three major laws governing boundary changes. The LAFCo that has annexation authority over the project site is Contra Costa LAFCo. According to Section 56668 of CKH, factors to be considered in the review of a boundary change proposal shall include, but not be limited to, all of the following:

- (a) Population and population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; the likelihood of significant growth in the area, and in adjacent incorporated and unincorporated areas, during the next 10 years.
- (b) The need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; probable effect of the proposed incorporation, formation, annexation, or exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas. “Services”, as used in this subdivision, refers to governmental services whether or not the services are services which would be provided by local agencies subject to this division, and includes the public facilities necessary to provide those services.
- (c) The effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests, and on the local governmental structure of the county.
- (d) The conformity of both the proposal and its anticipated effects with both the adopted commission policies on providing planned, orderly, efficient patterns of urban development, and the policies and priorities set forth in Section 56377.
- (e) The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Section 56016.
- (f) The definiteness and certainty of the boundaries of the territory, the nonconformance of proposed boundaries with lines of assessment or ownership, the creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.
- (g) A regional transportation plan adopted pursuant to Section 65080, and consistency with city or county general and specific plans.
- (h) The sphere of influence of any local agency which may be applicable to the proposal being reviewed.



- (i) The comments of any affected local agency or other public agency.
- (j) The ability of the newly formed or receiving entity to provide the services which are the subject of the application to the area, including the sufficiency of revenues for those services following the proposed boundary change.
- (k) Timely availability of water supplies adequate for projected needs as specified in Section 65352.5.
- (l) The extent to which the proposal will affect a city or cities and the county in achieving their respective fair shares of the regional housing needs as determined by the appropriate council of governments consistent with Article 10.6 (commencing with Section 65580) of Chapter 3 of Division 1 of Title 7.
- (m) Any information or comments from the landowner or owners, voters, or residents of the affected territory.
- (n) Any information relating to existing land use designations.
- (o) The extent to which the proposal will promote environmental justice. As used in this subdivision, "environmental justice" means the fair treatment of people of all races, cultures, and incomes with respect to the location of public facilities and the provision of public services.

Most of the above factors address growth patterns, public services, and other land use-related matters. To the extent the factors address physical environmental conditions, this EIR provides information for the LAFCo as it considers the factors. The Contra Costa LAFCo would act as a CEQA responsible agency in regard to consideration of the proposed annexation.

## **Local Regulations**

### City of Pittsburg General Plan

The following are applicable Pittsburg General Plan goals and policies related to land use and planning. The goals and policies would ensure that future development remains consistent with the General Plan.

#### *Health and Safety Element*

Goal 10-G-1 Minimize risk to life and property from geologic and seismic hazards.

Policy 10-P-2 Restrict future development from occurring on slopes greater than 30 percent (as designated in Figure 10-1[of the General Plan]) over the 900 foot elevation contour, and on major and minor ridgelines (as delineated in Figure 4-2 [of the General Plan]).

#### *Land Use Element*

Goal 2-G-1 Maintain a compact urban form within the City's projected municipal boundary. Ensure that hillside lands not environmentally suitable for development are maintained as open space.

- Goal 2-G-4 Provide a range of development intensities, with the highest intensities in Downtown and in areas accessible to transit and services, and lower intensities in hillsides and at the City's southern edge.
- Goal 2-G-5 Promote a diversity of housing types, including opportunities for hillside estate development, as well as smaller lot, infill, and high-density housing.
- Goal 2-G-6 Maintain programs and provide incentives for use of vacant infill land and reuse and revitalization of underutilized sites.
- Goal 2-G-7 Promote flexibility and diversity in land use arrangements, including mixed-use development in appropriate areas.
- Goal 2-G-8 Ensure that hillside development enhances the built environment, improves safety through slope stabilization, is respectful of topography and other natural constraints, and preserves ridgelines and viewsheds.
- Goal 2-G-9 Exercise leadership in securing development and preserving open space consistent with the General Plan in portions of the Planning Area that will ultimately be inside the city boundaries.

- Policy 2-P-4 Consider amendments to the current Sphere of Influence for properties along the eastern and western edges of the City, to take advantage of providing City services for the development of adjacent vacant lands.

The undeveloped Southeast Border Area has historically been considered part of Pittsburg, and is a logical extension of the Highlands Ranch development. The Southeast Border Area can be served by extending City services to the property and the City supports its annexation into the City of Pittsburg. This will help protect the vacant land from being developed in the City of Antioch. Developable sites west of Bay Point can also be served by extending existing City services.

- Policy 2-P-9 Allow development of residential uses in transition areas where real estate interest in industrial land adjacent to existing or planned residential areas has diminished. However, ensure project design avoids potential activity conflicts.

- Policy 2-P-13 Ensure that buffers—including landscaping, berms, parking areas, and storage facilities—are used to separate potentially incompatible activities.

- Policy 2-P-15 Ensure minimum residential densities, in accordance with the ranges stipulated in this Plan.

This would require update of the City's Zoning Ordinance to ensure consistency with the General Plan, including rezoning of sites to appropriate designations so that planned development is within the designated range.

Policy 2-P-16    Develop criteria and standards for small-lot single-family residential development that:

- Promotes design and development flexibility;
- Includes design and bulk standards to ensure that development is appropriate and related to underlying lot size; and
- Ensures that residential development promotes a neighborhood orientation, with limitation on frontage that can be occupied by garages.

Goal 2-G-25    Ensure design of new developments as inter-connected residential neighborhoods, rather than distinct, introverted subdivisions.

*Growth Management Element*

Goal 3-G-1    Manage the City's growth to balance development of housing options and job opportunities, protection of open space and habitat areas, construction of transportation improvements, and preservation of high quality public facilities.

Goal 3-G-2    Realize the opportunities afforded by establishment of the Voter Approved Urban Limit Line to allow the City to grow in such a way as to diversify and expand the employment base, develop a range of housing opportunities, increase the depth of municipal fiscal resources, enhance the quality of urban life for all Pittsburg residents and prohibit urban development beyond the Voter Approved Urban Limit Line.

Goal 3-G-3    Provide a range of development intensities, with the highest intensities in Downtown and in areas approximate to transit and services, and lower intensities in hillsides and at the City's southern edge.

Goal 3-G-5    Ensure that new residential, commercial and industrial growth within the Voter-Approved Urban Limit Line pays its share of the costs for the construction of facilities needed to serve that growth.

Policy 3-P-1    Allow urban and suburban development only in areas where public facilities and infrastructure (police, fire, parks, water, sewer, storm drainage, and community facilities) are available or can be provided.

Prior to development approval, public service agencies and/or districts should be contacted and assurance gained that areas of urban expansion will have all necessary infrastructure.

*Urban Design Element*

Goal 4-G-3     Ensure that new residential development in the southern hills provides adequate transition between urban and open space uses on the City's edge.

Policy 4-P-6     Ensure that developers of new residential projects in the southern hills plant trees and other vegetation along collector and arterial roadways, in order to maintain the sense of "rural" open space at the City's southern boundary.

Although residential developers should restrict planting of trees and landscaping that will block views of the hills from other areas of the City, or views of Suisun Bay from hillside streets, vegetation along new roadways will contribute to the goal of retaining a sense of open space.

Policy 4-P-7     Ensure that design treatment of new development at the City's southern boundary retains a rural feel by:

- Discouraging the use of solid walls along these edges (fences must be visually permeable; however, discourage use of chain link in front and side yards);
- Using materials and design to promote a rural feeling (for example, wooden or other rustic materials); and
- Encouraging development at the outer edge of the City to face outwards toward the rural landscape (preventing a solid wall of residential back yard fences).

Goal 4-G-17     Encourage development of diverse and distinctive neighborhoods that build on the patterns of the natural landscape and provide a sense of connection with surrounding uses.

Goal 4-G-18     Ensure that neighborhood streets provide safe and attractive connections to local schools, parks, commercial centers, and transit facilities for pedestrians and bicycles.

Policy 4-P-80     Any subdivision involving more than four units, regardless of the number of parcels shall be subject to design review. Prepare a design standards checklist and/or residential design guidelines for use during review of development projects.

- Policy 4-P-81 Encourage neighborhood design—including components such as land use, development intensity, and street layout—to be responsive to natural and institutional elements, including:
- Creeks. Ensure protection of riparian corridors through building setbacks. Ensure adequate pedestrian access to creeks, and provide connections from local trails and sidewalks. Integrate parks and open space areas with creeks.
  - Urban Edges. Ensure feathering from urban to rural intensities at City boundaries.
  - Adjacent Uses. Promote connections with surrounding land uses by integrating street networks and visual/architectural treatments.
  -
- Policy 4-P-83 Ensure that new developments provide an integrated pattern of streets and pedestrian paths that provide connections between neighborhoods. As part of the City's Subdivision Regulations, establish street connectivity requirements.
- New residential streets, particularly those adjacent to existing neighborhoods, should provide street and pedestrian connections to adjacent areas to enable more efficient movement throughout the City. Single-access neighborhoods should be avoided.
- Policy 4-P-85 Provide safe and comfortable pedestrian routes through local neighborhoods by requiring sidewalks on both sides of residential streets, except in hillside areas, by planting street trees adjacent to the curb, and by minimizing curb cuts.

#### **4.9.4 IMPACTS AND MITIGATION MEASURES**

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The following section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to land use and planning. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

##### **Standards of Significance**

In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of this EIR, an impact is considered significant if the proposed project would:

- Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect (Initial Study Question X.b.); or

- Conflict with any applicable habitat conservation plan or natural community conservation plan (Initial Study Question X.c.).

### Issues Not Discussed Further

As presented in the Introduction to Analysis chapter of this EIR, the Initial Study prepared for the proposed project determined that development of the proposed project would result in no impact related to the physical division of an established community (Initial Study Question X.a.). Thus, impacts related to such are not discussed further in this EIR. The proposed project's impacts associated with any applicable habitat conservation plan or natural community conservation plan are addressed in the Biological Resources chapter of this EIR.

### **Method of Analysis**

The following section identifies land use and planning changes included in the proposed project. In addition, the project is evaluated for potential incompatibilities with existing City of Pittsburg General Plan policies adopted for the purpose of avoiding or mitigating significant environmental effects. It should be noted that the City is ultimately responsible for making the determination regarding land use compatibility and consistency with the General Plan.

### **Impacts and Mitigation Measures**

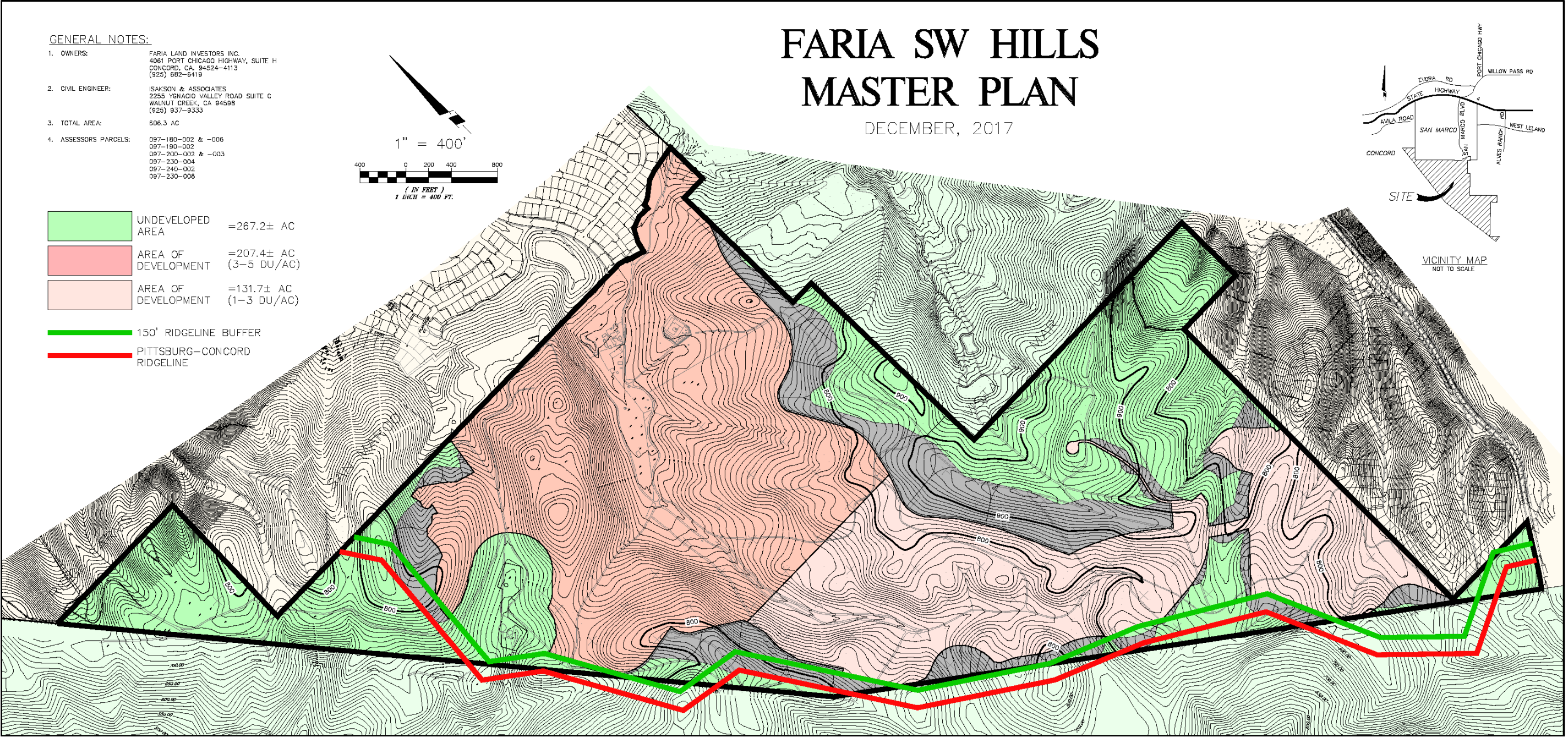
The following discussion of land use and planning impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

#### **4.9-1 Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect. Based on the analysis below, and with implementation of mitigation, the impact would be *less than significant*.**

According to the 2005-2020 Contra Costa County General Plan Land Use Element Map, the approximately 606-acre project site is designated AL. The proposed project would include annexation of the project site into the City of Pittsburg City Limits, CCWD service area, and DDSD service area. Although, the proposed project is generally consistent with the existing City of Pittsburg General Plan policies, which have been addressed at a program level in the technical chapters of this EIR, the project may not be consistent with all City of Pittsburg General Plan policies, specifically policies related to geology (see the Geology, Soils, and Seismicity chapter of this EIR for more detail). Therefore, the project would require approval of a General Plan Amendment (GPA) to introduce new goals and policies relevant to the project site, remove an existing General Plan goal and several policies, and change the existing General Plan land use patterns for the project site to match the proposed Faria SW Hills Draft Master Plan Map (see Figure 4.9-4 and Figure 4.9-5).



Figure 4.9-4  
Proposed Land Use Map











Policy 4-P-14 & 4-P-25 which are proposed for removal, were included in the General Plan to help address a Significant and Unavoidable Impact related to new development that may alter the visual character of the hillsides (see General Plan EIR, Impact 4.2-c). Minor changes are also proposed to General Plan Policy 4-P-2 to help address a Significant and Unavoidable impact related to new development that may block views of hills and major ridgelines (see General Plan EIR, Impact 4.2-b). At this point in time, all remaining hillside areas within the City limits of Pittsburg, in which these policies would apply, have already obtained entitlements for development and are in compliance with the General Plan policies. The only remaining property that these policies would be applicable to for future development is the Faria property. Further, this EIR does include a site-specific analysis in the Aesthetics chapter relating to the visual character of the site and views of the hills from neighboring jurisdictions. This EIR found, similar to the General Plan EIR, that the impacts related to the visual character of the site (i.e., aesthetics) would continue to be significant and unavoidable. However, land use impacts related to the removal/modification of these policies would be less than significant, as they now only apply to the Faria property.

It should be noted that the proposed GPA does not substantially alter the type and intensity of development permitted within the project site. Rather, the GPA redefines the areas of open space and development. Should the Pittsburg City Council approve the requested annexation and GPA included in the proposed project, the proposed land uses would be consistent with the new land use designations for the site. In addition, the project would be consistent with existing residential development trends within the project region.

Policy 4-P-10 of the City's General Plan provides further regulation regarding grading and the protection of open space on hillsides. The policy encourages developers to protect undeveloped areas within open space and to avoid extensive grading of hillsides. The proposed project would include 267.2 acres of open space within the project site, which would represent a 138.2 acre increase in designated open space within the project site as compared to existing General Plan land use designations. Although approval of the proposed project would increase the amount of open space designated within the project site, the proposed project would include extensive grading along hillsides within the project site. Such grading would be necessary to provide for relatively level development areas within the project site, and, as discussed in greater depth in Chapter 4.6, Geology, Soils, and Seismicity, of this EIR, to provide slope stability and landslide prevention. Consequently, the proposed project would require a text amendment to the General Plan to remove Policy 4-P-10.

The Draft Master Plan provides Design Review Guidelines that are derived from existing General Plan Policies. The Guidelines are intended to provide a framework for the design of future development within the project site. Furthermore, development within the project site would be subject to various development regulations specified in the Draft Master Plan, including, but not limited to, density requirements, building height restrictions, flag lots, landscaping requirements, pedestrian access, and outdoor lighting. In addition, the Draft Master Plan specifies that the total number of dwelling units within the project site would not be permitted to exceed 1,500, consistent with Policy 2-P-96 in the City's General Plan. Because the Guidelines were drafted in compliance with existing General Plan policies,



development within the project site consistent with the Guidelines would be consistent with the City's General Plan Policies related to design and development.

Although the proposed project would be consistent with the foregoing general Plan Policies, Policy 10-P-2 of the City's General Plan restricts development from occurring on slopes greater than 30 percent in areas that are over 900 feet in elevation. Elevations within the project site vary from 435 feet at the lowest point to approximately 1,000 feet at the highest point. As shown in Figure 4.9-4, the majority of development areas within the project site would be within the lower portions of the site, below 900 feet. However, the proposed project would include designation of a portion of the site above 900 feet in elevation for residential development as well as designation of a portion of the site above 900 feet in elevation for development of a water tank. With the exception of the proposed water tank, development of the residential portion of the project site in excess of 900 feet in elevation would conflict with Policy 10-P-2.

Plans, policies and regulations adopted by the City or other responsible agencies for avoiding or mitigating a significant physical environmental effect have been addressed at a program level in the technical chapters of this EIR.<sup>10</sup> Future development within the project site would require Tentative Map approval and would be subject to Design Review, which would ensure consistency with the Draft Master Plan and Design Review Guidelines. However, as discussed above, implementation of the proposed project would result in designation of a portion of the project site with elevations in excess of 900 feet for future residential development and development of a water tank. Although development of the water tank in areas of the site exceeding 900 feet in elevation would be acceptable, future residential development above 900 feet in elevation would create a conflict with the City's General Plan resulting in a *significant* impact, which would be inconsistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (c), (d), (f), (h), (n), and (o), as discussed in Appendix J of this EIR.

#### Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level, and ensure the proposed project would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (c), (d), (f), (h), (n), and (o), as discussed in Appendix J of this EIR.

- 4.9-1      *Prior to approval of the first tentative map for the project site, the Land Use Map for the proposed project shall be revised to remove development from all areas with elevations in excess of 900 feet. All areas within the project site with elevations in excess of 900 feet shall be designated as Open Space, and, with the exception of areas designated for development of a future water tank, future development shall not be allowed to occur in any areas*

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<sup>10</sup> Also see Appendix J to this EIR for a detailed discussion of the project's consistency with the applicable General Plan land use policies.

*of the project site with elevations exceeding 900 feet. The revised Land Use Map shall be subject to review and approval by the City of Pittsburg Community Development Department.*

## **Cumulative Impacts and Mitigation Measures**

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Land use conflicts are site-specific and do not typically result in a cumulative impact. Incompatibility issues are addressed and mitigated on a project-by-project basis. The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area.

### **4.9-2 Result in cumulative conflicts with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect. Based on the analysis below, the cumulative impact would be *less than significant*.**

The proposed project site is located within the City of Pittsburg Urban Limit Line and the LAFCo-approved SOI. According to the Pittsburg General Plan Land Use Element Map, the approximately 606-acre project site is designated LDR, HLDR, and OS. With the approval of Measure P, the project site has been rezoned HPD and OS. The maximum buildout for the proposed project site, according to the current General Plan, is 1,500 single-family units. As such, the City has anticipated development of the site with residential uses.

Land use incompatibility issues are site-specific impacts and mitigated, as necessary, on a project-by-project basis. Should the City Council approve the requested GPA, the proposed project would be consistent with applicable land use plan, policies, and regulations. Furthermore, with approval of Measure P, the City has previously considered cumulative buildout of the project area with residential uses. As discussed in Appendix J to this EIR, the proposed project would not result in incompatibilities with any surrounding land uses or with applicable Contra Costa County LAFCo standards. Therefore, the proposed project would not result in any cumulative land use and planning incompatibilities with regard to applicable land use plans, policies or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect. Thus, a *less-than-significant* cumulative impact would occur.

Mitigation Measure(s)

*None required.*





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## 4.10 NOISE

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## 4.10

## NOISE

### 4.10.1 INTRODUCTION

The Noise chapter of the EIR discusses the existing noise environment in the immediate project vicinity and identifies potential noise-related impacts and mitigation measures associated with the proposed project. Specifically, the Noise chapter analyzes potential noise impacts due to and upon development of the project site relative to applicable noise criteria and to the existing ambient noise environment. Information presented in the Noise chapter is primarily drawn from the *Faria Annexation Environmental Noise Assessment*<sup>1</sup> prepared specifically for the proposed project by j.c. brennan & associates, Inc. (see Appendix K), as well as the Pittsburgh General Plan<sup>2</sup> and the associated EIR.<sup>3</sup>

### 4.10.2 EXISTING ENVIRONMENTAL SETTING

The Existing Environmental Setting section provides a discussion of acoustical terminology, the effects of noise on people, existing sensitive receptors in the project vicinity, existing sources and noise levels in the project vicinity, and groundborne vibration.

#### Acoustical Terminology

Acoustics is the science of sound. Sound is a mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough, 20 times per second, they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second called Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid awkwardness, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels correspond closely to human perception of relative loudness.

<sup>1</sup> j.c. brennan & associates, Inc. *Faria Annexation Environmental Noise Assessment*. April 9, 2014.

<sup>2</sup> City of Pittsburgh. *General Plan Pittsburgh 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

<sup>3</sup> City of Pittsburgh. *City of Pittsburgh General Plan Draft Environmental Impact Report (SCH#1999072109)*. January, 2001.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. A strong correlation exists between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. Accordingly, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in the Noise chapter are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level ( $L_{eq}$ ), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the composite noise descriptor, the day/night average level ( $L_{dn}$ ), and shows very good correlation with community response to noise. The  $L_{dn}$  is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, short-term variations in the noise environment tend to get disguised.

Because sensitivity to noise increases during the evening and at night, due to excessive noise interfering with the ability to sleep, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Community Noise Equivalent Level (CNEL) is a measure of the cumulative noise exposure in a community, with a five dB penalty added to evening (7:00 PM - 10:00 PM) and a 10 dB addition to nocturnal (10:00 PM - 7:00 AM) noise levels.  $L_{dn}$  is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during 7:00 PM and 10:00 PM are grouped into the daytime period.

Table 4.10-1 provides a list of several examples of the noise levels associated with common activities.

### **Effects of Noise on People**

The effects of noise on people can be placed in the following three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; or
- Physiological effects such as hearing loss or sudden startling.

<b>Table 4.10-1 Typical Noise Levels</b>		
<b>Common Outdoor Activities</b>	<b>Noise Level (dBA)</b>	<b>Common Indoor Activities</b>
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing
<i>Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. November, 2009.</i>		

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. A completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction does not exist. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way a new noise compares to the existing environment to which one has adapted (i.e., the ambient noise level). In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing the new noise.

With regard to increases in A-weighted noise levels, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of one dB cannot be perceived;
- Outside of the laboratory, a three dB change is considered a barely perceivable difference;
- A change in level of at least five dB is required before any noticeable change in human response would be expected; and
- A 10 dB change is subjectively heard as approximately a doubling in loudness, and would typically cause an adverse response.

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of approximately six dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or

manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate.

## **Existing Conditions**

The existing surrounding land uses, as well as the ambient noise levels and sources in the project area, are discussed below.

### Surrounding Land Uses and Sensitive Receptors

With the exception of two single family homes located near the terminus of San Marco Boulevard, and scattered outbuildings, the remainder of the project area consists of vacant and undeveloped hills just beyond the southwestern boundary of the City of Pittsburg. The project site is generally bounded by Bailey Road and the Vista Del Mar residential subdivision to the east, the Concord City Limits and recently closed Concord Naval Weapons Station (CNWS) to the south and west, and the San Marco planned development area along the northern boundary and other open space areas along the northeastern boundary. Immediately west of the project site (within the CNWS), is land designated for open space and habitat protection in the adopted CNWS Reuse Plan<sup>4</sup> and certified Final EIR<sup>5</sup> that precludes development within the City of Concord eastern hillsides.

Certain land uses are more sensitive to ambient noise levels than others due to the amount of noise exposure (in terms of both exposure time and shielding from noise sources) and the type of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks, and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses, and, thus, are referred to as sensitive receptors. As discussed above, the project site is currently surrounded by existing unimproved land uses and single-family residential uses to the north. The nearest existing sensitive land uses to the proposed project site would be the residences of the San Marco residential subdivision, specifically along Rio Verde Circle, Barranca Drive, Pilar Ridge Drive, Rosa Blanca Drive, and San Marco Boulevard, which are adjacent to the project site, as well as the various agricultural-related single-family residences in the vicinity. The closest sensitive receptor is anticipated to be approximately 50 feet away from the project site. The sensitive receptors may be affected by construction noise and increased project-related traffic noise.

### Existing Ambient Noise Levels

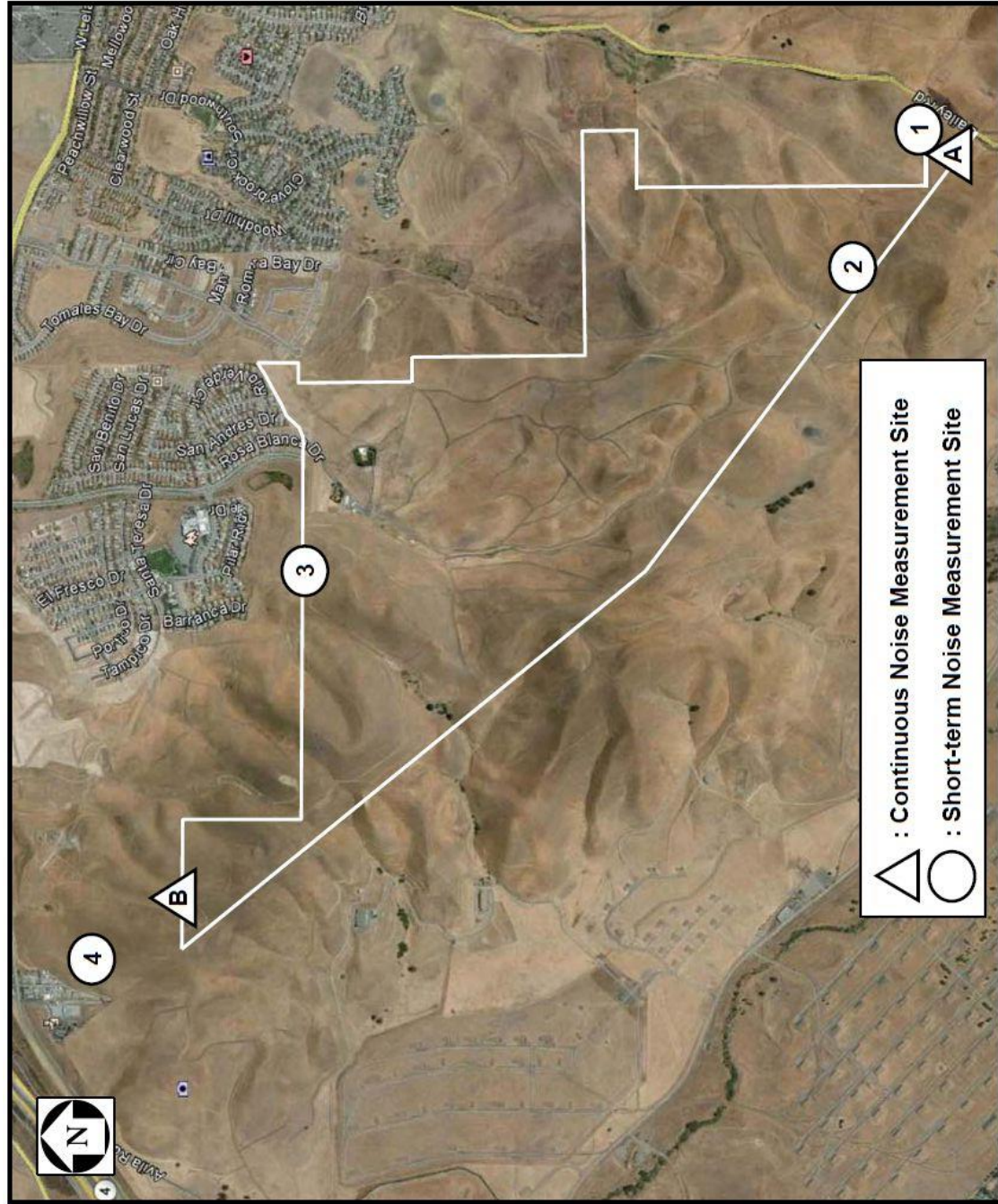
To quantify the existing ambient noise environment in the project vicinity, short-term and continuous (24-hour) noise level measurements were conducted on the project site on Thursday, February 5, 2014 at the locations shown on Figure 4.10-1. Noise monitoring locations were chosen based on existing sources of noise in the project area, and the monitoring site's ability to provide representative noise data for the project site.

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<sup>4</sup> City of Concord. *Concord Naval Weapons Station Reuse Plan*. Adopted February 2010.

<sup>5</sup> City of Concord. *Concord Naval Weapons Station Reuse Plan Final Environmental Impact Report*. Certified January 24, 2012.

**Figure 4.10-1**  
**Noise Measurement Locations**



Source: j.c. brennan & associates, Inc., 2014.





The sound level meters were programmed to collect hourly noise level intervals at each site during the survey. The maximum value ( $L_{\max}$ ) represents the highest noise level measured during an interval. The average value ( $L_{\text{eq}}$ ) represents the energy average of all of the noise measured during an interval. The median value ( $L_{50}$ ) represents the sound level exceeded 50 percent of the time during an interval. The noise level measurement survey results are provided in Table 4.10-2. The complete results of the continuous noise monitoring are included in Appendix K.

Table 4.10-2								
Summary of Existing Background Noise Measurement Data								
Site	Location	L <sub>dn</sub>	Average Measured Hourly Noise Levels, dB					
			Daytime (7am-10pm)			Nighttime (10pm-7am)		
			L <sub>eq</sub>	L <sub>50</sub>	L <sub>max</sub>	L <sub>eq</sub>	L <sub>50</sub>	L <sub>max</sub>
Continuous (24-hour) Noise Level Measurements								
A	Southeast corner of site	65.3	64	59	75	57	47	69
B	Northwest corner of site	46.9	43	39	65	40	36	54
Short-term Noise Level Measurements								
ST-1	Southeast corner by Bailey Road	NA	62	57	72	@ 12:50 PM		
ST-2	Southwest property line	NA	54	52	64	@ 1:30 PM		
ST-3	North center on property line	NA	43	41	56	@ 2:25 PM		
ST-4	Northwest overlooking gun range	NA	71	58	86	@ 3:10 PM		
Source: j.c. brennan & associates, Inc., 2014.								

### Existing Roadway Noise Levels

Existing noise levels in the project area are primarily due to traffic on nearby roadways. To predict existing noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used, which predicts hourly  $L_{\text{eq}}$  values for free-flowing traffic conditions. Traffic volumes for existing conditions were obtained from the traffic study prepared for the proposed project by Kimley-Horn & Associates, Inc. (see Appendix N).<sup>6</sup> Truck percentages and vehicle speeds on the local area roadways were estimated from field observations.

The actual distances to noise level contours may vary from the distances predicted by the FHWA model due to roadway curvature, grade, shielding from local topography or structures, elevated roadways, or elevated receivers. Therefore, the existing traffic noise levels may vary at the given distances presented in Table 4.10-3, below. Table 4.10-3 shows the existing traffic noise levels in terms of  $L_{\text{dn}}$  at a distance of 75 feet from the centerline of each roadway segment, as well as the estimated existing distances from roadway centerlines to noise level contours associated with each roadway segment. Distances reported in Table 4.10-3 are considered to be conservative estimates of noise exposure because the estimates do not include noise reducing features such as roadway curvature, grade, shielding from topography or structures, or elevated receivers. Consideration of such factors would likely reduce the distances presented in Table 4.10-3. A complete listing of the FHWA Model input data is included within Appendix K to this EIR.

<sup>6</sup> Kimley-Horn and Associates, Inc. *Traffic Impact Study – Faria Annexation, Pittsburg, CA*. May 12, 2014.



**Table 4.10-3  
Existing Traffic Noise Levels and Distances to Contours**

Roadway	Segment	Exterior Traffic Noise Level ( $L_{dn}$ ) at 75 feet	Distance to Traffic Noise Contours, $L_{dn}$		
			70 dB	65 dB	60 dB
Leland Rd	San Marco Blvd to Bailey Rd	62.4	23	50	108
Leland Rd	Bailey Rd to Montevideo Dr	65.9	40	87	187
Leland Rd	Montevideo Dr to Dover Way	64.0	30	64	139
Leland Rd	Dover Way to Railroad Ave	63.6	28	61	131
San Marco Blvd	Leland Rd to Santa Teresa Dr	61.4	20	43	92
Bailey Rd	North of Project to Leland Rd	58.5	13	28	59
Bailey Rd	South of Project to Myrtle Dr	62.3	23	50	107
Bailey Rd	Myrtle Dr to Concord Blvd	59.7	16	33	72
Bailey Rd	Concord Blvd to Clayton Rd	59.4	15	32	68
Willow Pass Rd	Avila Rd to Olivera Rd	64.1	30	65	141
Concord Blvd	West of Farm Bureau Rd	63.5	28	60	129
Concord Blvd	Farm Bureau Rd to Bailey Rd	64.3	31	67	145
Concord Blvd	Bailey Rd to Railroad Ave	63.3	27	58	124
Clayton Rd	Babel Ln to Treat Blvd	67.5	51	111	239
Clayton Rd	Treat Blvd to Bailey Rd	68.2	57	122	263
Clayton Rd	Bailey Rd to Railroad Ave	67.7	53	114	245
Treat Blvd	North of Clayton Rd	61.1	19	41	89
Treat Blvd	Clayton Rd to Cowell Rd	66.1	41	89	192
Notes: Distances to traffic noise contours are measured in feet from the centerlines of the roadways.					
Source: FHWA-RD-77-108 with inputs from Kimley-Horn & Associates, Inc., and j.c. brennan & associates, Inc. 2014.					

It should be noted that the City's General Plan includes Bailey Road as a major corridor in respect to potential traffic noise levels. Bailey Road is in proximity to the Draft Master Plan Area, and would function as one of the access points to the Draft Master Plan Area

#### Existing Off-site Noise Levels

The Concord Police Academy Training Facility, which includes a gun range, is located approximately 1,600 feet from the northwest corner of the project site. The project site is shielded from the gun range by intervening topography. Noise level measurements of the gun range were measured near the property line of the Concord Police Academy Training Facility, a distance of 540 feet from the gun range, while the gun range was operating. The measured noise level was 71 dBA  $L_{eq}$  and 86 dBA  $L_{max}$ . During the same time, the continuous 24-hour noise measurements were being conducted at Site B (west portion of the site). Measured noise levels at Site B were 44 dBA  $L_{eq}$  and 68 dBA  $L_{max}$ .

## Groundborne Vibration

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

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

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 4.10-4, which was developed by Caltrans, shows the reactions of people and the effects on buildings associated with continuing vibration levels. The vibration levels are presented in terms of ppv in in/sec.

<b>Table 4.10-4</b>		
<b>Effects of Vibration on People and Buildings</b>		
<b>Velocity Level, PPV (in/sec)</b>	<b>Human Reaction</b>	<b>Effect on Buildings</b>
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible (general threshold for human annoyance)	Virtually no risk of damage to normal buildings
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential dwellings such as plastered walls or ceilings
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to newer residential structures
<i>Source: Caltrans. Transportation and Construction Vibration Guidance Manual. September 2013.</i>		

Table 4.10-4 indicates that the threshold for damage to structures is 0.3 in/sec ppv. The general threshold at which human annoyance could occur is noted as 0.1 in/sec ppv. j.c. brendan & associates considers 0.1 in/sec ppv as a safe criterion that would protect against architectural or structural damage.

### 4.10.3 REGULATORY CONTEXT

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In order to limit population exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the State have established standards and ordinances to control noise. The following provides a general overview of the existing regulations established regarding noise and vibration that are relevant to the proposed project.

#### State Regulations

##### California State Building Codes

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings that house people, including hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L<sub>dn</sub> or CNEL in any habitable room. In addition, Title 24 mandates that for structures containing noise-sensitive uses, such as residences, to be located where the L<sub>dn</sub> or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must specify a ventilation or air conditioning system to provide a habitable interior environment.

#### Local Regulations

##### City of Pittsburg General Plan

The Pittsburg General Plan Noise Element contains goals, policies, and implementation measures for assessing exterior and interior noise impacts within the City. The following noise-related goals and policies are applicable to the proposed project.

- |               |   |
|---------------|---|
| Goal 12-G-1   | Protect public health and welfare by eliminating or minimizing the effects of existing noise problems, and by preventing increased noise levels in the future.  |
| Goal 12-G-2   | Encourage criteria such as building design and orientation, wider setbacks, and intense landscaping in lieu of sound walls to mitigate traffic noise along all major corridors, except along State Route 4. |
| Goal 12-G-3   | Continue efforts to incorporate noise considerations into land use planning decisions, and guide the location and design of transportation facilities to minimize the effects on adjacent land uses.        |
| Policy 12-P-1 | As part of development review, use Figure 12-3 (presented as Table 4.10-5 below) to determine acceptable uses and installation requirements in noise impacted areas.  |

<b>Table 4.10-5</b> <b>Land Use Compatibility for Community Noise Environments</b>				
<b>Land Use Category</b>	<b>Exterior Day/Night Noise Levels</b> <b>DNL or Ldn, dB</b>			
	<b>Normally Acceptable<sup>1</sup></b>	<b>Conditionally Acceptable<sup>2</sup></b>	<b>Normally Unacceptable<sup>3</sup></b>	<b>Clearly Unacceptable<sup>4</sup></b>
Residential – Single Family	50 – 60	55 – 70	70 – 75	75 – 85
Residential – Multiple Family	50 – 65	60 – 70	70 – 75	75 – 85
Transient Lodging – Motels, Hotels	50 – 65	60 – 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, <sup>5</sup> Nursing Homes	50 – 70	60 – 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	65 – 85	NA
Sports Arena, Outdoor Spectator Sports	NA	50 – 75	70 – 85	NA
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 75	NA	70 – 80	80 – 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 – 77.5	75 – 85	NA
Industrial, Manufacturing	50 – 75	70 – 80	75 – 85	NA
<sup>1</sup> Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. <sup>2</sup> Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. <sup>3</sup> Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does not proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. <sup>4</sup> Clearly Unacceptable: New construction or development clearly should not be undertaken. <sup>5</sup> Because hospitals are often designed and constructed with high noise insulation properties, it is possible for them to be satisfactorily located in noisier areas.				
<i>Source: Contra Costa County. Contra Costa County General Plan 2020 Policy Document. January, 2005.</i>				

Figure 12-3 (Table 4.10-5 of this chapter) is based on land use and noise exposure compatibility levels in Appendix A of the State of California General Plan Guidelines. The table is consistent with the provision of State law that requires special noise insulation for new residential units within 60 dB Ldn noise exposure contours. The table's land use categories do not correspond to the land use classifications on the General Plan Land Use Diagram, but to actual uses in development projects.

- |                |   |
|----------------|---|
| Policy 12-P-4  | Require noise attenuation programs for new development exposed to noise above normally acceptable levels. Encourage noise attenuation programs that avoid visible sound walls.  |
| Policy 12-P-5  | Require that applicants for new noise-sensitive development, such as schools, residences, and hospitals, in areas subject to noise generators producing noise levels greater than 65 dB CNEL obtain the services of a professional acoustical engineer to provide a technical analysis and design of mitigation measures.   |
| Policy 12-P-6  | Ensure that new noise-sensitive uses, including schools, hospitals, churches, and homes, in areas near roadways identified as impacting sensitive receptors by producing noise levels greater than 65 dB CNEL (Figure 12-1), incorporate mitigation measures to ensure that interior noise levels do not exceed 45 dB CNEL. |
| Policy 12-P-7  | Require the control of noise at the source through site design, building design, landscaping, hours of operation, and other techniques, for new development deemed to be noise generators.  |
| Policy 12-P-8  | Develop noise attenuation programs for mitigation of noise adjacent to existing residential areas, including such measures as wider setbacks, intense landscaping, double-pane windows, and building orientation muffling the noise source.   |
| Policy 12-P-9  | Limit generation of loud noises on construction sites adjacent to existing development to normal business hours between 8 AM and 5 PM.  |
| Policy 12-P-10 | Reduce the impact of truck traffic noise on residential areas by limiting such traffic to appropriate truck routes. Consider methods to restrict truck travel times in sensitive areas.   |

#### City of Pittsburg Municipal Code

The City of Pittsburg regulates construction noise in Chapter 9.44 (Noise) and Section 18.82.040 of the Municipal Code. Chapter 9.44 of the City's Municipal Code includes general prohibition of unreasonably loud activities, and regulations on the time of day that necessary loud equipment may be used. Meanwhile, Section 18.82.040 of the Municipal Code places restrictions on the time of day during which construction activity in proximity to existing residential areas can generate noise in excess of 65 dB, measured at the property line.

#### **4.10.4 IMPACTS AND MITIGATION MEASURES**

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The methods used to analyze the impacts of the proposed project related to noise and vibration are provided in this section, as well as the standards of significance used in identifying project-specific and cumulative impacts. The standards are based on CEQA Guidelines and policies of the City of Pittsburgh.

##### **Standards of Significance**

In accordance with Appendix G of the CEQA Guidelines, the City of Pittsburgh has determined that implementation of the project would result in significant noise and vibration impacts if the project would result in any of the following:

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, defined as:
  - An increase in the noise level of 1.5 dB or more where the ambient noise level exceeds 65 dBA;
  - An increase in noise levels of 3 dBA where the ambient noise level is between 60 dBA and 65 dBA; and
  - An increase in noise levels of 5 dBA or more where ambient noise levels are lower than 60 dBA (Initial Study Question XII.c.).
- Exposure of persons to or generation of noise levels in excess of standards established in the City of Pittsburgh General Plan. Specifically, exterior and interior noise levels of 65 dB  $L_{dn}$  and 45 dB  $L_{dn}$ , respectively, for residential uses exposed to transportation or other noise sources (Initial Study Question XII.a.).
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (Initial Study Question XII.d.).
- Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels. Specifically, a threshold of 0.1 in/sec ppv is established, because this is considered a safe criterion that would protect against architectural or structural damage and human annoyance (Initial Study Question XII.b.).

##### **Issues Not Discussed Further**

It should be noted that, as presented in the Introduction to Analysis chapter of this EIR, the Initial Study prepared for the proposed project (see Appendix C) determined that development of the proposed project related to the following would result in no impact:

- 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 project would expose people residing or working in the project area to excessive noise levels (Initial Study Question XII.e.).
- For a project within the vicinity of a private airstrip, the project would expose people residing or working in the project area to excessive noise levels (Initial Study Question XII.f.).



Accordingly, impacts related to aircraft noise or vibration are not further analyzed or discussed in this EIR chapter.

## **Method of Analysis**

Below are descriptions of the methodologies utilized to determine the existing ambient noise levels, traffic noise, and construction noise and vibration impacts. Further modeling details and calculations are provided in the Environmental Noise Assessment (see Appendix K). It should be noted that future traffic noise generation estimates are based on future traffic estimates from a Traffic Impact Study prepared by Kimley-Horn and Associates in March 2015. Since the preparation of the original March 2015 Traffic Impact Study, Kimley-Horn has updated the Traffic Impact Study of the proposed project. Although the updated report, which is discussed in-depth in Chapter 4.12, Transportation, Traffic, and Circulation of this EIR, includes slightly altered traffic volume estimates, j.c. brennan & associates determined that the changes to the Traffic Impact Study are not substantial enough to warrant changes to the conclusions of the Noise Assessment prepared for the proposed project.<sup>7</sup> The results of the noise analyses were compared to the standards of significance discussed above in order to determine the associated level of impact.

### Existing Ambient Noise Level Measurement Methodology

Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

### Traffic Noise Impact Assessment Methodology

To describe existing and future noise levels due to traffic, the FHWA RD-77-108 model was used. Direct inputs to the model included traffic volumes provided by Kimley-Horn & Associates, Inc. As discussed in Chapter 4.12, Transportation and Circulation, Kimley-Horn & Associates conducted traffic counts to establish the existing traffic volumes in the project area. Future traffic volumes were estimated using the Contra Costa Transportation Authority's Travel Demand Forecast Model for project area conditions with and without the proposed project. All of the traffic scenarios included in Chapter 4.12, including Existing Conditions, Existing plus Project Conditions, Long-Term (2035) Conditions, and Long-Term (2035) Plus Project Conditions, were included in the noise analysis prepared for the proposed project. The Long-Term (2035) Plus Project Condition represents the cumulative operational scenario for the proposed project.

The FHWA model is based upon the Calvenio reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions. To predict  $L_{dn}$  values, it is necessary to determine the day/night distribution of traffic and adjust the traffic

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<sup>7</sup> j.c. brennan & associates. *Faria Revised Traffic Volumes*. September 26, 2017.

volume input data to yield an equivalent hourly traffic volume. A complete listing of the FHWA Model input data is included in Appendix K to this EIR.

#### Construction Noise and Vibration Impact Methodology

Construction noise and vibration was analyzed using data compiled for various pieces of construction equipment at a distance of 50 feet. A distance of 50 feet was used to provide a conservative analysis for existing residences in the San Marco subdivision, and potential future residents in the approved Bailey Estates development to the east of the project site. Construction activities are discussed relative to the applicable City of Pittsburg noise policies.

#### **Project-Specific Impacts and Mitigation Measures**

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

##### **4.10-1 Cause a substantial permanent increase in ambient noise levels in the project vicinity above existing levels without the project. Based on the analysis below, the impact would be *less than significant*.**

For purposes of the CEQA analysis, the maximum buildout for the proposed project is assumed to include 1,500 single-family units. Based on the expected traffic generation and trip distribution for the project, Table 4.10-6 shows Existing traffic noise levels and the predicted traffic noise level increases from the local roadway network for the Existing Plus Project Condition at the nearest sensitive receptors.

Some existing noise sensitive receptors located along the project-area roadways are currently exposed to exterior traffic noise levels exceeding the City of Pittsburg normally acceptable 60 dBA  $L_{dn}$  exterior noise level standard, and in some cases the noise levels currently exceed the conditionally acceptable noise level standard of 65 dBA  $L_{dn}$  for residential uses.

The standards of significance included in Table 4.10-6 are based on an increase in existing noise levels due to the increase of traffic associated with a project. As shown in Table 4.10-6, the increase in ambient noise levels in the Existing plus Project Condition due to the addition of project traffic do not exceed the applicable standards of significance. Therefore, the proposed project would not cause a substantial permanent increase in ambient noise levels in the project vicinity above existing levels without the project, resulting in a *less-than-significant* impact.

#### Mitigation Measure(s)

*None required.*

**Table 4.10-6  
Existing and Existing Plus Project Traffic Noise Levels**

Roadway	Segment	Noise Levels ( $L_{dn}$ , dB) at Nearest Sensitive Receptors				
		Existing <sup>1</sup>	Existing + Project <sup>1</sup>	Change	Standard of Significance <sup>2</sup>	Exceed Standard?
Leland Rd	San Marco Blvd to Bailey Rd	62.4	62.5	0.1	3	NO
Leland Rd	Bailey Rd to Montevideo Dr	65.9	66.2	0.3	1.5	NO
Leland Rd	Montevideo Dr to Dover Way	64.0	64.3	0.3	3	NO
Leland Rd	Dover Way to Railroad Ave	63.6	64.0	0.4	3	NO
San Marco Blvd	Leland Rd to Santa Teresa Dr	61.4	63.2	1.8	3	NO
Bailey Rd	North of Project to Leland Rd	58.5	61.8	3.3	5	NO
Bailey Rd	South of Project to Myrtle Dr	62.3	64.1	1.8	3	NO
Bailey Rd	Myrtle Dr to Concord Blvd	59.7	61.5	1.8	5	NO
Bailey Rd	Concord Blvd to Clayton Rd	59.4	60.3	0.9	5	NO
Willow Pass Rd	Avila Rd to Olivera Rd	64.1	64.3	0.2	3	NO
Concord Blvd	West of Farm Bureau Rd	63.5	63.9	0.4	3	NO
Concord Blvd	Farm Bureau Rd to Bailey Rd	64.3	64.6	0.3	3	NO
Concord Blvd	Bailey Rd to Railroad Ave	63.3	63.4	0.1	3	NO
Clayton Rd	Babel Ln to Treat Blvd	67.5	67.6	0.1	1.5	NO
Clayton Rd	Treat Blvd to Bailey Rd	68.2	68.2	0.0	1.5	NO
Clayton Rd	Bailey Rd to Railroad Ave	67.7	67.7	0.0	1.5	NO
Treat Blvd	North of Clayton Rd	61.1	61.1	0.0	3	NO
Treat Blvd	Clayton Rd to Cowell Rd	66.1	66.3	0.2	1.5	NO

<sup>1</sup> Estimated traffic noise levels do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.

<sup>2</sup> The City of Concord uses an increase of 4 dBA or more, where noise levels would exceed the “normally acceptable” level, as the threshold for a significant increase in noise (City of Concord. *Concord 2030 General Plan* [pgs. 7-27 through 7-30]. July 10, 2012.)

Source: j.c. brennan & associates, Inc., 2014.

**4.10-2 Expose persons to or generate noise levels in excess of standards established in the General Plan. Based on the analysis below, the proposed project could result in noise levels in excess of exterior and interior noise standards, but with implementation of mitigation, the impact would be *less than significant*.**

Buildout of the proposed project includes a maximum of 1,500 single-family residential units, with primary access from San Marco Boulevard and Bailey Road. Because the project site is at the southerly extent of the Urban Limit Line and Sphere of Influence, roadways within the project site would not extend offsite to the south, except for Bailey Road at the southeast corner of the property. Other than identifying the primary access points, the current applications for annexation and rezoning do not define an internal circulation plan. Local traffic on roadways is typically the major source of noise in residential development; thus, once detailed development is proposed through future applications, related noise exposures can be estimated. To the extent that future residences would be located along future primary roadways or other currently unknown noise sources in the Draft Master Plan area, the potential exists for noise exposure levels to exceed the General Plan standard of 65 dB  $L_{dn}$  for exterior noise and 45 dB  $L_{dn}$  for interior noise. Thus, the proposed project would have a *significant* impact with respect to exposing persons to noise levels in excess of (exterior and interior noise) standards established in the City's General Plan.

Mitigation Measure(s)

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

4.10-2      *As part of any development application, the applicant shall submit a site-specific noise study with an analysis of traffic and any other significant noise generators and recommended measures to reduce the exterior and interior noise levels at all future residences or other sensitive receptors to below 65 dB  $L_{dn}$  and 45 dB  $L_{dn}$ , respectively. Potential measures could include, but would not be limited to, inclusion of noise buffers in site design, restriction of two-story homes, or incorporation of noise-insulating building materials such as windows with a sound transmission class rating of 35-38 and resilient channels for walls.*

**4.10-3 Construction of the project could cause a substantial temporary increase in ambient noise levels. Based on the analysis below, construction of the proposed project would result in periods of elevated ambient noise levels and the potential for annoyance, but with implementation of mitigation, the impact would be *less than significant*.**

Construction of the project would include ground clearing, grading, demolition, and construction of structures and improvements. During construction of the project, including roads, water and sewer lines and related infrastructure, noise from construction activities would add to the noise environment in the project vicinity. Existing residents in the project area could be affected by noise from grading and other construction activities. In addition, if developed in phases, residents of the early phases of the project could be affected by

construction noise from later phases. As shown in Table 4.10-7, equipment typically involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

<p style="text-align: center;"><b>Table 4.10-7</b> <b>Construction Equipment Noise</b></p>	
<b>Type of Equipment</b>	<b>Maximum Level, dB at 50 feet</b>
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85
<p><i>Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006.</i></p>	

Noise would also be generated during the construction phase by increased truck traffic on area roadways, such as truck traffic associated with the transport of heavy materials and equipment to and from construction sites and the movement of heavy construction equipment on the project site. The associated noise increase would be temporary in nature and would occur during normal daytime working hours, between 8:00 AM and 5:00 PM, as outlined in Section 18.82.040 of the Municipal Code. Existing residences in the San Marco and Vista Del Mar subdivisions and future residences in the Bailey Estates subdivision are located in close proximity to developable areas of the project site. Considering the proximity of existing and proposed residences, and the potential proximity of new residences if the project is phased, without the implementation of additional construction noise controls, construction of the proposed project would result in periods of elevated ambient noise levels and the potential for annoyance, and construction of the proposed project would result in a *significant* impact.<sup>8</sup>

**Mitigation Measure(s)**

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

**4.10-3(a)**      *In compliance with Section 18.82.040 of the City's Municipal Code, construction hours shall be restricted to 8:00 AM to 5:00 PM. In addition,*

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<sup>8</sup> A response to the Notice of Preparation asked about a past golden eagle sighting near the project site. Results of a California Natural Diversity Database search concluded that the sighting was near the Concord Naval Weapons Station, approximately 4,447 feet southwest of the project boundary on the other side of an intervening ridge. Noise impacts to golden eagle (or other nesting raptors) would only be anticipated to occur within approximately 300 feet of noise-generating construction. Because construction of the proposed project would occur over the ridge from where the golden eagle was sighted (over 4,000 feet away), impacts associated with construction noise would not be a significant impact related to the golden eagle.

*construction shall not occur on City-observed holidays. Such restrictions shall be noted on grading plans and other construction plans for the review and approval of the City of Pittsburg Community Development Department.*

4.10-3(b) *Prior to issuance of any grading permit, the project contractor shall ensure that all equipment to be used in the construction of the project (i.e., owned, leased, and subcontractor vehicles) shall be fitted with factory equipped mufflers and in good working order, subject to review and approval by the City Engineer. The aforementioned requirements shall be noted on the grading plans.*

4.10-3(c) *If the project is constructed in phases, construction staging areas and construction activities shall be located as far from prior phases as feasible, as determined by the City Engineer. Such restrictions shall be noted on grading plans and other construction plans for the review and approval of the City of Pittsburg Community Development Department.*

**4.10-4 Expose persons to, or generate, excessive groundborne vibration or groundborne noise levels. Based on the analysis below, the impact would be *less than significant*.**

The primary vibration-generating activities associated with development of the site with residential uses would occur during construction, when activities such as grading and utility placement are taking place. Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage could take the form of cosmetic or structural. Table 4.10-8, below shows the typical vibration levels produced by construction equipment.

<b>Table 4.10-8</b> <b>Vibration Levels for Varying Construction Equipment</b>			
<b>Type of Equipment</b>	<b>Peak Particle Velocity @ 25 feet (inches/second)</b>	<b>Peak Particle Velocity @ 50 feet (inches/second)</b>	<b>Peak Particle Velocity @ 100 feet (inches/second)</b>
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210	0.074	0.026
<i>Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.</i>			

Nearby existing sensitive receptors could be impacted by construction-related vibrations, especially vibratory compactors/rollers. The nearest receptors are located approximately

50 feet or further from any areas of the project site that might require grading or paving. At this distance, construction vibrations are predicted to be less than the identified threshold of significance of 0.1 in/sec. Therefore, implementation of the proposed project would not expose persons to, or generate, excessive groundborne vibration or groundborne noise levels, and impacts related to groundborne vibration would be considered *less than significant*.

Mitigation Measure(s)

*None required.*

## **Cumulative Impacts and Mitigation Measures**

The cumulative context for noise impacts associated with the proposed project consists of the existing and future noise sources that could affect the project or surrounding uses. Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Refer to Chapter 5, Statutorily Required Sections, of this EIR for more detail on the cumulative setting of the proposed project.

### **4.10-5 Cumulative impacts on traffic noise-sensitive receptors. Based on the analysis below, the project's contribution to cumulative noise would be *less than cumulatively considerable*.**

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to construction of the proposed project and on-site activities resulting from operation of the proposed project. Table 4.10-9 below shows cumulative, Long-Term traffic noise levels with and without the proposed project.

As presented in Table 4.10-9, the proposed project would not result in a substantial permanent increase in ambient noise levels above cumulative levels, as determined by the identified threshold. In addition, the new residential uses proposed for the project would be designed and constructed in order to comply with the applicable City of Pittsburg exterior and interior noise level standards, including adequate window and glass door design, noise attenuation methods, ventilation or air conditioning system, and park area locations. Compliance with such standards would be ensured by Mitigation Measure 4.10-2. As shown in Table 4.10-9, the Long-Term, cumulative increase in noise levels associated with implementation of the proposed project, and other cumulative projects within the area, would be below the City's applicable thresholds of significance. Therefore, the total noise increase associated with the proposed project would not have a cumulatively considerable incremental contribution to the surrounding noise environment, and the transportation noise impact would be considered *less than cumulatively considerable*.

Mitigation Measure(s)

*None required.*

**Table 4.10-9  
Long-Term and Long-Term Plus Project Traffic Noise Levels**

Roadway	Segment	Noise Levels ( $L_{dn}$ , dB) at Nearest Sensitive Receptors				
		Long-Term <sup>1</sup>	Long-Term + Project <sup>1</sup>	Change	Standard of Significance <sup>2</sup>	Exceed Standard?
Leland Rd	San Marco Blvd to Bailey Rd	65.4	65.5	0.1	1.5	NO
Leland Rd	Bailey Rd to Montevideo Dr	67.6	67.8	0.2	1.5	NO
Leland Rd	Montevideo Dr to Dover Way	65.8	66.0	0.2	1.5	NO
Leland Rd	Dover Way to Railroad Ave	65.5	65.7	0.2	1.5	NO
San Marco Blvd	Leland Rd to Santa Teresa Dr	62.8	64.3	1.5	3	NO
Bailey Rd	North of Project to Leland Rd	62.0	63.6	1.6	3	NO
Bailey Rd	South of Project to Myrtle Dr	67.3	68.0	0.7	1.5	NO
Bailey Rd	Myrtle Dr to Concord Blvd	63.4	64.3	0.9	3	NO
Bailey Rd	Concord Blvd to Clayton Rd	60.0	60.7	0.7	3	NO
Willow Pass Rd	Avila Rd to Olivera Rd	66.2	66.3	0.1	3	NO
Concord Blvd	West of Farm Bureau Rd	63.9	64.2	0.3	3	NO
Concord Blvd	Farm Bureau Rd to Bailey Rd	64.7	65.0	0.3	3	NO
Concord Blvd	Bailey Rd to Railroad Ave	63.3	63.4	0.1	3	NO
Clayton Rd	Babel Ln to Treat Blvd	68.7	68.8	0.1	1.5	NO
Clayton Rd	Treat Blvd to Bailey Rd	69.0	69.1	0.1	1.5	NO
Clayton Rd	Bailey Rd to Railroad Ave	68.8	68.8	0.0	1.5	NO
Treat Blvd	North of Clayton Rd	62.3	62.3	0.0	3	NO
Treat Blvd	Clayton Rd to Cowell Rd	66.9	67.1	0.2	1.5	NO

<sup>1</sup> Traffic noise levels do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.

<sup>2</sup> The City of Concord uses an increase of 4 dBA or more, where noise levels would exceed the “normally acceptable” level, as the threshold for a significant increase in noise (City of Concord. *Concord 2030 General Plan* [pgs. 7-27 through 7-30]. July 10, 2012.)

Source: j.c. brennan & associates, Inc., 2014.



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## 4.11 PUBLIC SERVICES AND UTILITIES

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## 4.11

## PUBLIC SERVICES AND UTILITIES

### 4.11.1 INTRODUCTION

The Public Services and Utilities chapter of this EIR summarizes setting information and identifies potential new demands resulting from the proposed project on water supply, wastewater systems, solid waste disposal, fire protection, law enforcement, schools, parks and recreation, library services, and energy utilities. Information for this chapter was drawn from project information provided by the *Water Supply Assessment for Faria/Southwest Hills Annexation EIR* (see Appendix L),<sup>1</sup> the Pittsburg General Plan<sup>2</sup> and the associated EIR,<sup>3</sup> the City of Pittsburg *Water System Master Plan*,<sup>4</sup> the City of Pittsburg 2015 Urban Water Management Plan,<sup>5</sup> the sanitation district Delta Diablo (DDSD) *Conveyance System Master Plan Update*,<sup>6</sup> the City of Pittsburg Five Year Capital Improvement Program,<sup>7</sup> the City of Pittsburg *Development of Water and Sewer Facility Reserve Charges* study,<sup>8</sup> the Faria Property Sanitary Sewer System technical memorandum (see Appendix M),<sup>9</sup> and information from local service providers. It should be noted that for purposes of this CEQA analysis, the maximum buildout for the proposed project site, according to the current General Plan, is 1,500 single-family units. Because the proposed project does not include detailed designs to be evaluated (such as a subdivision map or design review request), the project is being evaluated at a program level.

### 4.11.2 EXISTING ENVIRONMENTAL SETTING

The existing environmental setting section describes the existing water supply, wastewater collection and treatment, solid waste, fire protection and law enforcement services, as well as schools, parks and recreation facilities, library services, and electricity and natural gas services.

#### Water Supply

The City of Pittsburg provides water service to the Pittsburg Water Service Area, which comprises all of the area within the incorporated City limits, approximately 10,000 gross acres (15.6 square miles) (see Figure 4.11-1).

<sup>1</sup> West Yost Associates. *Water Supply Assessment for Faria/Southwest Hills Annexation EIR*. March 2015.

<sup>2</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

<sup>3</sup> City of Pittsburg. *City of Pittsburg General Plan Draft Environmental Impact Report (SCH#1999072109)*. January, 2001.

<sup>4</sup> AKEL Engineering Group, Inc. *City of Pittsburg Water System Master Plan*. December 2015.

<sup>5</sup> City of Pittsburg. *City of Pittsburg 2015 Urban Water Management Plan Final Draft*. June 2016.

<sup>6</sup> Delta Diablo. *Conveyance System Master Plan Update*. April 2010.

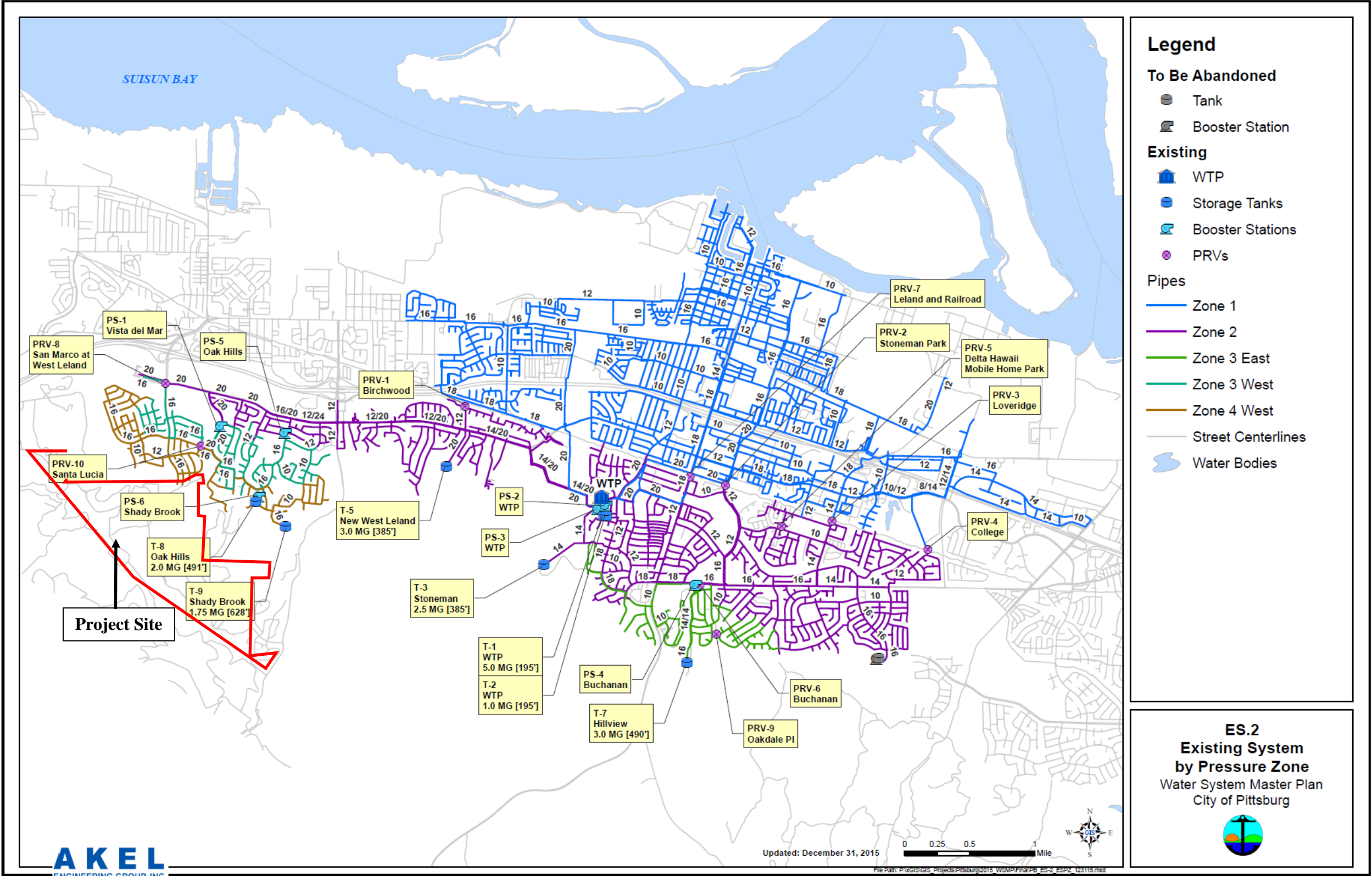
<sup>7</sup> City of Pittsburg. *Five Year Capital Improvement Program 2012/13 through 2016/17*. July 2012.

<sup>8</sup> City of Pittsburg. *Development of Water and Sewer Facility Reserve Charges*. April 2005.

<sup>9</sup> Isakson and Associates Inc. *Technical Memorandum: Faria Property Sanitary Sewer System*. December 27, 2013.



Figure 4.11-1  
Existing City Water System



Source: City of Pittsburgh Water System Master Plan, December 2015.



City water services are provided under contract with the Contra Costa Water District (CCWD). The Faria/Southwest Hills project site is located outside of CCWD's current service area.<sup>10</sup>

### Water Supplies

The City's water supplies include local groundwater, recycled water, and purchased surface water from the CCWD. Groundwater is pumped from two wells in the central part of the City. Surface water and groundwater are conveyed to the City's water treatment plant, treated, and then conveyed via the City's potable water distribution system.

### *Surface Water*

The City is within the CCWD service area and purchases Central Valley Project (CVP) water pumped from the Sacramento-San Joaquin Delta by CCWD, its wholesale supplier. The CVP is under the jurisdiction of the United States Bureau of Reclamation (USBR), and manages approximately nine million acre-feet of water throughout the State. Water managed within the CVP is used for agricultural, urban, and environmental uses.<sup>11</sup> CCWD has a contract with the USBR for 195,000 acre-feet per year (AFY) of CVP water. In March 2005, CCWD renewed their water service contract with the USBR for a period of 40 years through February 2045.

The City obtains 85 percent to 95 percent of its water supply from CCWD, pursuant to a contractual arrangement allowing the City to obtain such quantity of water as is necessary to meet its needs, subject to rationing restrictions in the event of drought or other extraordinary circumstances. CCWD's future supply projections indicate adequate availability of surface water sources delivered through its contract with the USBR, along with other available sources and short-term purchases under normal conditions.<sup>12</sup>

### *Groundwater*

The following section describes the groundwater basin underlying the Pittsburg area, as well as the City's two existing groundwater wells.

### Basin Description

Groundwater is pumped from two wells in the central part of the City. The City overlies the Pittsburg Plain Groundwater Basin (Groundwater Basin Number 2-4 as presented in the Department of Water Resources (DWR)'s Bulletin 118). This groundwater basin is not adjudicated and is under a groundwater management plan, managed by the City.<sup>13</sup> The basin is bounded by Suisun Bay on the north, the Tracy Sub-basin of the San Joaquin Valley Groundwater Basin on the east, and the Clayton Valley Groundwater Basin on the

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<sup>10</sup> Contra Costa Water District. *Faria/Southwest Hills Annexation, Comments on the Notice of Preparation (NOP) for the Draft EIR*. April 8, 2014.

<sup>11</sup> United States Bureau of Reclamation. *Mid-Pacific Region: About the Central Valley Project*. Available at <https://www.usbr.gov/mp/cvp/about-cvp.html>. Accessed September 2017.

<sup>12</sup> West Yost Associates. *Water Supply Assessment for Faria/Southwest Hills Annexation EIR*. March 2015.

<sup>13</sup> City of Pittsburg. *Pittsburg Plain Groundwater Basin Groundwater Management Plan*. October 2012.





west. The southern boundary of the basin extends inland from Suisun Bay by approximately one to three miles. The basin lies within the two major surface drainage basins of Kirker Creek and Willow Creek, both of which discharge into Suisun Bay.

The water-bearing units in the basin are Pleistocene to recent age alluvium deposits. The Pleistocene deposits consist of consolidated and unconsolidated sediments characterized by expansive clays. The modern alluvial sediments are characterized by soft, water saturated muds, peat and loose sands. The maximum thickness of these deposits is 400 feet. The aquifers in the basin area are hydrologically connected to the Sacramento River. Limited data exist regarding the occurrence and movement of groundwater in the basin.

Hydrographs created from DWR well data in the Pittsburg Plain Groundwater Basin indicate that groundwater levels have remained fairly stable over the period of record, with the exception of static water level drops and subsequent recovery associated with the 1976-1977, and 1987-1992 drought periods.<sup>14</sup> If present groundwater conditions persist, the DWR has identified that overdraft conditions would not exist.

The East County Water Management Association is developing a Pittsburg Plain Groundwater Management Program (GWMP) as part of its Integrated Regional Water Management Plan update. Funding for the GWMP will come from a Proposition 84 Planning Grant. The GWMP will supersede the City's existing Groundwater Basin Plan, establish a groundwater monitoring network and coordinate data collection, providing a framework for basin management to protect the groundwater resources.

#### Well Description

The City has two municipal wells, Rossmoor and Bodega, which together are currently producing about 1,500 acre-feet of groundwater per year. In 2010, the City completed the Bodega Well Pump Station Project. The Bodega well was installed to replace the Ballpark well, which experienced frequent shut downs and performed inconsistently.

The relatively shallow wells (approximately 200 feet deep) deliver approximately 600 (Rossmoor) and 1,200 (Bodega) gallons per minute, respectively. The total amount of groundwater pumped from the Pittsburg Plain Groundwater Basin in 2010 was 1,061 AFY. Groundwater use was less in 2009 and 2010 because of the removal of one well (Ballpark) from service in October 2008. The replacement well (Bodega) was placed into service in January 2010.

The City conducts regular tests of the water pumped from the two wells in compliance with State of California water quality standards (California Code of Regulations, Title 22) to make sure that the utilization of the water source is consistent with applicable State water standards.

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<sup>14</sup> California Department of Water Management. *Bulletin 118 - Pittsburg Plain Groundwater Basin*. Updated February 27, 2014.

### *Recycled Water*

The recycled water supply for the City comes from the DDSR, a California Wastewater Resources Recovery, Recycled Water Facility (RWF). The RWF ensures a consistent water quality standard is met for the City's recycled water supply. Use of recycled water is not proposed for the project.

### Water Treatment Plant

Surface water and groundwater are conveyed to the City's water treatment plant, treated, and then conveyed via the City's potable distribution system. The City operates a domestic water distribution system that consists of a water treatment plant, storage reservoirs, pump stations, pressure reducing valves, and over 211 miles of transmission and distribution pipelines.

The City owns and operates the Pittsburg Water Treatment Plant (PWTP). The plant has a design capacity of 32 million gallons per day (MGD), and is currently permitted by the State Department of Health Services. The PWTP currently operates at six to 18 MGD.<sup>4</sup>

### Water Demand

The City's 2015 Urban Water Management Plan (UWMP) describes the projected City water demand through 2040. Although the City has shown steady population growth over the last 20 years, future growth is limited as the availability of open, developable land declines. In 1979, the City had 29,100 residents; by 1986 the population had increased to 41,600, and the City's 2010 population was 63,264. The City's General Plan 2015-2023 Housing Element projects an average annual population growth rate of 1.3 percent.

The City's water use for 2015 was 8,772 AFY, which is a 13 percent increase in water consumption from the demand of 7,784 AFY in 2010. Although water use has increased since 2010, the increase represents a recovery from water demand reductions related to the 2008 economic recession. In fact, water demand in 2005 was 8,969 AFY, thus 2015 water demand is similar to pre-recession levels, despite the growth and development that has occurred within the City during that time. The total projected water use between 2015 and 2040 is illustrated in Table 4.11-1 below.

<b>Table 4.11-1</b>						
<b>City of Pittsburg Current and Projected Total Water Use</b>						
<b>Water Use</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>
Potable Water Demand	8,772	10,230	10,868	11,554	12,270	13,017
Recycled Water Demand	6,657	6,757	6,757	6,757	6,757	6,757
<b>Total Water Demand (AFY)</b>	<b>15,329</b>	<b>16,987</b>	<b>17,625</b>	<b>18,311</b>	<b>19,027</b>	<b>19,774</b>
Note: AFY = acre-feet per year						
Source: City of Pittsburg. City of Pittsburg 2015 Urban Water Management Plan Final Draft. June 2016.						

### *Dry Year Water Demand*

The City currently has an extensive water conservation program in place, as described in Chapter 9 of the City's 2015 UWMP. Considering the City's participation in the California Urban Water Conservation Council, and the combined water conservation efforts of the City and CCWD, the projected future water demand presented in Table 4.11-1 above, includes continued implementation of the City's existing water conservation program, and is based on future normal hydrologic conditions. Because the projected future water demand presented in Table 4.11-1 above includes the City and CCWD water conservation programs, projected future demands presented in the table also apply to single-dry or multiple-dry years.

## **Wastewater Collection and Treatment**

### Wastewater Collection

The City maintains and owns the local sewage collection system and is responsible for the collection and conveyance of wastewater to the Delta Diablo Wastewater Treatment Plant (WWTP). DDSO owns and operates the regional interceptors and wastewater treatment plant. The project site is located within the DDSO sphere of influence, but is not located within the Delta Diablo service area. The project site would need to be annexed to the DDSO service area prior to receiving service. The City of Pittsburg would be responsible for the wastewater collection system from the project site to the designated DDSO regional wastewater conveyance facility. The regional conveyance facilities transport wastewater to the Delta Diablo WWTP located at 2500 Pittsburg-Antioch Highway, Antioch. After secondary treatment, the effluent is either discharged through a deep-water outfall to New York Slough, or further processed through the Delta Diablo's RWF to tertiary Title 22 recycled water standards and distributed for reuse.

### Wastewater Treatment

As discussed above, regional conveyance facilities transport wastewater to the Delta Diablo WWTP. After secondary treatment, the effluent is either discharged through a deep-water outfall to New York Slough or further processed through the RWF. The WWTP National Pollutant Discharge Elimination System (NPDES) Permit allows an average dry weather flow of 16.5 MGD, and the plant has an average dry weather flow design capacity of 19.5 MGD. The average dry weather flow influent to the treatment plant was 13.4 MGD in 2017.<sup>15</sup>

## **Solid Waste**

Pittsburg Disposal Service is a private firm that provides solid waste collection under a City franchise agreement. Residential rates range between \$37.06 and \$50.83 per month. Both residential and commercial solid waste is currently transported to, and disposed of at the Potrero Hills Landfill east of Suisun. The Potrero Hills Landfill has a maximum permitted capacity of

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<sup>15</sup> Delta Diablo. *Quick Facts*. Available at: <http://www.deltadiablo.org/about-us/organization/quick-facts>. Accessed March 2017.

83,100,000 cubic yards with a remaining fillspace capacity of 13,872,000 cubic yards.<sup>16</sup> The total acreage of the Landfill is approximately 525 acres, with a disposal acreage of 340 acres. The most recent solid waste permit was issued for the Landfill on February 14, 2012. According to the Permit, the estimated closure date is 2048.<sup>17</sup>

Keller Canyon Landfill disposes of industrial non-recyclable waste from Pittsburg. Mount Diablo Recycling Center provides recycling service through their Recycling Center and Transfer Station at 1300 Loveridge Road. The Keller Canyon Landfill has a maximum permitted throughput of 3,500.00 tons per day, and a maximum permitted capacity of 75,018,280 cubic yards with a remaining capacity of 63,408,410 cubic yards.<sup>18</sup>

The Public Works Department's Environmental Affairs Division, in conjunction with Pittsburg Disposal, coordinates the curbside recycling, and green waste programs. Pittsburg Disposal provides a container for garbage, recycling and green waste separately.

## **Fire Protection**

The entirety of the Faria/Southwest Hills Annexation project site is currently within the service boundaries of the Contra Costa County Fire Protection District (CCCFPD). The CCCFPD boundaries encompass the central and northern portions of Contra Costa County (CCC), extending from the City of Antioch in the east to the eastern border of the City of Richmond in the west, and as far south as the northern border of the City of Moraga. The CCCFPD has a boundary area of approximately 257 square miles. The CCCFPD provides fire suppression (structural, vehicle, and vegetation fires) and prevention, Advanced Life Support (ALS) for medical emergencies, rescue, dispatch, initial hazardous materials response, fire inspection, plan review, and education.

The CCCFPD has four fire stations that could provide fire protection services to the project site. The station numbers, addresses, equipment, and distances to the project site are shown in Table 4.11-2. Each fire station is staffed with three personnel 24 hours a day. A 24-hour shift includes one captain, one engineer, and one firefighter. The CCCFPD employs 11 Battalion chiefs, one Fire Chief, one Deputy Chief, four Assistant Fire Chiefs and one Fire Marshall. The CCCFPD maintains a minimum daily staffing of 82 personnel, and the total number of employees within the CCCFPD, including both sworn and non-sworn employees, is currently 311 individuals

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<sup>16</sup> California Department of Resources Recycling and Recovery. *Facility/Site Summary Details: Potrero Hills Landfill*. Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/48-AA-0075/>. Accessed March 2017.

<sup>17</sup> Solano County Department of Resource Management, Solid Waste Facility Permit (Potrero Hills Landfill), February 14, 2012.

<sup>18</sup> California Department of Resources Recycling and Recovery. *Facility/Site Summary Details: Keller Canyon Landfill (07-AA-0032)*. Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/07-AA-0032/>. Accessed March 2017.

<b>Table 4.11-2 CCCFPD Fire Stations Serving the Project Site</b>			
<b>Station Number</b>	<b>Address</b>	<b>Distance to Project Site</b>	<b>Equipment</b>
Station 84	1903 Railroad Avenue, Pittsburg	3.5 miles	1 ladder truck 1 reserve ladder truck
Station 85	2331 Loveridge Road, Pittsburg	4.25 miles	1 Type 1 Engine 1 Type 3 Engine 1 Fire Boat <sup>1</sup>
Station 86	3000 Willow Pass Rd, Bay Point	1.5 miles	1 Type 1 Engine 1 Type 3 Engine
Station 87	800 West Leland Road, Pittsburg	2.5 miles	1 Type 1 Engine 1 Type 3 Engine
<sup>1</sup> The Station 85 fire boat is docked at the Pittsburg Marina.  <i>Sources:</i> <i>Goetsch, Lon, Assistant Fire Chief – Training and Safety, Contra Costa County Fire Protection District. Personal communication [email] with Jacob Byrne, Associate, Raney Planning and Management, Inc. September 7, 2017.</i>  <i>Gonzalez, Ed, Assistant Chief – Operations Division, Contra Costa County Fire Protection District. Personal communication [phone] with Jacob Byrne, Associate, Raney Planning and Management, Inc. November 16, 2017.</i>			

In 2016, the CCCFPD received a total of 65,748 emergency and non-emergency calls for service.<sup>19</sup> The CCCFPD's current response time goal for emergency and non-emergency calls is five minutes to 90 percent of all calls received. According to CCCFPD, actual response times vary; however, the CCCFPD response time, as of September 2016, was within approximately 8 minutes and 55 seconds 90 percent of the time.<sup>20</sup>

The Insurance Service Office (ISO), an advisory organization, classifies fire service in communities from 1 to 10, indicating the general adequacy of coverage. Communities with the best systems for water distribution, fire department facilities, equipment and personnel and fire alarms and communications, receive a rating of 1. CCCFPD has a current ISO rating of 3.

## Law Enforcement

The Pittsburg Police Department (PPD) is responsible for providing law enforcement services in the City, including patrol, crime prevention, parking and traffic control, community awareness, investigations, and temporary holding facilities. The Department is responsible for community policing, has a Special Weapons and Tactics Team, and conducts Emergency Preparedness training. Similar to other cities, the PPD relies on the Sheriff's Office for search and rescue services and long-term holding facilities, County Animal Control for animal services, and the City of Walnut Creek for bomb squad services. Additionally, PPD contracts with the Sheriff's Office for dispatch services.

<sup>19</sup> Contra Costa Local Agency Formation Commission. *2<sup>nd</sup> Round EMS/Fire Services Municipal Service Review/Sphere of Influence Updates*. August 10, 2016.

<sup>20</sup> Goetsch, Lon, Assistant Fire Chief – Training and Safety, Contra Costa County Fire Protection District. Personal communication [email] with Jacob Byrne, Associate, Raney Planning and Management, Inc. September 7, 2017.

PPD patrols 17.2 square miles which are divided into nine beats. In addition, the PPD provides services outside of the patrol area boundaries through mutual aid agreements. The joint mutual aid agreements include: 1) the Contra Costa Mutual Aid Mobile Field Force, which provides police services of all types for calls to other counties on request; 2) the California Law Enforcement Mutual Aid Plan; 3) the County Wide Mutual Aid Program, which is a countywide agreement to provide law enforcement services to any other provider when needed; and 4) Crowd/Riot Control with a contribution of two to four officers.

PPD operates out of the police headquarters at 65 Civic Avenue, which was built in 2000. According to the City's Capital Improvement Plans, plans currently do not exist for significant capital improvements to the police headquarters. PPD provides law enforcements services with a fleet of 75 vehicles, which is comprised of sedans, SUVs, motorcycles, trucks, and vans. According to CCC Local Agency Formation Commission's (LAFCo) Municipal Service Review (MSR) for Law Enforcement Services, the Department has not reported any needs related to vehicles or equipment, nor do any areas exist within the City's boundaries that are particularly challenging to serve.<sup>21</sup> Regarding law enforcement personnel, the PPD currently employs 81 sworn officers.<sup>22</sup> While General Plan Policy 10-P-39 states that the City should strive to maintain a ratio of 1.8 sworn police officers per 1,000 residents, the PPD has indicated that they have not adopted a staffing standard.<sup>23</sup> With a population of 66,695 residents and 81 sworn officers, the current ratio is approximately 1.2 officers per 1,000 residents. The PPD receives approximately 5,900 emergency and non-emergency calls per month, or approximately 90,000 per year. A total of 3.3 violent crimes per 1,000 residents occurred in 2015, which is similar, or in some cases lower than surrounding jurisdictions.<sup>24</sup>

## **Schools**

The project site is within the Mount Diablo Unified School District (MDUSD) boundaries. The MDUSD has twenty-nine elementary schools serving students in grades kindergarten through five. The MDUSD has ten middle schools serving grades 6-8 and six high schools. Delta View Elementary, Rio Vista Elementary, Riverview Middle, and Mount Diablo High would serve the project site. All schools that would be serving the project site have been operating below capacity, except for Rio Vista Elementary (see Table 4.11-3).<sup>25</sup> The MDUSD student generation rates for detached single-family homes are shown in Table 4.11-4.

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<sup>21</sup> Baracco & Associates and Policy Consulting Associates, LLC. *Report to the Contra Costa Local Agency Formation Commission, Municipal Service Review: Law Enforcement Services*. September 7, 2011.

<sup>22</sup> Rathnesh, Raman, Captain, Pittsburg Police Department. Personal Communication [phone] with Jacob Byrne, Associate, Raney Planning and Management, Inc. April 5, 2017.

<sup>23</sup> Brian Annington, Captain, Pittsburg Police Department. Personal Communication with Raney Planning and Management, Inc. October 10, 2012.

<sup>24</sup> Pittsburg Police Department. *City of Pittsburg Crime Comparison 2014 v. 2015*. 2016.

<sup>25</sup> Nacht & Lewis. *Mt. Diablo Unified School District Bay Point Area Master Program*. February 24, 2014.

<b>Table 4.11-3 MDUSD School Capacity</b>				
<b>School</b>	<b>Grades</b>	<b>Student Enrollment</b>	<b>Student Capacity</b>	<b>% of Maximum Capacity</b>
Delta View Elementary	K-5	659	904	73%
Rio Vista Elementary	K-5	554	472	117%
Riverview Middle	6-8	808	1,184	68%
Mount Diablo High	9-12	1,344	2,219	61%
<i>Sources:</i> <i>Nacht &amp; Lewis. Mt. Diablo Unified School District Bay Point Area Master Program. February 24, 2014.</i>  <i>California Department of Education. Enrollment Report: 2016-17 Enrollment by Grade. Available at: <a href="http://data1.cde.ca.gov/dataquest/page2.asp?level=School&amp;subject=Enrollment&amp;submit1=Submit">http://data1.cde.ca.gov/dataquest/page2.asp?level=School&amp;subject=Enrollment&amp;submit1=Submit</a>. Accessed September 2017.</i>				

<b>Table 4.11-4 Student Generation Rates</b>	
<b>Grade Levels</b>	<b>Student Generation Factor Per Household</b>
Elementary (K-5)	0.220
Middle (6-8)	0.086
High (9-12)	0.950
<i>Sources:</i> <i>Sandy Barnhart, Administrative Secretary, Research and Evaluation, MDUSD. Personal Communication with Raney Planning and Management, Inc. September 4, 2013.</i>  <i>Linda Savre, Administrative Secretary, Research and Evaluation, MDUSD. Personal Communication [email] with Jacob Byrne, Associate, Raney Planning and Management, Inc. September 12, 2017.</i>	

## **Parks and Recreation**

Pittsburg's Parks and Recreation Department manages the maintenance of the City's park facilities, while the Recreation Department manages the operation of the parks. The Development Services Department is responsible for acquisition and development of park facilities. Pittsburg's current park and recreation facilities (including parks currently under construction) are listed in Table 4.11-5. The primary source of funding for park maintenance comes from the Citywide Landscaping and Lighting Assessment District. Park maintenance is also provided by developer fees and the General Fund.

Community parks are developed primarily to meet the recreational needs of a large portion of the City. Community parks range in size according to purpose, and often feature one-of-a-kind community facilities or natural resources. For example, Riverview Park offers paths and amenities along the Delta waterfront, while Small World Park features small replicas of a fort, mission, railroad ride, lagoon, riverboat, and a full-scale carousel. Community parks, such as Buchanan Park, may also contain a greater variety of recreational facilities, such as swimming pools, community centers, public rest rooms, bocce ball and horseshoe areas, trails, athletic fields, and pond fishing.

<b>Table 4.11-5 City of Pittsburg Parks</b>				
	<b>Name</b>	<b>Location</b>	<b>Acres</b>	<b>Type</b>
1	8th St. Greenbelt	8th St.	4.7	LP
2	Americana Park	N. Parkside Dr.	2	NP
3	Buchanan Park	4150 Harbor St.	16	CP
4	California Seasons Park	Seasons Way	2.5	NP
5	Central Harbor Park	Marina Boulevard	1.5	CP
6	Central Park	Pittsburg / Antioch Highway	8	CP
7	City Park	17th & Railroad Ave.	28	CP
8	Columbia Linear Park	Columbia Ave.	4.4	LP
9	De Anza Park	Trident Dr.	3.5	NP
10	Heritage Park Plaza	East 4th St.	0.1	NP
11	Highland Park	Golden Hill Dr. & St. Paul Cir.	4.5	NP
12	Highlands Ranch Park	Buchanan Rd.	10	CP
13	Hillsdale Park	Doffodil & Jacqueline Dr.	3.5	NP
14	John Henry Johnson Park	W. Leland & John Henry Johnson Pkwy.	8	CP
15	Larry Lasater Park	San Marcos Blvd.	3	NP
16	Marina Walk Park	W. 6th & Cutter	1.7	NP
17	Mariner Park	8th St. & Herb White Way	3.6	CP
18	Oak Hills Park	Southwood Dr.	5	NP
19	Riverview Park	Bayside Dr.	4	CP
20	Small World Park	2551 Harbor St.	8	SF
22	Stoneman Trailhead	W. Leland & John Henry Johnson Pkwy.	190	CP
23	Santa Fe Linear Park	Santa Fe Ave.	2.6	LP
24	Woodland Hills Park	Crestview & Alta Vista Dr.	2.4	NP
25	Village Park at New York Landing	Cambria Dr.	2	NP
Note: CP = Community Park; NP = Neighborhood Park; MP = Mini Park; LP = Linear Park; SF = Special Facility.				
Source: City of Pittsburg Parks and Recreation Department. Parks and Rentals. Available at: <a href="http://www.pittsburgparksandrec.com/content/parks_rentals/parks_rentals">http://www.pittsburgparksandrec.com/content/parks_rentals/parks_rentals</a> . Accessed June 8, 2015.				

Neighborhood parks primarily serve a small portion of the City, usually within one-half mile radius of the park. Neighborhood parks are generally oriented toward the recreational needs of children and youth. For example, Marina Park provides playground equipment, as well as softball, baseball, and soccer fields.

All of the City's neighborhood parks are located near collector streets in residential neighborhoods, while community parks lie along arterial roadways to serve the larger City population. The parks located closest to the project site include Larry Lasater Park and Oak Hills Park, located within the San Marco Subdivision to the north of the project site in the City of Pittsburg.

In addition to City parks, regional trails provide opportunities for hiking, biking, and jogging along open space corridors throughout the region. The Delta De Anza Regional Trail is a paved multi-use hiking, bicycling and equestrian trail currently spanning over 15 miles of the planned 25-mile



length, which is easily accessible from the project site. When completed, the Delta De Anza Regional Trail would generally follow the East Bay Municipal Utility District's corridor and the CCWD's canal. The trail intersects Bailey Road north of the project site, near the Bailey Road SR 4 overpass, approximately two miles away from the project site. The trail also connects the cities of Concord, Bay Point, Pittsburg, Antioch, and Oakley and provides access to Contra Loma Regional Park (and Black Diamond Mines Regional Preserve) through Antioch Community Park. The Black Diamond Mines Regional Preserve offers tours of abandoned coal mining tunnels and many miles of hiking trails. The Delta De Anza Regional Trail and the Black Diamond Mines Regional Preserve are under the jurisdiction of the East Bay Regional Park District (EBRPD).

### **Library System**

The 10,000 square foot Vincent A. Davi Memorial Library is the Pittsburg branch of the County Library system. The building at 80 Power Avenue adjacent to the Civic Center is owned by the City but the library is operated by the CCC Library with \$88,000 in funding annually from the City. The branch remains open 35 hours per week, Tuesday through Saturday. In April 2014, an adjoining café opened for business. The Vincent A. Davi Memorial Library currently has 80 reader seats, and based on national averages, a standard of 5 reader seats per 1,000 residents is optimal, but is not consistently achieved county wide. Approximately 48 percent of Pittsburg citizens have a library card and approximately 49 people visit the Pittsburg Library per hour.<sup>26</sup>

### **Electricity and Natural Gas**

Pacific Gas & Electric (PG&E) provides energy services to the City of Pittsburg. The GenOn/Mirant Delta LLC, Pittsburg Generating Station generates energy at the Pittsburg Power Plant (696 West 10<sup>th</sup> Street, Pittsburg, CA), and PG&E distributes the energy to users within the region through overhead transmission lines. The Pittsburg Generating Station has seven natural gas burning, steam generating turbines, but four out of the seven units are inactive leaving the combined capacity at 1,332 megawatts (MW).<sup>27</sup>

#### **4.11.3 REGULATORY CONTEXT**

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Many agencies regulate public services and utilities. The following discussion contains a summary review of regulatory controls pertaining to public services and utilities, including federal, State, and local laws and ordinances.

### **Federal Regulations**

The following are the federal environmental laws and policies relevant to public services and utilities.

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<sup>26</sup> Jessica Hudson, Contra Costa County Librarian. Personal Communication with Raney Planning and Management, Inc. April 29, 2014.

<sup>27</sup> Vanessa Xie, City of Pittsburg. Personal Communication with Raney Planning and Management, Inc. July 25, 2014.

### Federal Clean Water Act

The federal Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into surface waters of the U.S., and sets water quality standards for all contaminants in surface waters. Water quality standards are intended to protect public health, enhance the quality of water, and serve the purposes of the CWA. The Act defines water quality standards as federal or state provisions or laws that designate the beneficial uses of water and establish water quality criteria to protect those designated uses. To enforce the goals of the CWA, the U.S. Environmental Protection Agency (USEPA) established the National Pollutant Discharge Elimination System (NPDES) program. NPDES is a national program for regulating and administering permits for discharges to receiving waters, including non-point sources. Under Section 1251 (b) of the CWA, Congress and the USEPA must recognize and preserve the primary responsibilities and rights of states concerning the reduction of pollution in water resources.

### Safe Drinking Water Act

The federal Safe Drinking Water Act (SDWA), which was enacted in 1974, gives the USEPA the authority to set standards for contaminants in drinking water supplies. The USEPA was required to establish primary regulations for the control of contaminants that affected public health and secondary regulations for compounds that affect the taste, odor, and aesthetics of drinking water. Accordingly, the USEPA set a maximum contaminant level or treatment technique for each of the 83 contaminants in drinking water listed in the SDWA. Under the provisions of SDWA, the California Department of Health Care Services (DHS) has the primary enforcement responsibility. Title 22 of the California Code of Regulations establishes DHS authority, and stipulates State drinking water quality and monitoring standards.

### **State Regulations**

The following are the State environmental laws and policies relevant to public services and utilities.

#### California Fire Code

The California Fire Code contains specialized regulations related to the construction, maintenance, and use of buildings in relation to fire and safety. The extent of the Code coverage pertains to fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to aid fire responders, industrial processes, and other fire-safety requirements for new and existing buildings.

#### California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8 Sections 1270 “Fire Prevention” and 6773 “Fire Protection and Fire Equipment”, the California Occupational Safety and Health Administration (Cal-OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hosing sizing requirements, restrictions on the use

of compressed air, access roads, and the testing, maintenance and use of all fire-fighting and emergency medical equipment.

#### Proposition 1A/Senate Bill 50 (1A/SB 50)

Proposition 1A/SB 50 (Chapter 407, Statutes of 1998) is a school construction measure that authorizes the expenditure of State bonds totaling \$9.2 billion through 2002, primarily for modernization and rehabilitation of older school facilities and construction of new school facilities. \$2.5 billion is for higher education facilities and \$6.7 billion is for K-12 facilities.

Proposition 1A/SB 50 implemented significant fee reforms by amending the laws governing developer fees and school mitigation.

- Proposition 1A/SB 50 establishes the base (statutory) amount (indexed for inflation) of allowable developer fees at \$1.93 per square foot for residential construction and \$0.31 per square foot for commercial construction.
- Proposition 1A/SB 50 prohibits school districts, cities, and counties from imposing school impact mitigation fees or other requirements in excess of or in addition to those provided in the statute.

Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any “legislative or adjudicative act involving the planning, use, or development of real property.” (Government Code 65996(b).) In addition, a local agency cannot require participation in a Mello-Roos district for school facilities; however, the statutory fee is reduced by the amount of any voluntary participation in a Mello-Roos district.

Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be “full and complete mitigation.” The law identifies certain circumstances under which the statutory fee can be exceeded, including preparation and adoption of a “needs analysis,” eligibility for State funding, and satisfaction of two of four requirements (after January 1, 2000) identified in the law including year-round enrollment. General obligation bond measure on the ballot over the last four years that received 50 percent plus one of the votes cast, 20 percent of the classes in portable classrooms, or specified outstanding debt.

Assuming a district qualifies for exceeding the statutory fee, the law establishes ultimate fee caps of 50 percent of costs where the State makes a 50 percent match, or 100 percent of the costs where the State match is unavailable. School district certification of payment of the applicable fee is required before a city or county can issue a building permit for the construction of development.

#### Quimby Act

California Government Code Section 66477 of the Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density, parkland cost, and other factors. Land dedication and fees collected pursuant

to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities or the development of public school grounds.

#### Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610 – 10656). The Act requires that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually shall prepare and adopt an UWMP within a year of becoming an urban water supplier and update the plan at least once every five years. The Act specifies the content that is to be included in an UWMP, and states that urban water suppliers should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry-years. The Act also states that the management of urban water demands and the efficient use of water shall be actively pursued to protect both the people of the State and their water resources.

#### Sustainable Groundwater Management Act

The California Department of Water Resources (DWR) has developed a Strategic Plan for its Sustainable Groundwater Management (SGM) Program. DWR's SGM Program will implement the new and expanded responsibilities identified in the 2014 Sustainable Groundwater Management Act (SGMA), as amended in 2015. Some of these expanded responsibilities include: (1) developing regulations to revise groundwater basin boundaries; (2) adopting regulations for evaluating and implementing Groundwater Sustainability Plans (GSPs) and coordination agreements; (3) identifying basins subject to critical conditions of overdraft; (4) identifying water available for groundwater replenishment; and (5) publishing best management practices for the sustainable management of groundwater.

The City, along with regional partners, is in the process of planning compliance activities under SGMA. Once the regional Groundwater Management Program is developed, it will overlay the Western Placer Basin, and will encompass and/or supersede other local groundwater planning efforts. Thus, SGMA may alter the City's existing groundwater management activities envisioned in the Western Placer County Groundwater Management Plan (WPCGMP) and related efforts. The Sacramento Groundwater Authority, a Joint Powers Authority with a common interest in the North American Groundwater Subbasin, has established itself as a Groundwater Sustainability Agency (GSA). However, the role of the City of Lincoln related to this GSA has not yet been finalized. Eventually, under SGMA, agencies participating in the GSA will be required to develop a Groundwater Management Program that coordinates management among all stakeholders in the North American Groundwater Subbasin.

#### Senate Bill 610

The California Water Code requires coordination between land use lead agencies and public water purveyors. The purpose of this coordination is to ensure that prudent water supply planning has been conducted and that planned water supplies are adequate to meet both existing demands and the demands of planned development.

Water Code Sections 10910 through 10915 (inclusive), sometimes referred to as Senate Bill (SB) 610, require land use lead agencies: 1) to identify the responsible public water purveyor for a proposed development project, and 2) to request from the responsible purveyor, a “Water Supply Assessment” (WSA). The purposes of the WSA are (a) to describe the sufficiency of the purveyors’ water supplies to satisfy the water demands of the proposed development project, while still meeting the current and projected water demands of customers, and, (b) in the absence of a currently sufficient supply to describe the purveyor’s plans for acquiring additional water. Water Code Sections 10910-10915 delineate the specific information that must be included in the WSA. SB 610 requirements are reflected in CEQA Guidelines Section 15155, which defines a “water-demand project.” As stated in CEQA Guidelines Section 15155, any residential development exceeding 500 dwelling units is considered a “water-demand project” and because the proposed project would involve future development of a maximum of 1,500 residential units, the proposed project is considered a “water-demand project” and thus is subject to SB 610 requirements. A WSA was prepared for the proposed project and is included in this EIR as Appendix L.

#### Senate Bill 221

SB 221 principally applies to the Subdivision Map Act, conditioning a tentative map on the applicant verifying that the public water supplier has sufficient water supply available to serve the project. SB 221 applies to any subdivision, which is defined as:

- A proposed residential development of more than 500 dwelling units, if the public water supplier has more than 5,000 service connections; or
- Any proposed development that increases connections by 10 percent or more, if the public water supplier has fewer than 5,000 connections.

SB 221 does not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses or housing projects that are exclusively for very-low- and low-income households. Sufficient water supply per SB 221 requires consideration of the following:

- Availability of water over the past 20 years;
- Applicability of any urban water shortage contingency analysis prepared per Section 10632 of the Water Code;
- Reduction in water supply allocated to a specific use by an adopted ordinance; and
- Amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation and water transfer.

The written verification must also provide evidentiary proof of the water supply, and the standard for that proof is largely similar to SB 610, as described above. In most cases, the water supply assessment prepared under SB 610 would meet the SB 221 requirement.

#### California Integrated Waste Management Act - Assembly Bill 939

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the State Legislature passed the California Integrated Waste Management Act of

1989 (Assembly Bill 939), effective January 1990. According to Assembly Bill (AB) 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective county plan. The plans must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to \$10,000-per-day fines.

#### *Senate Bill 1016*

In 2007, SB 1016 amended portions of AB 939, which allows the California Integrated Waste Management Board (CIWMB) to use per capita disposal as an indicator in evaluating compliance with the requirements of AB 939. Jurisdictions track and report their per capita disposal rates to CalRecycle.

### **Local Regulations**

The following are the local government's environmental policies relevant to public services and utilities.

#### Contra Costa LAFCo

Contra Costa LAFCo is a Responsible Agency for the proposed project and approval by LAFCo would be required for the proposed reorganization. In addition, annexation to the CCWD and DDSd service areas and amendment of service boundaries would require approval by LAFCo in conjunction with the CCWD and DDSd. Policies and standards have been adopted by the Contra Costa LAFCo to assist in the review of proposals and the preparation of studies as necessary. It should be noted that the Contra Costa LAFCo would use this EIR to aid in their determination and actions regarding the proposed project.

#### City of Pittsburg General Plan

The City of Pittsburg General Plan goals and policies related to public services and utilities applicable to the proposed project are presented below:

#### *Public Facilities Element*

Goal 11-G-2 Continue to implement water conservation policies to ensure adequate supplies of water in the future.

Policy 11-P-1 Continue using the Urban Water Management Plan as the mechanism for detailed water supply planning, implementation, and conservation.

Policy 11-P-3 Continue water district and user conservation efforts to help reduce demand in light of recent CCWD raw water reductions.

In an attempt to preserve Delta species and habitat, the CVP mandated reductions in the amount of raw water available to the CCWD. Current water conservation efforts in the City include:

- Implementation of a water rate structure that encourages conservation;
- Implementation of plumbing code changes requiring ultra-low-flow toilets in new construction;
- Continuance of public education on water conservation;
- Passage of a Water-Efficient Landscape Ordinance for new large-scale landscaping;
- Study of expanded reclaimed water usage; and
- System-wide water audit/leak detection survey and repair program.

Policy 11-P-7 Ensure that new residential, commercial, and industrial development equitably shares costs associated with providing water services to areas of urban expansion within the Planning Area.

Policy 11-P-9 Cooperate with CCWD to ensure compliance with District regulations and State law for new development requiring annexation to the CCWD service area. Cooperate with CCWD in processing all necessary information to allow a determination if Los Vaqueros facilities can be used to service new annexation areas.

Policy 11-P-10 Cooperate with federal agencies to ensure that new development requiring inclusion in the CCWD CVP contract service area addresses all requirements of federal statutes and regulations, including the National Environmental Policy Act and Endangered Species Act. Encourage project developers to provide all required information for consultation purposes, if necessary, under Endangered Species Act Sections 7 or 10, or a Habitat Conservation Plan.

Goal 11-G-4 Maintain environmentally appropriate wastewater management practices.

Policy 11-P-12 Pursue replacement and/or expansion of the City's trunk sewer system, as demand increases, particularly in newer portions of the system south of State Route 4.

New development south of State Route 4 places increased demand on the City's aging sewer collection system. The expansion of the trunk sewer system would ensure adequate capacities for future

growth, particularly during heavy rainfall when inflow/infiltration levels are high.

Policy 11-P-17 Require that all wastewater dischargers within the City conform to the ordinances of Delta Diablo.

Policy 11-P-18 Ensure that new residential, commercial, and industrial development equitably share costs associated with providing wastewater services to areas of urban expansion within the Planning Area.

Policy 11-P-19 Promote the importance of recycling industrial and construction wastes.

Goal 11-G-6 Continue reduction and recycling efforts within the City to divert increasingly larger portions of the waste stream from local landfills.

Goal 11-G-7 Manage solid waste so that State diversion goals are met.

Policy 11-P-23 Encourage builders to incorporate interior and exterior storage areas for recyclables into new or remodeled residential, commercial, and industrial structures.

Goal 11-G-8 Require development in areas of high fire hazard to be designed and constructed to minimize potential losses and maximize the ability of fire personnel to suppress fire incidents.

Policy 11-P-25 Review and amend ordinances that regulate development in potentially hazardous locations to require adequate protection, such as fire-resistant roofing, building materials, and landscaping.

Using fire-resistant construction materials and landscaping will both slow the pace at which fire spreads and improve the likelihood that the structure will survive a fire incident.

Policy 11-P-26 Cooperate with CCCFPD to ensure that new or relocated fire stations are constructed on appropriate sites within the 1.5-mile response radii from new or existing development.

Policy 11-P-29 Ensure adequate road widths in new development for fire response trucks, per the subdivision regulations.

Goal 11-G-9 Assess the adequacy of public utilities in existing developed areas, and program needed improvements to coordinate with developing portions of the Planning Area.



Goal 11-G-10 Encourage buffer landscaping and multi-use of utility sites and rights-of-way to harmonize with adjoining uses.

Policy 11-P-32 Ensure the designation of service corridor easements or routes when required for tentative map or specific plan approval.

Ensure the provision of public utilities to all new urban development by requiring utility corridor easements in development plans.

Policy 11-P-33 As a condition of approval, ensure that all new and redevelopment projects underground utility lines on and adjacent to the site.

Undergrounding of all utilities in new and redeveloped areas will significantly improve the appearance of City streets and views.

#### *Health and Safety Element*

Policy 10-P-39 Strive to maintain a ratio of 1.8 sworn police officers per 1,000 residents.

#### *Open Space, Youth and Recreation Element*

Goal 8-G-10 Ensure that school facilities maintain adequate capacity to provide for current and projected enrollment.

Policy 8-P-41 As part of development review for large residential subdivisions (greater than 100 units), evaluate the need for new school sites. If needed, encourage subdivision design to accommodate school facilities and cooperate with the school districts in acquisition of those sites.

Goal 8-G-1 Develop a high-quality public park system for Pittsburg that provides varied recreational opportunities accessible to all City residents.

Goal 8-G-2 Provide parks that reflect the diversity of Pittsburg's natural setting, including creeks and waterways, tree stands, rock outcroppings, and topography.

Policy 8-P-1 Maintain a neighborhood and community park standard of 5 acres of public parkland per 1,000 residents.

Policy 8-P-2 Pursue the development of park and recreation facilities within reasonable walking distance of all homes.

Policy 8-P-3 Develop public parks and recreational facilities that are equitably distributed throughout the urbanized area, and provide

neighborhood recreation facilities in existing neighborhoods where such facilities are presently lacking.

- Policy 8-P-4 Consider park accessibility, use and character as more valuable than size in the acquisition and development of new parks.

The City's current park classification system (see above) is based more on the use and character of park facilities than their size. For example, many community parks that fulfill important community needs, such as shoreline access, are smaller than those proposed by national and regional recreation agencies.

- Policy 8-P-5 Maintain park and recreation facility standards for new development to serve both residents and employees, attainable through dedication of parkland or payment of in-lieu fees.

The demand by new residential development for parks and open space facilities is a well-known calculation among Californian cities, but the additional demands on park facilities by employees of local businesses (for example, eating lunch in a park or jogging along the waterfront after work) who are not residents must also be considered.

- Policy 8-P-6 Revise the City's Park Dedication Ordinance to define useable area for parkland dedication requirements. Proposed park sites should be:

- Designed such that 80 percent of the site has slopes of less than 3 percent that are suitable for active recreational play;
- Sized according to the City's park standard of 5 acres per 1,000 residents (for example, a 200-unit subdivision would yield about 600 residents, and a dedication requirement of 3 acres);
- Available for year-round use, so that detention basins are not designated as parkland or shared park facilities; and
- A minimum of 2 contiguous acres in new residential neighborhoods.

- Policy 8-P-7 Encourage the development or provision of facilities that cater to diverse recreational interests.

These facilities could provide hard-surface courts in-lieu of turf areas, which include but are not limited to activities such as tennis, skateboarding, hand/racquetball, bocce ball, basketball, volleyball, badminton, and roller hockey. These may be provided within existing parks or constructed as specific-use facilities.

- Policy 8-P-11 Encourage dedication of fully developed parks rather than in-lieu fees. When in-lieu fees are collected, ensure that they are spent acquiring and developing new park sites or enhancing existing park facilities.

Due to significant increases in land values over time, the City's purchasing power can be diminished as time lapses between the collection of in-lieu fees and the actual acquisition of parkland. Dedication of usable parkland prevents the potential depreciation of park fees while the City searches for appropriate and affordable parkland.

- Policy 8-P-12 Ensure that all parks acquired through dedication are at least 2 acres in size within new residential developments (target 5 acres). Accept smaller visual open space areas in new commercial and industrial development for parkland dedications.

Several of the newer mini-parks contained within residential developments lack necessary park amenities, such as benches. The provision of visual open space as parkland dedication in commercial developments is reasonable. However, residential developments must provide more usable open space areas.

- Policy 8-P-13 Limit parkland dedications to flat, usable parcels within new residential neighborhoods (see Policy 8-P-6 above). Ensure that such park sites provide open, grassy areas for informal recreational play (such as football or soccer).

- Policy 8-P-14 Develop a maintenance-funding plan for all City parks. Consider participation in parkland maintenance districts as a condition of development approval for new residential subdivisions.

Maintenance of existing and new parks is essential in the on-going use of developed parkland. A citywide plan for funding the maintenance and improvement of all City parks will ensure that the citizens of Pittsburg derive the full benefits of City parkland. Requiring new residential development to secure funding sources for the maintenance of new parks will allow the City to continue developing and maintaining recreational facilities on a limited budget.

- Policy 8-P-16 Encourage dedication of public parks in new residential developments with more than 150 units.

Current and proposed parks are not sufficient to meet City's park standard (See Policy 8-P-1). The City should consider new sites to add to its park system.

### Pittsburg Municipal Code

The City of Pittsburg Municipal Code sections relating to public services and utilities that are applicable to the proposed project are presented below:

#### *Section 17.32.020. Park dedication*

Section 17.32.020 (D)(2) of the Pittsburg Municipal Code specifies park land dedication requirements for new residential development based on a standard of 1.73 acres per 100 dwelling units. The dedication requirement would be applied to the project with the future tentative map application.

#### *Section 17.32.090. Other public facilities*

Section 17.32.090 of the Pittsburg Municipal Code specifies a condition of approval of a tentative map. The subdivider may be required to dedicate land, pay fees, or both, for fire stations, library sites, child day care, public art, or any other public facilities pursuant to, and in order to implement, the provisions of the general plan regarding such facilities. [Ord. 09-1315 § 3 (Exh. A), 2009; Ord. 962 § 2 (Exh. A), 1989.

### City of Pittsburg School Impact Fee

In addition to the park dedication and other public facilities dedications or fees, discussed above, the City maintains a School Impact Fee. All three school districts within the City assess school impact fees on developments within the respective district boundaries. Fees are assessed on a per unit basis for residential developments or a per square foot basis for commercial developments.

### Contra Costa County Fire District Fire Facility Impact Fees

In October 2005, the CCCFPD prepared the *Fire Facilities Impact Fee Study and Report*. The report documented a reasonable relationship between new development and the need for funding of new facilities. Under the *Mitigation Fee Act* (Government Code Section 6600 *et. Seq.*) the CCCFPD has the legal authority to impose impact fees providing that certain legal requirements are met. The *Fire Facilities Impact Fee Study and Report* details the need for impact fees, quantifies such fees, and provides sufficient legal justification for the fees. Residential projects within the CCCFPD are subject to CCCFPD Fire Facilities Impact Fees on a per unit basis.

### City of Pittsburg 2015 Urban Water Management Plan

The City's UWMP includes all information necessary to meet the requirements of California Water Code, Division 6, Part 2.6, and was prepared in compliance with the Urban Water Management Planning Act as well as the water use efficiency requirements of SB X7-7. SB X7-7 requires all

water suppliers to increase water use efficiency measures; consequently, the City intends to implement the UWMP water demand reduction plan. The water demand reduction plan includes recycled water projects, conservation efforts and ongoing collaboration with the CCWD and the DDS. The outreach efforts highlighted in the water demand reduction plan are expected to reduce urban water use, particularly irrigation use. The City has already taken various measures, including regulations for water efficiency in new developments, to help ensure that urban water use continues to meet water reduction targets identified in the UWMP.

#### City of Pittsburg 2015 Water System Master Plan

The City of Pittsburg recognizes the importance of planning, developing, and financing the City's domestic water system facilities. In order to continue to provide reliable and enhanced domestic water service to existing customers and to serve anticipated future developments, the 2015 Water System Master Plan was prepared. The City's Water System Master Plan is intended to serve as a tool for planning and phasing the construction of future water transmission and distribution facilities, through the project horizon year of 2030.

The City's Water System Master Plan summarizes the City's existing distribution system infrastructure, and documents the City's acceptable design criteria and current growth assumptions. In addition, a capacity evaluation of the existing system is documented, including a list of facility improvements needed to meet the water demand needs of existing users, as well as the needs of planned future developments. Included in the Water System Master Plan is a capital improvement program and a cost allocation analysis. The proposed project site is addressed within the Capital Improvement Program Table (Table ES.4) and is described as part of the Southeast Hills planning area.

#### **4.11.4 IMPACTS AND MITIGATION MEASURES**

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The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to public services and utilities. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

##### **Standards of Significance**

Consistent with Appendix G of the CEQA Guidelines a public services and utilities impact may be considered to be significant if any potential effects of the following conditions would result with the proposed project's implementation:

- Require or result in the construction of new water or wastewater treatment and conveyance facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Initial Study Question XVIII.b.);
- Not have sufficient water supplies available to serve the project from existing entitlements and resources (Initial Study Question XVIII.d.);
- Exceed wastewater treatment requirements of the applicable RWQCB (Initial Study Question XVIII.a.);

- Result in an increase in wastewater generation such that the wastewater treatment provider does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments (Initial Study Question XVIII.e.);
- Generate solid waste such that the permitted landfill capacity could not accommodate the project's solid waste disposal needs (Initial Study Question XVIII.f.);
- Comply with federal, state, and local statutes and regulations related to solid waste (Initial Study Question XVIII.g.);
- Result in significant adverse impacts related to project energy requirements, and/or energy use inefficiencies;
- 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 (Initial Study Question XV.a.);
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment (Initial Study Question XV.b.); or
- 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 following public services:
  - Police Protection (Initial Study Question XIV.b.);
  - Fire protection (Initial Study Question XIV.a.);
  - Schools (Initial Study Question XIV.c.);
  - Parks/Recreation Facilities (Initial Study Question XIV.d.); and
  - Other Public Facilities (Initial Study Question XIV.e.).

#### Issue Not Discussed Further

It should be noted that impacts related to storm drainage facilities (Initial Study Question XVIII.c.) are addressed in the Hydrology and Water Quality chapter of this EIR; therefore, such topics are not analyzed or discussed in this EIR chapter.

#### **Method of Analysis**

The Public Services and Utilities chapter identifies any impacts of the proposed project on existing public services and utilities that could occur if the project as currently proposed is approved and implemented. The standards of significance listed above were used to delineate the significance of any potential impacts associated with public services and utilities as a result of the proposed project. The general methodology employed for the WSA is summarized below.

The WSA prepared for the proposed project by West Yost Associates documents the projected water demands associated with the proposed Faria/Southwest Hills Annexation Project and the existing and projected water demands within the Pittsburg Water Service Area. The WSA was based on a maximum 1,500 single-family dwelling units for the proposed project.

The project's WSA does not reserve water or function as a "will serve" letter or any other form of commitment to supply water. The provision of water service would continue to be undertaken in a manner consistent with applicable CCWD policies and procedures, consistent with existing law. If changes to the Faria/Southwest Hills Annexation Project are made, the WSA shall be reviewed in order to assess if a subsequent WSA is required.

### **Project-Specific Impacts and Mitigation Measures**

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

**4.11-1 Result in insufficient water supply available to serve the project from existing entitlements and resources, or require the construction of new water delivery, collection, or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Based on the analysis below, while adequate capacities exist, the project site is not currently within the CCWD service district nor is the project site included in the CVP, but with implementation of mitigation, the impact would be *less than significant*.**

As described above, the proposed project site is located outside of CCWD's current service area. As a result, the project site would need to be annexed to CCWD's service area and included into the CVP area. For purposes of the proposed annexation and rezoning, the project is evaluated at a program-level based on maximum buildout of 1,500 single-family units.

A comparison of the City's projected water supplies and demands is shown in Table 4.11-6 for Normal, Single-Dry, and Multiple-Dry Years. The water supply and demand projections are based on CCWD's projected supply conditions as described in the City's 2015 UWMP. The supply balance in Table 4.11-6 indicates that, in normal precipitation years, the City would have sufficient water to meet its customers' needs through 2035.

It should be noted that the 2015 UWMP relies on population growth projections from the Association of Bay Area Governments (ABAG) to estimate future development in the City. Therefore, the 2015 UWMP does not specifically address buildout of the project site; rather, the 2015 UWMP analyzes the City's potential addition of 34,000 total residents and a total, Citywide increase in water demand of 3,900 AFY between 2010 and 2035. The estimated Draft Master Plan buildout population of 4,800 future residents, with an associated water demand of 572 AFY, would fall within the ABAG growth numbers used in the 2015 UWMP. Therefore, although the project was not specifically included in the UWMP, the anticipated population growth and water demand increases for the entire City were evaluated, and the demand estimates presented in Table 4.11-6 generally include the water demand increase associated with buildout of the proposed project.<sup>28</sup> As illustrated in Table 4.11-6, the City's water supplies could accommodate buildout of the City, which

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<sup>28</sup> West Yost Associates. *Water Supply Assessment for Faria/Southwest Hills Annexation EIR* [pg. 7-1]. March 2015.

includes the proposed project's potential population of 4,800 people and maximum water demand of 572 AFY.<sup>29</sup>

<b>Table 4.11-6 City of Pittsburg Water Supply and Demand Comparison</b>						
		<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
<b>Supply and Demand Comparison – Normal Year</b>						
Supply Totals; AFY		11,213	12,043	12,952	13,916	14,974
Demand Totals; AFY		11,213	12,043	12,952	13,916	14,974
Difference, AFY		0	0	0	0	0
Difference as % of Supply		0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand		0.0%	0.0%	0.0%	0.0%	0.0%
<b>Supply and Demand Comparison – Single Dry Year<sup>1</sup></b>						
Supply Totals(b), AFY		11,213	12,043	12,842	13,439	14,325
Demand Totals, AFY		11,213	12,043	12,952	13,916	14,974
Difference, AFY		0	0	(110)	(477)	(649)
Difference as % of Supply		0.0%	0.0%	-0.9%	-3.6%	-4.5%
Difference as % of Demand		0.0%	0.0%	-0.8%	-3.4%	-4.3%
<b>Supply and Demand Comparison – Multiple Dry-Year Events<sup>2</sup></b>						
Multiple-Dry Year First Year Supply	Supply Totals, AFY	11,213	12,043	12,952	13,916	14,974
	Demand Totals, AFY	11,213	12,043	12,952	13,916	14,974
	Difference, AFY	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-Dry Year Second Year Supply	Supply Totals, AFY	11,213	12,043	12,842	13,439	14,325
	Demand Totals, AFY	11,213	12,043	12,952	13,916	14,974
	Difference, AFY	0	0	(110)	(477)	(649)
	Difference as % of Supply	0.0%	0.0%	-0.9%	-3.6%	-4.5%
	Difference as % of Demand	0.0%	0.0%	-0.8%	-3.4%	-4.3%
Multiple-Dry Year Third Year Supply	Supply Totals, AFY	10,473	11,237	11,635	12,126	13,027
	Demand Totals, AFY	11,213	12,043	12,952	13,916	14,974
	Difference, AFY	(740)	(806)	(1,317)	(1,791)	(1,946)
	Difference as % of Supply	-7.1%	-7.2%	-11.3%	-14.8%	-14.9%
	Difference as % of Demand	-6.6%	-6.7%	-10.2%	-12.9%	-13.0%
Notes:						
1. CCWD anticipates the following supply shortfalls in a single-year drought: 2015, (0%), 2020 (0%), 2025 (1%), 2030 (4%), 2035 (5%).						
2. CCWD anticipates the following supply shortfalls in a three-year drought scenario: 2015 (0%, 0%, 8%), 2020 (0%, 0%, 8%), 2025 (0%, 1%, 12%), 2030 (0%, 4%, 15%), 2035 (0%, 5%, 15%).						
Source: West Yost, 2015.						

The projected water supplies from CCWD are not anticipated to incur deficits in normal years due to CCWD's long-term conservation program, existing CVP contract supply, and

<sup>29</sup> West Yost Associates. *Water Supply Assessment for Faria/Southwest Hills Annexation EIR* [pg. 7-1]. March 2015.



long-term water transfer agreement with East Contra Costa Irrigation District.<sup>30</sup> CCWD's currently available and planned supplies are sufficient to meet their reliability goals and estimated water demands during normal, single-dry year, and the first two years of a multi-year drought. In later years, several types of drought conditions may result in supply shortfalls. Supply reliability tables provided by CCWD are included in Appendix F of the City's 2015 UWMP. Based on Table 4.11-6, the anticipated amount of short-term conservation expected to be required by CCWD is 15 percent of supply.<sup>31</sup>

During the recent California drought, lasting from 2014 until 2017, Governor Jerry Brown declared a drought state of emergency, and, in response, the State Water Resources Control Board (SWRCB) required that the CCWD implement conservation goals to achieve water savings of 28 percent between June 2015 and February 2016 in the retail sector, and to achieve savings of 25 percent beginning in March of 2016. In response to the mandatory conservation requirements, the CCWD adopted a Drought Program on June 3, 2015. The Drought Program included water use reduction targets, temporary conservation pricing adjustments, and fines for violating prohibitions. In response to the drought state of emergency and the Drought Program, the CCWD's customers achieved a cumulative conservation rate of 34 percent through March 2016.<sup>32</sup>

The City's 2015 UWMP includes a water shortage contingency plan, which incorporates a four-staged response to water shortages. The staged response is intended to allow the City to meet future water conservation needs through targeted emissions aimed at achieving between 10 and 50 percent water conservation goals. The City's water shortage contingency planning includes restrictions and prohibitions on end water use, as well as enforcement procedures including penalization. The Stage III conservation measures included in the City's Water shortage contingency plan, which are intended to achieve between 21 and 35 percent water conservation,<sup>33</sup> are substantively similar to the conservation measures included in the CCWD's Drought Program. As discussed, the Drought Program was shown to result in a 34 percent water use reduction during the water emergency. Therefore, considering the City's inclusion of water shortage contingency planning in the 2015 UWMP, and the proven efficacy of such measures at achieving a 34 percent reduction in water use, the City would be anticipated to have the ability to reduce water use to the meet the 15 percent reductions anticipated to be required by the CCWD.

Based on the analysis described above, the WSA demonstrates that the water demand estimates for citywide growth, which would generally include the 4,800 people anticipated to reside in the Draft Master Plan Area following potential buildout of the Draft Master Plan (together with existing water demands and planned future uses), have been anticipated in the City's 2015 UWMP, and such growth could be accommodated through existing

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<sup>30</sup> West Yost Associates. *Water Supply Assessment for Faria/Southwest Hills Annexation EIR* [pg. 6-7]. March 2015.

<sup>31</sup> City of Pittsburg. *City of Pittsburg 2015 Urban Water Management Plan Final Draft*. June 2016.

<sup>32</sup> Contra Costa Water District. *Agenda Docket Form: Item Number 5*. April 20, 2016.

<sup>33</sup> City of Pittsburg. *City of Pittsburg 2015 Urban Water Management Plan Final Draft*. June 2016.

CCWD supplies.<sup>34</sup> Therefore, CCWD has the capacity to serve the proposed project, in normal precipitation years, as accounted for in the UWMP. The UWMP concluded that although deficits may occur in single- or multiple-dry years, the response to recent drought-related supply curtailments has shown that the City and CCWD could adequately respond to drought conditions and provide sufficient water supplies to the Pittsburg Service Area. While adequate capacities exist, the project site is not currently within the CCWD service district nor is the project site included in the CVP. Consequently, approval of the proposed project would require annexation of the project site into both the CCWD service area and the CVP. As a result, the proposed project could have a *significant* impact to water supply and delivery and may not be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b), (j), and (k), as discussed in Appendix J of this EIR.

Mitigation Measure(s)

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

- 4.11-1(a) *The developer shall provide all necessary documentation required by the CCWD for its application for inclusion of the project site in the CVP. No grading or building permits shall be issued until the project site has been annexed into the CCWD service area and the developer provides the City with a “Will Serve” letter from the CCWD verifying that the project site has been included in the CVP.*
- 4.11-1(b) *Prior to final subdivision map approval, per SB 221 (Government Code Section 66473.7), the water supplier (the City of Pittsburg) shall provide a written verification that the water supply for the proposed project is sufficient, to the satisfaction of the CCWD.*

**4.11-2 Exceed wastewater treatment requirements of the applicable RWQCB, require the construction of new wastewater delivery, collection, or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, or require sewer service that may not be available by the area’s wastewater treatment provider. Based on the analysis below, while adequate capacities exist, the project site is not currently within the DDS service district, but with implementation of mitigation, the impact would be *less than significant*.**

The City maintains and owns the local sewage collection system and is responsible for the collection and conveyance of wastewater to the WWTP. The project site is located within the DDS sphere of influence, but is not located within the DDS service area and would need to be annexed prior to receiving service. The project site would be served by the regional Delta Diablo WWTP located in Antioch, upon annexation and subsequent project development. Existing operating permits for the WWTP allow for an average dry weather

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<sup>34</sup> West Yost Associates. *Water Supply Assessment for Faria/Southwest Hills Annexation EIR* [pg. 6-1]. March 2015.

flow of 16.5 MGD, but the plant currently has the physical capacity to accommodate up to 19.5 MGD of average dry weather flow. In 2017, the average dry weather flow influent to the treatment plant was 13.4 MGD.

Wastewater from the proposed project would include flow from residential development only and would not include flows from industrial or manufacturing operations that are associated with the generation of larger flows of wastewater. Based on the generation rate from the City of Pittsburg General Plan of 220 gallons per day (gpd) for single-family developments, the proposed project is anticipated to generate approximately 330,000 gpd (0.33 MGD).<sup>35</sup> The addition of 0.33 MGD of influent to the WWTP would result in a total influent of 13.73 MGD, which would not exceed the permitted capacity of the WWTP of 16.5 MGD. Therefore, the additional wastewater generated by the proposed project is not anticipated to result in an exceedance of the WWTP's capacity.

According to the Sanitary Sewer System technical memorandum prepared for the proposed project by Isakson & Associates Inc., the project's sewer system would flow in two directions, similar to the stormwater system discussed in Chapter 4.8 of this EIR, based on existing topography. The northerly three quarters of the project site would flow through the existing San Marco Project. Flows through the San Marco Project would be directed in the existing 12-inch diameter sewer main located in San Marco Boulevard to the north of the project site, which brings wastewater to a pump station and pumps wastewater to the WWTP in Antioch. The sewer system from SR 4 through Bay Point to the aforementioned pump station was designed by DDS to accommodate flow from the San Marco development and up to 1,328 single-family units from the northerly Faria Property (previously known as San Marco Hills).<sup>36</sup>

Sewage from the southerly quarter of the project site would flow through the approved Bailey Estates project into an existing 10-inch diameter sewer main located in Bailey Road. The southerly portion of the project site is located in the City of Pittsburg's Sewer Sub-Basin SW106. The City has planned to accommodate wastewater from up to 300 single-family units in Sewer Sub-Basin SW106.<sup>37</sup> The existing downstream sewer system flows to the WWTP through the existing interceptor sewer main located in Willow Pass Road.

Based on the anticipated conveyance capacity for the area, the conveyance system is capable of accommodating approximately 1,628 new single-family units. The proposed project could involve up to 1,500 single-family units. Thus, the system is capable of accommodating the conveyance of the proposed project's wastewater generation. In addition, adequate capacity exists at the WWTP to accommodate the increase in wastewater generation that would occur with buildout of the proposed project. Therefore, according to the Sanitary Sewer System technical memorandum prepared for the proposed project by Isakson & Associates Inc., development of the proposed project would not result in any new capacity deficiencies at buildout. While adequate capacities exist, the project

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<sup>35</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century* [pg. 11-9]. November 16, 2001.

<sup>36</sup> Isakson and Associates Inc. *Technical Memorandum: Faria Property Sanitary Sewer System*. December 27, 2013.

<sup>37</sup> *Ibid.*

site is not currently within the DDS D service district. Consequently, approval of the proposed project would require annexation of the project site into the DDS D service area. As a result, the proposed project could have a **significant** impact related to wastewater treatment and may not be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b) and (j), as discussed in Appendix J of this EIR.

Mitigation Measure(s)

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

4.11-2(a) *The developer shall provide all necessary documentation required by the DDS D for its application for inclusion of the project site in the DDS D's service area. No grading or building permits shall be issued until the project site has been annexed into the DDS D service area and the developer provides the City with a "Will Serve" letter from the DDS D.*

4.11-2(b) *In conjunction with the first development application within the Draft Master Plan area, the developer shall provide to the City confirmation from the DDS D that adequate trunk sewer system capacity exists to serve the proposed project.*

**4.11-3 Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs or fail to comply with federal, State, and local statutes and regulations related to solid waste. Based on the analysis below, the impact would be *less than significant*.**

The 2011 per capita disposal rate in the City of Pittsburg, which is the most recently approved disposal rate, was 3.5 pounds per day (ppd) per resident.<sup>38</sup> Using an average persons per household of 3.2 for the City of Pittsburg, upon maximum buildout, the project could generate approximately 4,800 new residents (1,500 units x 3.2 persons per household = 4,800 new residents).<sup>39</sup> Accordingly, the total daily solid waste generation resulting from the project could be approximately 16,800 ppd (4,800 new residents x 3.5 ppd per resident = 16,800 ppd), which would equate to approximately 8.4 tons per day and 3,066 tons per year.

As discussed above, the Potrero Hills Landfill has a maximum permitted capacity of 83,100,000 cubic yards with an effective remaining refuse capacity of 13,872,000 tons. According to the recently issued Solid Waste Permit, the estimated closure date for the Potrero Landfill is 2048. In addition to the Potrero Hills Landfill, according to the City's General Plan EIR, only 16 percent of the Keller Canyon Landfill is currently being used. Therefore, the Potrero Hills Landfill and the Keller Canyon Landfill would be expected to

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<sup>38</sup> Cal Recycle. *Jurisdiction Diversion/Disposal Rate Summary (2007-Current)*. Available at: <http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx>. Accessed June 4, 2015.

<sup>39</sup> City of Pittsburg. *2015 – 2023 Housing Element*. May 04, 2015.

be capable of accommodating the solid waste generated by the proposed project, and impacts related to an increased demand for solid waste disposal services would be ***less than significant*** and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b) and (j), as discussed in Appendix J of this EIR.

Mitigation Measure(s)

*None required.*

**4.11-4 Result in substantial adverse physical impacts associated with the provisions of new or physically altered fire protection facilities, and/or the need for new or physically altered fire protection 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 facilities. Based on the analysis below and the lack of feasible mitigation related to a conflict with location and response time standards established by the General Plan, the impact would be *significant and unavoidable*.**

The proposed project is located within the jurisdiction of the CCCFPD with four stations located within approximately four miles of the project site. Because the proposed project does not include detailed designs to be evaluated (such as a subdivision map or design review request), the project is evaluated at a program-level; therefore, the maximum buildout for the proposed project site, according to the current Pittsburg General Plan, is 1,500 single-family units. Maximum buildout of the project site could introduce an estimated 4,800 new residents to the City of Pittsburg (1,500 units x 3.2 persons per household = 4,800 new residents). Based on an added population of approximately 4,800 residents, CCCFPD would experience an increase in demand for fire protection services and emergency medical services. Impact fees for the CCCFPD are collected by the Building Department at the time of application for a building permit. The current Fire Facility Impact Fees are a onetime fee of \$591.00 per single-family dwelling unit. Fire Facility Impact Fees for the CCCFPD are specifically designed to proportionally cover any costs associated with additional equipment and/or personnel needed to serve new development projects within the CCCFPD service area.<sup>40</sup> In addition, on April 17, 2017, the City Council of the City of Pittsburg passed and adopted Resolution Number 17-13311. In adopting Resolution Number 17-13311, the City Council acknowledged that new development within the City increases demands on emergency medical and fire protection services and formed Community Facilities District 2017-1 (CFD 2017-1). The CFD 2017-1 was formed to help finance increased emergency medical and fire protection services through assessment of an annual special tax on properties within the CFD 2017-1. Payment of the Fire Facility Impact Fees and the CFD 2017-1 special tax would cover any additional costs associated with additional equipment or personnel needed to serve the proposed project. While the Fire Facility Impact Fees are assessed on all new developments within the City, the CFD 2017-1 special tax is only assessed on sites within the district. The proposed project site is not currently within the CFD 2017-1, and, thus, would not be

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<sup>40</sup> Contra Costa County Fire Protection District. *Fire Facilities Impact Fee Study Report*. October 11, 2005.

subject to the CFD 2017-1 special taxes that would support the increased fire demand from operation of the proposed residential development within the project site.

It should be noted that the Draft Master Plan includes requirements regarding fire resistant landscaping, which would reduce the potential for the project to increase fire service demand due to wildland fires. Furthermore, Chapter 4.7, Hazards and Hazardous Materials, of this EIR includes a discussion of potential impacts related to wildland fires.

In addition to the above, the proposed project would conflict with the location standard established by General Plan Policy 11-P-26, as the site would be located outside of the 1.5-mile response time radius of the nearest fire station, which would have the primary responsibility for serving the project site. Therefore, although the proposed project would be required to pay Fire Facility Impact Fees in effect at the time of building permit issuance, the project would conflict with location and response time standards established by the General Plan. Furthermore, the project site is not currently included within CFD 2017-1, and would not be subject to the special taxes required to provide fire service to new development. Consequently, the proposed project would conflict with General Plan Policy 11-P-26 and would not provide for adequate funding of fire emergencies, both of which would be considered a *significant* impact. Nonetheless, the proposed project would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b) and (j), as discussed in Appendix J of this EIR, due to payment of applicable fees and availability of CCCFPD to provide service to the project site.

Mitigation Measure(s)

Inclusion of the project site within CFD 2017-1 would ensure that special taxes would be assessed on future development within the project site, which would support the provision of emergency medical and fire protection services. However, the project site is outside of the 1.5-mile response time radius of the nearest fire station, and mitigation that would establish project consistency with General Plan Policy 11-P-26 does not exist. Therefore, despite implementation of the following mitigation measure, the project would continue to conflict with General Plan Policy 11-P-26, which would be considered a *significant and unavoidable* impact.

- 4.11-4      *Prior to recordation of a Final Map for any portion of the proposed project site, the project applicant shall provide proof, to the City of Pittsburg Community Development Department, that the proposed project site has been annexed into CFD 2017-1.*

**4.11-5 Result in substantial adverse physical impacts associated with the provisions of new or physically altered police protection facilities, and/or the need for new or physically altered police protection 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 facilities. Based on the analysis below, the impact would be *less than significant*.**

Upon annexation to the City of Pittsburg, the proposed project would be located within the jurisdiction of the PPD. Because the proposed project does not include detailed designs to be evaluated (such as a subdivision map or design review request), the project is evaluated at a program-level; therefore, the maximum buildout of the proposed project, according to the Draft Master Plan, could result in the development of approximately 1,500 dwelling units, which would introduce an estimated 4,800 new residents to the City (1,500 units x 3.2 persons per household = 4,800 new residents). Based on an added population of approximately 4,800 residents, the PPD would experience an increase in demand for law enforcement services. The PPD anticipates that the addition of 4,800 residents would result in the need to expand the Department's force of sworn officers. Such an expansion of the Department would require hiring new officers and providing the new officers with resources such as equipment and vehicles.<sup>41</sup>

Standard City of Pittsburg conditions of approval require that the developer annex new development into the Community Facilities District (CFD) 2005-1 in order to collect fees sufficient to fund increased police protection services needed due to the population increase associated with the proposed project. Such fees would be collected during the approval process for future specific developments within the annexation area. The rate of the CFD fee is subject to City Council Ordinance No. 05-1246. Development fees would be used by the PPD to meet the increased demand for police services.

While the project would require additional sworn officers to serve the project, new police facilities would not be required in order to provide police services to the proposed project. With annexation to the CFD, the PPD has indicated that the Department could adequately serve the proposed project.<sup>42</sup> As a result, the project would have a *less-than-significant* impact related to the provisions of new or physically altered police protection facilities and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b) and (j), as discussed in Appendix J of this EIR.

Mitigation Measure(s)

*None required.*

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<sup>41</sup> Captain Rathnesh Raman, Pittsburg Police Department. Personal communication [phone] with Jacob Byrne, Associate, Raney Planning and Management, Inc. April 5, 2017.

<sup>42</sup> Captain Michael Perry, Pittsburg Police Department. Personal communication with Raney Planning and Management, Inc. on March 4, 2014, and personal communication [phone] between Captain Rathnesh Raman, Pittsburg Police Department, and Jacob Byrne, Associate, Raney Planning and Management, Inc. on April 5, 2017.

**4.11-6 Result in substantial adverse physical impacts associated with the provisions of new or physically altered school facilities, and/or the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for school facilities. Based on the analysis below, the impact would be *less than significant*.**

Buildout of the Draft Master Plan is assumed to involve construction of up to 1,500 single-family units. Using the District's student generation rates, the proposed project's single-family units could generate an estimated 330 new elementary school students, 129 new middle school students, and 1,425 new high school students for a total of 781 new students (see Table 4.11-7).

<b>Table 4.11-7 Student Generation Projections for the Proposed Project</b>			
<b>Grade Levels</b>	<b>Student Generation Factor Per Household</b>	<b># of Units</b>	<b>New Students</b>
Elementary (K-5)	0.220	1,500	330
Middle (6-8)	0.086	1,500	129
High (9-12)	0.950	1,500	1,425
<b>Total</b>			<b>1,884</b>

The new students residing in the Draft Master Plan Area at buildout would be distributed throughout schools within the MDUSD. Table 4.11-8 below presents a comparison of the number of new students anticipated to reside in the Draft Master Plan Area with the available capacity at existing school facilities in the MDUSD. As shown in Table 4.11-8 below, adequate capacity exists at Riverview Middle school to accommodate the number of new students anticipated at buildout of the Draft Master Plan Area. However, adequate capacity is not currently available at Delta View Elementary School, Rio Vista Elementary School, and Mount Diablo High School. Pursuant to Proposition 1A/Senate Bill 50 and Education Code Section 17620 et seq., school districts are authorized to levy fees on new residential development to fund the school facilities necessary to accommodate the students associated with new development. The current MDUSD Developer Fees are \$3.48 per square foot of residential development.<sup>43</sup>

The project applicant shall pay the required SB 50 school development fees in effect at the time of issuance of building permits for the project. In accordance with California Proposition 1A/SB 50, payment of the applicable school impact fees is considered full and complete mitigation for the increased demand for school services resulting from development.

<sup>43</sup> Mount Diablo Unified School District. *Development Fee*. Available at: <http://www.mdusd.org/developfee>. Accessed September 12, 2017.



<b>Table 4.11-8 MDUSD Available Capacity</b>			
<b>School</b>	<b>Grades</b>	<b>Available Capacity<sup>1</sup></b>	<b>Students Generated from the Proposed Project</b>
Delta View Elementary	K-5	245	330
Rio Vista Elementary	K-5	0	
Riverview Middle	6-8	376	129
Mount Diablo High	9-12	875	1,425
<sup>1</sup> Available capacity provided by MDUSD and is based on built capacity of the school minus current enrollment.  <i>Sources:</i> <i>Nacht &amp; Lewis. Mt. Diablo Unified School District Bay Point Area Master Program. February 24, 2014.</i>  <i>California Department of Education. Enrollment Report: 2016-17 Enrollment by Grade. Available at: <a href="http://data1.cde.ca.gov/dataquest/page2.asp?level=School&amp;subject=Enrollment&amp;submit1=Submit">http://data1.cde.ca.gov/dataquest/page2.asp?level=School&amp;subject=Enrollment&amp;submit1=Submit</a>. Accessed September 2017.</i>			

Consequently, while capacity within the MDUSD is currently limited, the payment of school impact fees would be considered sufficient to reduce potential impacts related to the provision of school facilities and services to a ***less-than-significant*** level and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b) and (j), as discussed in Appendix J of this EIR.

Mitigation Measure(s)  
*None required.*

**4.11-7 Result in substantial adverse physical impacts associated with the provisions of new or physically altered park facilities, and/or the need for new or physically altered park facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios or other performance objectives for park facilities. Based on the analysis below, the impact would be *less than significant*.**

According to Section 17.32.020 (D)(2) of the Pittsburg Municipal Code, the amount of land to be dedicated for parks shall be determined according to the type of development proposed. For single-family, detached residences, the City requires 1.73 acres of parkland be dedicated per 100 units.

With maximum buildout of 1,500 single-family dwelling units, a minimum of 25.95 acres of parkland would be required for inclusion in future buildout of the Draft Master Plan area (1,500 dwelling units / 100 dwelling units x 1.73 acres). According to Section 17.32.020 (H)(2) of the Pittsburg Municipal Code, land dedicated for a park must be available for year-round use. Per Pittsburg Municipal Code Sections 17.32.020 (G) and (K), a combination of fee payment and land dedication is acceptable under certain circumstances, subject to approval by the Planning Commission.

The currently proposed Draft Master Plan includes approximately 267.2 acres of undeveloped area within the overall Draft Master Plan area. Such undeveloped areas could include trails and vehicle access as deemed necessary, consistent with Section 18.58.020 of the Pittsburgh Municipal Code. Additionally, grading activity would occur in approximately 72.9 acres of the site designated for Open Space; however, following the disturbance of such areas during grading, the 72.9 acres would remain as undeveloped Open Space. The Draft Master Plan includes several development regulations and guidelines regarding the provision of trails and parks throughout the area, including Development Regulation C.1 and Design Review Guidelines A.3, A.4, A.10, A.11, and B.1. Although the Draft Master Plan includes the aforementioned development regulations and guidelines to encourage the development of parks, the Draft Master Plan does not include specific siting of such parks within the Draft Master Plan Area. Nevertheless, Section 17.32.020 of the Pittsburgh Municipal Code requires the dedication of land or the payment of in-lieu fees, and future development within the Draft Master Plan Area would be required to comply with such Municipal Code requirements.

Development within the Draft Master Plan area could meet Pittsburgh Municipal Code requirements in two principal ways. First, buildout of the project site could include park space sufficient to meet the Pittsburgh Municipal Code requirements. Inclusion of such parkland would result in the development of new parks within the development area of the Draft Master Plan. Such development would involve activities with the potential to cause environmental impacts. However, this EIR assumes that all areas of the project site that are designated for residential land uses would be developed with either residences or ancillary uses supporting residences such as roads, infrastructure, or parks. By assuming all areas designated for residential uses would be disturbed and developed, this EIR addresses the potential physical environmental impacts related to development of parks within the Draft Master Plan area.

The second method of meeting the City's Municipal Code requirements would be through payment of in-lieu fees in compliance with Section 17.32.020. The Municipal Code requires that land, fees or combinations thereof must be used to provide parks or recreational facilities that would reasonably be assumed to serve the subdivision. Fees may also be used to expand or upgrade existing facilities. If the fees would be used to purchase and develop new parkland or park facilities, the potential impacts of the new facilities would be analyzed in a separate CEQA process. Accordingly, payment of in-lieu park fees to the City would be sufficient to meet the City's Municipal Code requirements.

It should be noted that future development within the Draft Master Plan area could meet the City's parkland requirements through a combination of on-site parks and the payment of in-lieu fees. The final determination with respect to how the project shall satisfy the City's park dedication requirements is subject to Planning Commission approval. The foregoing analysis for both individual methods would remain true if a combination of on-site parks and in-lieu fees are used.

Considering that future development within the Draft Master Plan area would be required to comply with the park dedication requirements set forth in Pittsburgh Municipal Code

Section 17.32.020, and given the analysis provided above, the proposed project would be anticipated to result in a *less-than-significant* impact related to existing park facilities or the provision of new park facilities and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b) and (j), as discussed in Appendix J of this EIR.

Mitigation Measure(s)

*None required.*

**4.11-8 Result in substantial adverse physical impacts associated with the provisions of new or physically altered library facilities, and/or the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for library facilities. Based on the analysis below, the impact would be *less than significant*.**

With maximum buildout, the proposed project could result in the development of up to 1,500 low density single-family units, which would introduce an estimated 4,800 new residents to the City (1,500 units x 3.2 persons per household). The population growth associated with the proposed project would increase the demand on library services for the City of Pittsburg.

The CCC Library system has indicated the Vincent A. Davi Memorial Library in Pittsburg currently adequately serves the needs of the City and the population increase from the proposed project at buildout would not create a deficiency in library services.<sup>44</sup> Therefore, the Pittsburg Library branch would be able to serve the proposed project, resulting in a *less-than-significant* impact and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b) and (j), as discussed in Appendix J of this EIR.

Mitigation Measure(s)

*None required.*

**4.11-9 Result in substantial adverse physical impacts associated with the provisions of new or physically altered electricity and natural gas facilities, and/or the need for new or physically altered electricity and natural gas facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for electricity and natural gas facilities. Based on the analysis below, the impact would be *less than significant*.**

The proposed project would result in energy consumption in the form of electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security

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<sup>44</sup> Jessica Hudson, Contra Costa County Librarian. Personal communication with Raney Planning and Management, Inc. April 29, 2014.

systems, and more. In addition, maintenance activities during operations, such as landscape maintenance, would involve the use of electric or fueled equipment. The proposed project site is located adjacent to other existing development to the north that are currently supplied electricity and natural gas services by PG&E. The project site would connect to existing PG&E utility lines in the project vicinity. The existing PG&E infrastructure and supply for the area is expected to be sufficient to handle the proposed project's increase in demand for electricity and natural gas. It should be noted that PG&E is ranked one of the three cleanest large power producers in the country, with more than half of their power supply being from zero-emission sources.<sup>45</sup> PG&E continues to increase the amount of renewable energy supplies in their overall energy supply.

The proposed project is required to comply with the mandated standards of the relevant California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 1), and the California Building Energy Efficiency Standards Code. The 2016 Building Energy Efficiency Standards and CALGreen focus on several key areas to improve building energy efficiency, such as through lighting efficiency, mechanical equipment efficiency, energy efficient appliances, building insulation, roofing materials, solar-ready buildings, and more. Compliance with the CALGreen Code and California Building Energy Efficiency Standards Code would help to further reduce the proposed project's overall consumption of energy.

The proposed project would include the construction of the necessary minor infrastructure improvements in order to connect to existing electrical and gas lines in the project vicinity. This EIR assumes that all areas of the project site that are designated for residential land uses would be developed with either residences or ancillary uses supporting residences such as roads, infrastructure, or parks. By assuming all areas designated for residential uses would be disturbed and developed, this EIR addresses the potential physical environmental impacts related to development of minor infrastructure within the Draft Master Plan area. However, buildout of the Draft Master Plan area would not require major upgrades to PG&E infrastructure which could cause significant environmental impacts. Therefore, a ***less-than-significant*** impact would occur and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b) and (j), as discussed in Appendix J of this EIR.

Mitigation Measure(s)

*None required.*

## Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the

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<sup>45</sup> Pacific Gas & Electric Company. *Clean Energy CA*. Available at: [https://www.pge.com/en\\_US/residential/solar-and-vehicles/clean-energy/about-clean-energy.page?](https://www.pge.com/en_US/residential/solar-and-vehicles/clean-energy/about-clean-energy.page?). Accessed March 2017.

environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area. Cumulative development in the cumulative geographic context could have combined effects on public services, such as exacerbating an existing response time deficiency in certain areas of the City or increased degradation of certain facilities, and on utilities, such as reaching or exceeding capacity of infrastructure and depleting availability of sources.

**4.11-10 Development of the proposed project, in combination with future buildout in the City of Pittsburg, would increase demand for additional public services and utilities. Based on the analysis below and lack of feasible mitigation related to a conflict with location and response time standards established by the General Plan, the cumulative impact would be *significant and unavoidable*.**

Implementation of the proposed project would contribute to an increased demand for public services and utilities in the City of Pittsburg and the region.

Water

Implementation of the proposed project would contribute to an increased demand for public services and facilities in the City of Pittsburg and the City's future water demand is anticipated to continue to increase as approved projects build out and new developments are approved and constructed within the City's water service area. The City currently has an extensive water conservation program in place, as described in the City's 2015 UWMP. Based on the 2015 UWMP, the City is planning for a potential population increase of 34,000 persons (equivalent to over 10,000 dwelling units based on current occupancy of 3.2 persons per dwelling unit) from 2010 to 2035. The proposed project could include the development of up to 1,500 single-family units and could generate up to an estimated 4,800 new residents to the City (1,500 units x 3.2 persons per household). The anticipated growth of 4,800 new residents would be within the 34,000 person population growth anticipated in the 2015 UWMP.

With the projected year 2035 population of 99,019 and the projected total City water demand of 14,531 AFY, the City is projecting an average per capita water demand of 131 gpcd by 2035. The projected future water demand of the City of Pittsburg includes continued implementation of the City's existing water conservation program, and is based on future normal hydrologic conditions. Because of the City's water conservation plan, the projected future dry-year water demand is similar for both single dry- and multiple dry-years. However, the City's response to recent droughts has demonstrated that substantial decreases in demand can be achieved during times of drought.<sup>46</sup>

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<sup>46</sup> City of Pittsburg. *City of Pittsburg 2015 Urban Water Management Plan Final Draft*. June 2016.

Therefore, existing water supplies would be sufficient to meet the City's existing and projected future water demands, including those future demands associated with the proposed project, to the year 2035. Consequently, the proposed project in combination with future buildout of the City of Pittsburg and other recently planned developments would not result in a significant cumulative impact related to water resources.

#### Wastewater

As described above, the City of Pittsburg is served by the regional Delta Diablo WWTP located in Antioch. The WWTP is currently permitted to accept an average dry weather flow of 16.5 MGD and the current average dry weather flow influent to the treatment plant is 13.4 MGD. Buildout of the Draft Master Plan could generate up to 0.33 MGD of additional wastewater, which would not cause an exceedance of the WWTP capacity. Although the Delta Diablo WWTP currently operates with a permitted capacity of up to 16.5 MGD of average dry weather flow, the physical capacity of the WWTP is currently 19.5 MGD, and the DDSO identified that phased expansion of the WWTP would ultimately provide 24.0 MGD of average dry weather flow capacity. Buildout capacity of 24.0 MGD is anticipated to provide adequate capacity for wastewater generation from buildout of the DDSO service area, including the cities of Antioch and Pittsburg, as well as the unincorporated community of Bay Point.<sup>47</sup>

Therefore, the project's incremental increase in wastewater generation, in combination with buildout of the DDSO service area, is not anticipated to exceed WWTP capacity or conveyance and would not represent a cumulatively considerable increase in the demand for wastewater treatment services.

#### Solid Waste

The Potrero Hills Landfill is expected to have adequate capacity to serve the regional waste disposal needs until the anticipated closure date of approximately 2048. In addition, as noted above, only 16 percent of the Keller Canyon Landfill is currently being used. Similar to water supply demands, as standards and regulations regarding solid waste reduction and recycling programs become more stringent, the overall demand for solid waste disposal services would likely reduce compared to baseline conditions. Furthermore, Pittsburg's General Plan EIR concluded that impacts related to solid waste would be less than significant with implementation of Policies 11-P-19 and 11-P-23 mentioned above. Potential future development within the Draft Master Plan area would be required to comply with all applicable General Plan policies, which would encourage recycling and reduce construction waste during development of the project. Because adequate capacity exists at the Keller Canyon Landfill, solid waste production is anticipated to decline in the future, and the City's General Plan EIR concluded that impacts to solid waste from buildout of the City would be less than significant, the proposed project's incremental contribution to cumulative impacts related to solid waste would be less than cumulatively significant.

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<sup>47</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century*. Adopted November 16, 2001.

### Law Enforcement, Fire Protection, Schools, Park and Recreation Facilities

The proposed project would pay all applicable fees to support adequate provisions for fire facilities, staffing, and equipment, schools, police services, and park dedication or in lieu fees for park and recreation facilities, if necessary. Similar to the proposed project, other future development projects would be required by the City to pay their fair-share fees toward the provision of adequate public services and facilities, including towards the necessary upgrades and expansions of facilities and equipment. Therefore, the proposed project in combination with future buildout in the City of Pittsburg would not result in a significant cumulative impact related to law enforcement, schools, and park and recreation facilities. However, as discussed above, the proposed project would conflict with the location standard established by General Plan Policy 11-P-26, as the site would be located outside of the 1.5-mile response time radius of the nearest fire station. Therefore, although the proposed project would be required to pay Fire Facility Impact Fees in effect at the time of building permit issuance, the project would still conflict with location and response time standards established by the General Plan, which would be considered a significant impact.

### Conclusion

Based on the above, the proposed project's incremental contribution to increases in demand for public services and utilities would not be cumulatively considerable, with the exception of impacts related to fire protection services. Therefore, the cumulative impact, specifically related to cumulative impacts to fire protection services, would be considered ***significant and unavoidable***. Nonetheless, the project would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policies (b), (j), and (k), as discussed in Appendix J of this EIR, due to payment of applicable fees and availability of service providers to provide service to the project site.

### Mitigation Measure(s)

*None feasible.*





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## 4.12 TRANSPORTATION, TRAFFIC, AND CIRCULATION

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## 4.12

## TRANSPORTATION, TRAFFIC, AND CIRCULATION

### 4.12.1 INTRODUCTION

The Transportation, Traffic, and Circulation chapter of the EIR addresses the existing and cumulative transportation and circulation conditions associated with the development of the proposed project. The analysis includes consideration of proposed project impacts on roadway capacity, transit impacts, bicycle impacts, and pedestrian impacts. The information contained within this chapter is based on the Traffic Impact Study (TIS) prepared for the proposed project by Kimley-Horn and Associates, Inc (Appendix N).<sup>1</sup> All technical calculations are included as an appendix to the TIS.

### 4.12.2 EXISTING ENVIRONMENTAL SETTING

The section below describes the transportation, traffic, and circulation study area and the physical and operational characteristics of the existing transportation system within the study area, including the surrounding roadway network, transit, bicycle and pedestrian facilities. In addition, a summary of existing funding mechanisms is provided.

#### Roadway Network

The principal roadways in the project vicinity include:

- State Route (SR) 4 – SR 4 is the primary east-west corridor in Contra Costa County (CCC). SR 4 connects Interstate (I) 80 in the west to the SR 4 Bypass in the east. SR 4 provides access to multiple freeways within the Bay Area, including I 80, I 680, SR 242, and SR 160. Within the study area, SR 4 is two lanes in each direction between I 680 and SR 242, and three to five lanes in each direction between SR 242 and Railroad Avenue. In addition, a high occupancy vehicle (HOV) lane exists in the peak direction only during the peak hour (i.e., from 5:00 to 9:00 AM in the westbound direction and 3:00 to 7:00 PM in the eastbound direction) from west of Port Chicago Highway to the eastern study limit near Railroad Avenue. Ramp metering is active during the peak hours in the peak directions for on-ramps on this study corridor. The speed limit on SR 4 is 65 miles per hour (mph).
- Alves Ranch Road – Alves Ranch Road is a two-lane local street with turn lanes serving residential areas south of W. Leland Road. The posted speed limit is 25 mph. It should be noted that Alves Ranch Road does not currently extend north of W. Leland Road, but is expected to in the future.

<sup>1</sup> Kimley-Horn and Associates, Inc. *Traffic Impact Study, Faria Annexation, Pittsburg, CA*. November 2017.

- Avila Road – Avila Road is a two-lane collector roadway without medians or turn lanes, and is a parallel arterial to SR 4. Avila Road serves industrial areas and provides access to Willow Pass Road. The posted speed limit is 40 mph. It should be noted that, in the future, Avila Road will be realigned and extended to connect to W. Leland Road.
- Babel Lane – Babel Lane is a two-lane roadway serving residential areas south of Clayton Road. The posted speed limit is 35 mph.
- Bailey Road – Bailey Road is a two- to four-lane major arterial roadway within the City of Pittsburg. Bailey Road has turn lanes and a raised median providing access to residential and commercial land uses. Further south in Concord, Bailey Road is a two-lane roadway between Clayton Road and Myrtle Drive. Bailey Road runs north-south within the project study area in Pittsburg from Willow Pass Road in the north to W. Leland Road in the south. Bailey Road runs northeast-southwest within the project study area in Concord from Myrtle Drive in the north to Clayton Road in the south. The posted speed limit is 30 to 35 mph along Bailey Road within the study area. Bailey Road would provide access to the project site at the southern portion of the site.
- Burton Avenue – Burton Avenue is a two-lane local street serving residential areas north and south of W. Leland Road. In addition, Burton Avenue provides access to Los Medanos Elementary School west of Burton Avenue. The posted speed limit is 25 mph.
- Canal Road – Canal Road is a two-lane roadway serving commercial areas and a church. To the west of Bailey Road, Canal Road turns into Alves Lane, and to the east of Bailey Road, Canal Road turns into Shooner Way. The posted speed limit is 35 mph.
- Chestnut Drive – Chestnut Drive is a two-lane local street serving residential areas north and south of W. Leland Road. The posted speed limit is 25 mph.
- Clayton Road – Clayton Road is a six-lane roadway with turn lanes and a raised median serving residential and commercial areas. To the west of Babel Lane, Clayton Road becomes two lanes in each direction with a two-way left turn lane (TWLTL). Clayton Road provides access to downtown Concord in the west and Ygnacio Valley Road in the east. The posted speed limit is 40 mph within the study area.
- Crestview Drive – Crestview Drive is a roadway with one lane in each direction and a TWLTL. Turn lanes exist at segments where a TWLT is lacking. Crestview Drive serves residential areas north and south of W. Leland Road. The posted speed limit is 30 mph.
- Concord Boulevard – Concord Boulevard is a two-lane roadway with turn lanes near Farm Bureau Road and a four-lane roadway with turn lanes near Bailey Road. Concord Boulevard provides access to residential land uses, Concord High School, and El Dorado Middle School between Farm Bureau Road and Bailey Road. To the west, Concord Boulevard provides access to downtown Concord. The posted speed limit is 35 mph along Concord Boulevard near Farm Bureau Road and Bailey Road.

- Cowell Road – Cowell Road is a four-lane roadway south of Treat Boulevard and a two-lane roadway north of Treat Boulevard near the study area. Cowell Road provides access to downtown Concord to the west and Ygnacio Valley Road to the east. The posted speed limit is 35 mph near the study area.
- Diamond Boulevard – Diamond Boulevard is a five-lane roadway with turn lanes and a raised median. Diamond Boulevard serves commercial uses to the north and south of Willow Pass Road.
- Dover Way – Dover Way is a two-lane local street serving residential areas north and south of W. Leland Road. The posted speed limit is 25 mph.
- Evora Road – Evora Road is a three-lane roadway with a TWLTL within the study area. Evora Road provides access to residential land uses north of SR 4 and west of Willow Pass Road. Evora Road also serves as a parallel roadway to SR 4 for commuters avoiding congestion on SR 4. The posted speed limit is 45 mph near the study area.
- Farm Bureau Road – Farm Bureau Road is a two-lane roadway serving residential areas within the study area. Farm Bureau Road becomes Olivera Road north of Willow Pass Road. The posted speed limit is 30 mph.
- Galindo Street – Galindo Street is a six-lane roadway serving residential areas within the study area. Galindo Street has turn lanes throughout and a raised median south of Oak Street. Galindo Street becomes Concord Avenue north of Salvio Street and becomes Monument Boulevard south of Cowell Road. The posted speed limit varies from 30 to 35 mph.
- Jacqueline Drive – Jacqueline Drive is a two-lane local street serving residential areas north and south of W. Leland Road. The posted speed limit is 25 mph.
- Kirker Pass Road – Kirker Pass Road is a six-lane roadway with turn lanes and a raised median serving residential and commercial uses from Clayton Road to Clearbrook Drive. It is a four-lane roadway without turn lanes or a median north of Clearbrook Drive. Kirker Pass Road turns into Ygnacio Valley Road south of Clayton Road, and to into Railroad Avenue north of Buchanan Road. The posted speed limit varies from 45 to 55 mph.
- West Leland Road – W. Leland Road is a four-lane major arterial roadway with turn lanes and a raised median from San Marco Boulevard to Woodhill Drive. East of Woodhill Drive, W. Leland Road is a four-lane major arterial roadway with turn lanes between Woodhill Drive and Railroad Avenue. The aforementioned segment does not include a raised median. W. Leland Road runs east-west within the study area and provides access to residential land uses. W. Leland Road is parallel to SR 4 on the south side and can provide an alternate route for commuters when SR 4 is congested. The posted speed limit is 35 to 45 mph on W. Leland Road within the study area.

- Loftus Road – Loftus Road is a two-lane local street serving residential areas south of Willow Pass Road. The posted speed limit is 25 mph.
- Market Street – Market Street is a four-lane roadway with a TWLTL north of Willow Pass Road. South of Willow Pass Road, Market Street is a two-lane roadway and turns into Meadow Lane. Market Street runs parallel to SR-242 within the study area and provides access to commercial uses. The posted speed limit is 35 mph.
- Maylard Street – Maylard Street is a two-lane local street off of Bailey Road. The Oak Hills Center is on the west side of the intersection of Maylard Street and Bailey Road. The posted speed limit is 25 mph.
- Montevideo Drive – Montevideo Drive is a two-lane local street serving residential areas north and south of W. Leland Road. The posted speed limit is 25 mph.
- Myrtle Drive – Myrtle Drive is a two-lane roadway serving residential areas between Bailey Road and Kirker Pass Road. Myrtle Road provides access to Ayers Elementary School. The posted speed limit is 25 mph near Bailey Road.
- Olivera Road – Olivera Road is a two-lane roadway with in the study area, serving Willow Pass Community Park and residential areas north of Willow Pass Road. Further to the northwest, Olivera Road connects to SR-242 and SR-4. Olivera Road becomes Farm Bureau Road south of Willow Pass Road. The posted speed limit is 35 mph near Willow Pass Road.
- Port Chicago Highway – Port Chicago Highway is a minor arterial roadway with two lanes in the southbound direction and one lane in the northbound direction near the study area at Willow Pass Road. Port Chicago Highway runs north-south near Willow Pass Road, providing access to residential areas. The posted speed limit is 35 mph in the study area.
- Railroad Avenue – Railroad Avenue is a four-lane major arterial roadway with turn lanes and a raised median serving commercial land uses. Railroad Avenue becomes a two-lane roadway north of East 10<sup>th</sup> Street. Railroad Avenue runs north-south within the study area and provides access to downtown Pittsburg in the north and becomes Kirker Pass Road in the south. The posted speed limit is 35 mph within the study area.
- Range Road – Range Road is a two-lane roadway that is separated by SR-4. North of SR-4, Range Road provides access to residential areas and becomes Willow Pass Road near Parkside Drive. South of SR-4, Range Road is four-lane roadway near W. Leland Road. Range Road provides access to Rancho Medanos Junior High School. The posted speed limit is 35 mph near Willow Pass Road and 35 mph near W. Leland Road.
- Rio Verde Circle – Rio Verde Circle is a two-lane local street serving residential areas off of San Marco Boulevard. Rio Verde Circle also provides access to Delta View Elementary School. The posted speed limit is 25 mph.

- San Marco Boulevard – San Marco Boulevard is a four-lane major arterial roadway with turn lanes and a raised median serving residential areas. San Marco Boulevard does not include shoulders. San Marco Boulevard runs north-south, providing access to SR 4 in the north. San Marco Boulevard becomes Willow Pass Road north of SR 4. The posted speed limit is 40 mph. San Marco Boulevard would be extended and provide access to the proposed project.
- Santa Teresa Drive – Santa Teresa Drive is a two-lane local collector street with turn lanes and a raised median serving residential areas to the west of San Marco Boulevard. To the east of San Marco Boulevard, Santa Teresa Drive is a two-lane local street without turn lanes or raised medians. The posted speed limit is 25 mph east of San Marco Boulevard and 30 mph west of San Marco Boulevard.
- Southwood Drive – Southwood Drive is a two-lane local street serving residential areas south of W. Leland Road. The posted speed limit is 25 mph.
- Treat Boulevard – Treat Boulevard is a four-lane roadway with turn lanes and a raised median serving residential and commercial areas. Treat Boulevard provides access to De La Salle High School, downtown Concord, and I 680 in the west. The posted speed limit is 40 mph within the study area.
- Willow Pass Road – Willow Pass Road is separated into two different segments: south of SR 4 and north of SR 4. The portion of Willow Pass Road south of SR 4 is a four-lane roadway within the study area between Avila Road and SR 4 ramps. South of Avila Road, Willow Pass Road becomes a two lane roadway until the City of Concord city limits, where the road opens up to two lanes in each direction again. Willow Pass Road provides access to SR 4 in the north and the City of Concord and SR 242 in the south. The posted speed limit is 55 mph near SR 4 and 35 mph near Farm Bureau Road.

The portion of Willow Pass Road north of SR 4 is a six-lane roadway within the study area between the SR 4 ramps and Port Chicago Highway. Willow Pass Road becomes two lanes in each direction with a center TWLTL between Port Chicago Highway and Bailey Road. Willow Pass Road becomes one lane in each direction with a TWLTL between Bailey Road and Range Road. Willow Pass Road provides access to SR 4 in the west and Railroad Avenue in the east, where the road becomes Parkside Drive. The posted speed limit is 40 mph between SR 4 and Port Chicago Highway, 35 mph between Port Chicago Highway and Bailey Road, and 30 to 35 mph between Bailey Road and Range Road.

- Woodhill Drive – Woodhill Drive is a two-lane local street serving residential areas south of W. Leland Road. The posted speed limit is 25 mph.
- Ygnacio Valley Road – Ygnacio Valley Road is a six-lane roadway with turn lanes and a raised median within out study area. It is a four-lane roadway without turn lanes or a raised median south of Michigan Boulevard. To the north of Clayton Road, Ygnacio Valley Road becomes Kirker Pass Road. The posted speed limit is 45 mph.

Additional roadway descriptions can be found in the TIS.

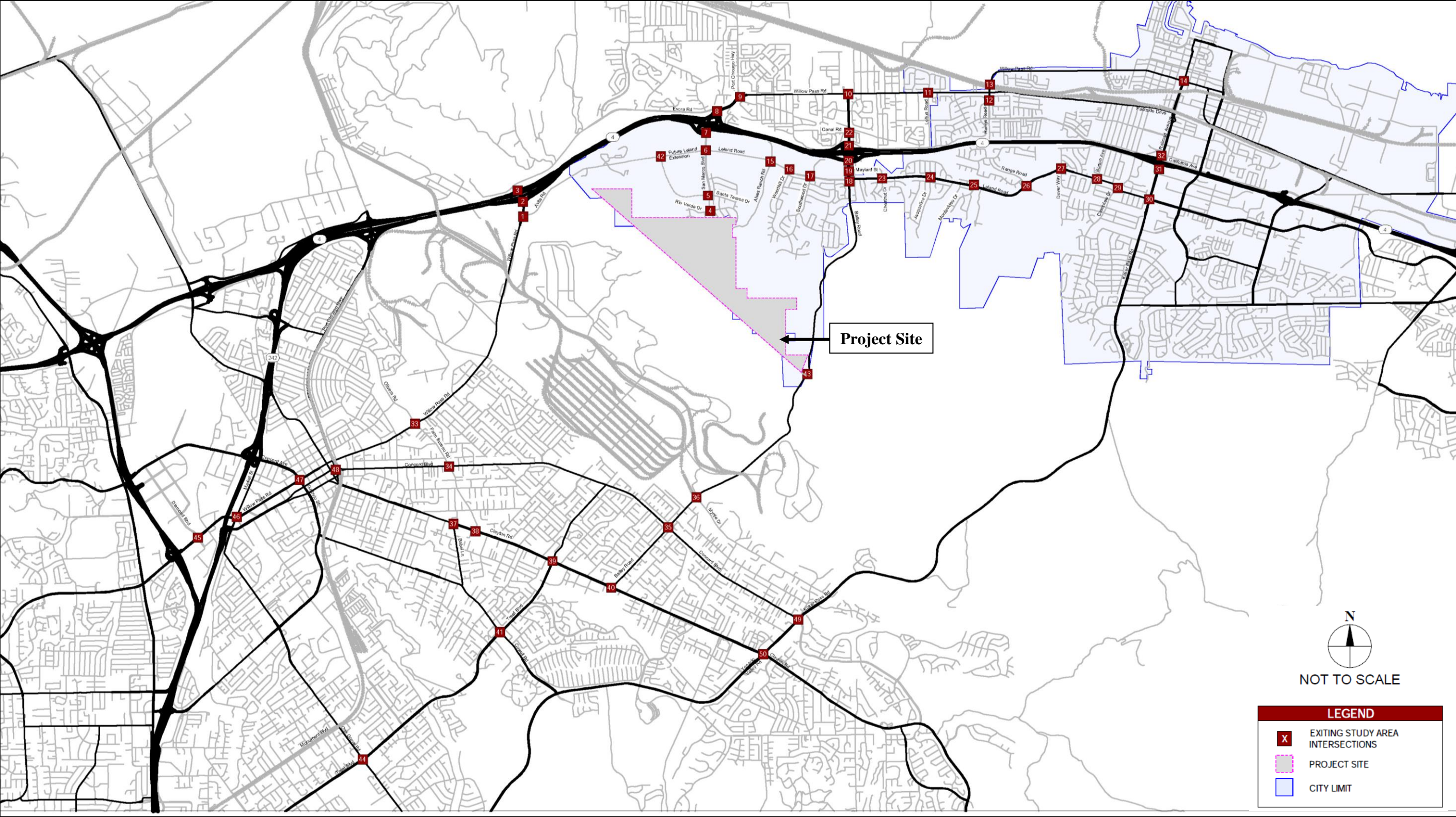
### **Study Intersections**

Based on the project's trip generation and the potential for traffic impacts, the following 50 intersections were selected to be included in the study area (see Figure 4.12-1):

1. Avila Road/Willow Pass Road;
2. Eastbound (EB) SR 4 Ramps/Willow Pass Road;
3. Westbound (WB) SR 4 Ramps/Willow Pass Road;
4. Rio Verde Circle/San Marco Boulevard;
5. Santa Teresa Drive/San Marco Boulevard;
6. W. Leland Road/San Marco Boulevard;
7. EB SR 4 Ramps/San Marco Boulevard;
8. WB SR 4 Ramp/San Marco Boulevard;
9. Willow Pass Road/Port Chicago Highway;
10. Willow Pass Road/Bailey Road;
11. Willow Pass Road/Loftus Road;
12. EB Willow Pass Road/Range Road;
13. WB Willow Pass Road/Range Road;
14. Willow Pass Road/Railroad Avenue;
15. W. Leland Road/Alves Ranch Road;
16. W. Leland Road/Woodhill Drive;
17. W. Leland Road/Southwood Drive;
18. W. Leland Road/Bailey Road;
19. Maylard Street/Bailey Road;
20. EB SR 4 Ramps/Bailey Road;
21. WB SR 4 Ramp/Bailey Road;
22. Canal Road/Bailey Road;
23. W. Leland Road/Chestnut Drive;
24. W. Leland Road/Jacqueline Drive;
25. W. Leland Road/Montevideo Drive;
26. W. Leland Road/Range Road;
27. W. Leland Road/Dover Way;
28. W. Leland Road/Burton Avenue;
29. W. Leland Road/Crestview Drive;
30. W. Leland Road/Railroad Avenue;
31. EB SR 4 Ramps/Railroad Avenue;
32. WB SR 4 Ramp/Railroad Avenue;
33. Willow Pass Road/Olivera Road;
34. Concord Boulevard/Farm Bureau Road;
35. Concord Boulevard/Bailey Road;
36. Bailey Road/Myrtle Drive;
37. Clayton Road/Babel Lane;
38. Clayton Road/Farm Bureau Road;
39. Clayton Road/Treat Boulevard;



Figure 4.12-1  
Study Intersections



Source: Kimley-Horn and Associates, Inc., 2017.



40. Clayton Road/Bailey Road;
41. Cowell Road/Treat Boulevard;
42. W. Leland Road/Santa Teresa Drive (future intersection);
43. Bailey Road/Project Entrance (future intersection);
44. Treat Boulevard/Oak Grove Road;
45. Willow Pass Road/Diamond Boulevard;
46. Willow Pass Road/Market Street;
47. Willow Pass Road/Galindo Street;
48. Concord Boulevard/Port Chicago Highway;
49. Kirker Pass Road/Oakhurst Drive/Concord Boulevard; and
50. Ygnacio Valley Road/Clayton Road.

### **Study Freeway Segments**

Based on the project's trip generation and the potential for traffic impacts, the following 24 freeway segments were selected to be included in the study area:

#### Northbound

1. SR 242 between I 680 and Clayton Road;
2. SR 242 between Clayton Road and Concord Avenue;
3. SR 242 between Concord Avenue and Grant Street;
4. SR 242 between Grant Street and Olivera Road; and
5. SR 242 between Olivera Road and SR 4.

#### Southbound

6. SR 242 between SR 4 and Olivera Road;
7. SR 242 between Olivera Road and Grant Street;
8. SR 242 between Grant Street and Concord Avenue;
9. SR 242 between Concord Avenue and Clayton Road; and
10. SR 242 between Clayton Road and I 680.

#### Eastbound

11. SR 4 between I 680 and Solano Way;
12. SR 4 between Solano Way and SR 242;
13. SR 4 between SR 242 and Port Chicago Highway;
14. SR 4 between Port Chicago Highway and Willow Pass Road;
15. SR 4 between Willow Pass Road and San Marco Boulevard;
16. SR 4 between San Marco Boulevard and Bailey Road; and
17. SR 4 between Bailey Road and Railroad Avenue.



### Westbound

18. SR 4 between Railroad Avenue and Bailey Road;
19. SR 4 between Bailey Road and San Marco Boulevard;
20. SR 4 between San Marco Boulevard and Willow Pass Road;
21. SR 4 between Willow Pass Road and Port Chicago Highway;
22. SR 4 between Port Chicago Highway and SR 242;
23. SR 4 between SR 242 and Solano Way; and
24. SR 4 between Solano Way and I 680.

### **Study Freeway Ramps**

Based on the project's trip generation and the potential for traffic impacts, the following 16 freeway ramps were selected to be included in the study area:

#### Eastbound SR 4

1. Willow Pass Road Off-ramp;
2. Willow Pass Road On-ramp;
3. San Marco Boulevard Off-ramp;
4. SB San Marco Boulevard Loop On-ramp;
5. NB San Marco Boulevard Diagonal On-ramp;
6. SB Bailey Road Diagonal Off-ramp;
7. NB Bailey Road Loop Off-ramp; and
8. Bailey Road On-ramp.

#### Westbound SR4

9. NB Bailey Road Diagonal Off-ramp;
10. SB Bailey Road Loop Off-ramp;
11. Bailey Road On-ramp;
12. San Marco Boulevard Off-ramp;
13. NB San Marco Boulevard Loop On-ramp;
14. SB San Marco Boulevard Diagonal On-ramp;
15. Willow Pass Road Off-ramp; and
16. Willow Pass Road On-ramp.

### **Common Traffic Analysis Terms**

Level of service (LOS) is a qualitative measure of traffic operating conditions, whereby a letter grade, from A to F is assigned, based on quantitative measurements of delay per vehicle. The grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions, and LOS F represents severe delay under stop-and-go conditions.

## Levels of Service

Table 4.12-1 summarizes the relationship between delay and LOS for signalized and unsignalized intersections. The delay ranges for unsignalized intersections are lower than for signalized intersections as drivers expect less delay at unsignalized intersections.

<b>Table 4.12-1 Intersection LOS Definitions</b>			
<b>LOS</b>	<b>Description of Operations</b>	<b>Signalized Average Control Delay per Vehicle (in seconds)</b>	<b>Unsignalized Average Control Delay per Vehicle (in seconds)</b>
A	Free flow without delays. Users are virtually unaffected by others in the traffic stream.	≤ 10	≤ 10
B	Stable Traffic. Traffic flows smoothly with few delays.	> 10 to 20	> 10 to 15
C	Stable flow, but the operation of individual users becomes affected by other vehicles. Modest delays occur.	> 20 to 35	> 15 to 25
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other users. Delays may be more than one cycle during peak hours.	> 35 to 55	> 25 to 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing occurs.	> 55 to 80	> 35 to 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing occurs.	> 80	> 50

*Source: Kimley-Horn and Associates, Inc., 2017.*

Table 4.12-2 relates the operational characteristics associated with each LOS category for freeway segments and ramps.

## Central and East County Routes of Regional Significance

The Contra Costa Transportation Authority (CCTA) and the Regional Transportation Planning Committees following the CCTA have set various standards on specific roadways, called Multi-Modal Transportation Service Objectives (MTSOs). The MTSOs are specific to each region and regulate the Routes of Regional Significance.

The study area incorporates facilities in the Central and East County. Bailey Road, Leland Road, Railroad Avenue, and Willow Pass Road are all Routes of Regional Significance in East County. In Central County, SR 242 is a route of regional significance. SR 4 is a route of regional significance in both Central and East County.



**Table 4.12-2  
Freeway and Ramp LOS Definitions**

LOS	Description of Operations	Freeway Segment Density (pcpmpl)	Freeway Ramp Density (pcpmpl)
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream.	≤ 11	≤ 10
B	Stable traffic. Traffic slows smoothly with few delays.	11 to 18	10 to 20
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	18 to 26	20 to 28
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles.	26 to 35	28 to 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	35 to 45	35
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	> 45	Demand exceeds capacity
Note: pcpmpl = passenger cars per mile per lane			
Source: Kimley-Horn and Associates, Inc., 2017.			

### Existing Intersection Conditions

The primary basis of the analysis is the peak hour LOS for the key intersections. The hours identified as the “peak” hours are generally between 7:00 AM and 9:00 AM and 4:00 PM and 6:00 PM for all of the transportation facilities described. Throughout this chapter, the peak hours are identified as the AM and PM peak hours, respectively. The City of Pittsburg’s General Plan identifies the following LOS Standards for the City’s Planning Area:<sup>2</sup>

- Major arterials are to operate at LOS D or better;
- Intersections on Bailey Road between W. Leland Road and State Route 4 are to operate at LOS E or better; and
- Unsignalized intersections to operate at LOS E or better.

For roadways in the City of Concord, the intersections and roadway segments are to operate at LOS D or better, as specified in the City of Concord General Plan. However, in the Downtown area (as generally defined by Port Chicago Highway to the east, Mt. Diablo High School to the north, Cowell Road to the south, and Market Street to the west), LOS E is acceptable. Table 4.12-3 shows the existing delay and LOS at the study intersections for weekday peak hour conditions.

<sup>2</sup> City of Pittsburg. *General Plan Pittsburg 2020: A Vision for the 21st Century* [pg. 7-7]. Adopted November 16, 2001.

**Table 4.12-3  
Intersection LOS – Existing Conditions**

Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
1. Avila Road/Willow Pass Road	SSSC	E	A	0.1	A	0.5
<i>Worst Approach</i>			B	10.5	C	23.8
2. EB SR 4 Ramps/Willow Pass Road	AWSC	E	F	117.5	F	201.1
3. WB SR 4 Ramps/Willow Pass Road	AWSC	E	F	143.6	C	19.2
4. Rio Verde Circle/San Marco Boulevard	AWSC	E	B	11.9	A	8.2
5. Santa Teresa Drive/San Marco Boulevard	AWSC	D	C	28.3	B	15.9
6. W. Leland Road/San Marco Boulevard	Signal	D	D	39.7	C	25.9
7. EB SR 4 Ramps/San Marco Boulevard	Signal	D	A	9.5	B	13.7
8. WB SR 4 Ramp/San Marco Boulevard	Signal	D	C	26.9	B	18.5
9. Willow Pass Road/Port Chicago Highway	Signal	D	B	15.8	B	11.0
10. Willow Pass Road/Bailey Road	Signal	D	C	27.9	D	39.8
11. Willow Pass Road/Loftus Road	Signal	D	F	107.2	C	24.5
12. EB Willow Pass Road/Range Road	SSSC	E	A	5.5	A	6.6
<i>Worst Approach</i>			B	11.1	B	11.5
13. WB Willow Pass Road/Range Road	SSSC	E	A	0.2	A	0.5
<i>Worst Approach</i>			A	0.8	A	0.8
14. Willow Pass Road/Railroad Avenue	Signal	D	C	23.1	C	20.6
15. W. Leland Road/Alves Ranch Road	Signal	D	B	11.8	A	9.7
16. W. Leland Road/Woodhill Drive	Signal	D	A	8.2	A	7.8
17. W. Leland Road/Southwood Drive	Signal	D	B	18.4	C	21.2
18. W. Leland Road/Bailey Road	Signal	E	F	97.6	D	52.3
19. Maylard Street/Bailey Road	Signal	E	B	11.6	B	18.1
20. EB SR 4 Ramps/Bailey Road	Signal	E	C	22.4	D	35.2
21. WB SR 4 Ramp/Bailey Road	Signal	E	C	25.2	B	19.3
22. Canal Road/Bailey Road	Signal	D	B	13.5	B	10.9
23. W. Leland Road/Chestnut Drive	Signal	D	F	112.9	C	27.8
24. W. Leland Road/Jacqueline Drive	Signal	D	E	75.2	C	34.2
25. W. Leland Road/Montevidéo Drive	Signal	D	A	6.4	A	6.5
26. W. Leland Road/Range Road	Signal	D	C	31.8	D	46.2
27. W. Leland Road/Dover Way	Signal	D	C	28.9	C	33.1
28. W. Leland Road/Burton Avenue	Signal	D	B	16.9	C	30.9
29. W. Leland Road/Crestview Drive	Signal	D	F	111.8	D	39.0
30. W. Leland Road/Railroad Avenue	Signal	D	D	52.1	D	45.3

(Continued on next page)



<b>Table 4.12-3 Intersection LOS – Existing Conditions</b>						
<b>Intersection</b>	<b>Intersection Control<sup>1</sup></b>	<b>Delay Criteria<sup>2</sup></b>	<b>AM Peak Hour</b>		<b>PM Peak Hour</b>	
			<b>LOS</b>	<b>Delay</b>	<b>LOS</b>	<b>Delay</b>
31. EB SR 4 Ramps/Railroad Avenue	Signal	D	C	25.4	E	<b>63.1</b>
32. WB SR 4 Ramp/Railroad Avenue	Signal	D	D	41.3	C	30.9
33. Willow Pass Road/Olivera Road	Signal	D	B	16.7	D	47.2
34. Concord Boulevard/Farm Bureau Road	Signal	D	C	25.4	C	26.5
35. Concord Boulevard/Bailey Road	Signal	D	E	<b>64.5</b>	E	<b>65.0</b>
36. Bailey Road/Myrtle Drive	SSSC	E	A	5.0	A	1.9
<i>Worst Approach</i>			<b>F</b>	<b>62.2</b>	C	<b>19.8</b>
37. Clayton Road/Babel Lane	Signal	D	C	25.4	C	30.9
38. Clayton Road/Farm Bureau Road	Signal	D	C	24	B	16.0
39. Clayton Road/Treat Boulevard	Signal	D	D	46	E	<b>55.2</b>
40. Clayton Road/Bailey Road	Signal	D	C	32.4	C	32.5
41. Cowell Road/Treat Boulevard	Signal	D	E	<b>73.2</b>	F	<b>89.0</b>
42. W. Leland Road/Santa Teresa Drive	Signal	D	Future Intersection			
43. Bailey Road/Project Entrance	Signal	D	Future Intersection with Project			
44. Treat Boulevard/Oak Grove Road	Signal	D	E	<b>59.7</b>	F	<b>93.5</b>
45. Willow Pass Road/Diamond Boulevard	Signal	D	B	17.2	D	39.4
46. Willow Pass Road/Market Street	Signal	E	D	38.2	D	43.8
47. Willow Pass Road/Galindo Street	Signal	E	D	37.8	D	51.0
48. Concord Boulevard/Port Chicago Highway	Signal	E	E	61.5	C	23.6
49. Kirker Pass Road/Oakhurst Drive/Concord Boulevard	Signal	D	F	<b>665.4</b>	F	<b>341.6</b>
50. Ygnacio Valley Road/Clayton Road	Signal	D	D	39.3	D	47.1
Notes: Locations that are operating below acceptable levels are shown in <b>BOLD</b> . <sup>1</sup> . Each study intersection is controlled by a traffic signal, a side-street stop-control (SSSC), or an all-way stop-control (AWSC). <sup>2</sup> . For all intersections, the LOS criteria is based on seconds of delay.						
<i>Source: Kimley-Horn and Associates, Inc., 2017.</i>						

As shown in the table, all the study intersections operate at acceptable levels per the City of Pittsburg and City of Concord General Plans during the Existing Conditions without the proposed project, except for the following intersections:

- #2 – EB SR-4 Ramps and Willow Pass Road (AM and PM peak hours);
- #3 – WB SR-4 Ramps and Willow Pass Road (AM peak hour);
- #11 – Willow Pass Road and Loftus Road (AM peak hour);
- #18 – W. Leland Road and Bailey Road (AM peak hour);
- #23 – W. Leland Road and Chestnut Drive (AM peak hour);

- #24 – W. Leland Road and Jacqueline Drive (AM peak hour);
- #29 – W. Leland Road and Crestview Drive (AM peak hour);
- #31 – EB SR-4 Ramps and Railroad Avenue (PM peak hour);
- #35 – Concord Boulevard and Bailey Road (AM and PM peak hours);
- #36 – Bailey Road and Myrtle Drive (AM peak hour);
- #39 – Clayton Road and Treat Boulevard (PM peak hour);
- #41 – Cowell Road and Treat Boulevard (AM and PM peak hours);
- #44 – Treat Boulevard and Oak Grove Road (AM and PM peak hours);
- #48 – Concord Boulevard and Port Chicago Highway (AM peak hour); and
- #49 – Kirker Pass Road and Oakhurst Drive (AM and PM peak hours).

### **Existing Freeway Segment Conditions**

Traffic operations were evaluated at the study freeway segments under existing traffic conditions. Table 4.12-4 shows the peak hour LOS and density for each freeway section in the study area. As shown in Table 4.12-4, all freeway segments currently operate at acceptable levels during the Existing Conditions per the LOS standards established in the Draft 2017 Update of the CCTA Contra Costa Congestion Management Program.

### **Existing Freeway Ramp Conditions**

Traffic operations were evaluated at the study freeway ramps under existing traffic conditions. Table 4.12-5 shows the peak hour LOS and density for each freeway ramp in the study area. As shown in Table 4.12-5, all freeway ramps currently operate at acceptable levels during the Existing Conditions per the LOS standards established in the Draft 2017 Update of the CCTA Contra Costa Congestion Management Program.

### **Existing East and Central County Routes of Regional Significance Conditions**

In CCC, action plans exist for each region (East County and Central County) that describe the MTSOs that are needed to be analyzed. For Routes of Regional Significance within the project area, the MTSOs include delay index (DI), roadway average speed, roadway average stopped delay, roadway segment LOS, roadway volume to capacity ratio (V/C), and persons in vehicles in the HOV lane. As outlined in the East County Action Plan for Routes of Regional Significance, SR 4 is evaluated for DI and HOV lane usage, while study intersections are evaluated based on signalized intersection LOS (see Table 4.12-6).

Table 4.12-4 Freeway Segment LOS – Existing Conditions					
Freeway Section	Criteria LOS	AM Peak Hour		PM Peak Hour	
		LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)
Northbound					
SR 242 between I 680 and Clayton Road	E	A	5.1	D	26.6
SR 242 between Clayton Road and Concord Avenue	E	A	4.1	C	21.1
SR 242 between Concord Avenue and Grant Street	E	A	4.5	C	22.9
SR 242 between Grant Street and Olivera Road	E	A	4.5	C	23.0
SR 242 between Olivera Road and SR 4	E	A	5.5	D	29.5
Southbound					
SR 242 between SR 4 and Olivera Road	F	D	30.3	B	16.8
SR 242 between Olivera Road and Grant Street	F	C	23.6	B	13.7
SR 242 between Grant Street and Concord Avenue	F	C	23.8	B	13.8
SR 242 between Concord Avenue and Clayton Road	F	C	21.7	B	12.7
SR 242 between Clayton Road and I 680	F	D	28.2	B	15.9
Eastbound					
SR 4 between I 680 and Solano Way	E	A	6.0	D	33.0
SR 4 between Solano Way and SR 242	E	A	5.9	D	32.2
SR 4 between SR 242 and Port Chicago Highway	F	A	2.8	B	15.6
SR 4 between Port Chicago Highway and Willow Pass Road	F	A	6.1	F	46.3
SR 4 between Willow Pass Road and San Marco Boulevard	F	A	6.0	D	27.7
SR 4 between San Marco Boulevard and Bailey Road	F	A	5.2	D	34.3
SR 4 between Bailey Road and Railroad Avenue	F	A	4.9	D	31.3
Westbound					
SR 4 between Railroad Avenue and Bailey Road	F	D	28.1	B	15.5
SR 4 between Bailey Road and San Marco Boulevard	F	D	30.5	B	16.5
SR 4 between San Marco Boulevard and Willow Pass Road	F	C	25.2	C	18.9
SR 4 between Willow Pass Road and Port Chicago Highway	F	E	37.4	C	19.2
SR 4 between Port Chicago Highway and SR 242	F	B	16.9	A	8.7
SR 4 between SR 242 and Solano Way	E	E	35.2	C	18.6
SR 4 between Solano Way and I 680	E	E	36.0	C	18.8
Notes: Locations that are operating below acceptable levels are shown in <b>BOLD</b> . <sup>1</sup> pcpmpl = passenger cars per mile per lane.					
Source: Kimley-Horn and Associates, Inc., 2017.					

Table 4.12-5 Freeway Ramp LOS – Existing Conditions					
Freeway Section	Criteria LOS	AM Peak Hour		PM Peak Hour	
		LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)
Eastbound SR 4					
Willow Pass Road Off-Ramp	F	A	5.2	F	35.2
Willow Pass Road On-Ramp	F	A	9.0	F	44.8
San Marco Boulevard Off-Ramp	F	A	8.6	D	34.2
SB San Marco Boulevard Loop On-Ramp	F	A	8.0	D	29.1
NB San Marco Boulevard Diagonal On-Ramp	F	A	5.5	C	26.5
SB Bailey Road Diagonal Off-Ramp	F	A	5.1	C	24.3
NB Bailey Road Loop Off-Ramp	F	A	7.3	C	26.2
Bailey Road On-Ramp	F	B	11.6	E	35.0
Westbound SR 4					
NB Bailey Road Diagonal Off-Ramp	F	C	27.3	B	15.3
SB Bailey Road Loop Off-Ramp	F	C	25.1	B	19.5
Bailey Road On-Ramp	F	C	24.3	B	14.1
San Marco Boulevard Off-Ramp	F	D	28.2	B	16.3
NB San Marco Boulevard Loop On-Ramp	F	E	36.7	B	17.4
SB San Marco Boulevard Diagonal On-Ramp	F	F	45.4	B	16.2
Willow Pass Road Off-Ramp	F	C	27.3	B	16.6
Willow Pass Road On-Ramp	F	E	37.3	C	20.3
Notes: Locations that are operating below acceptable levels are shown in <b>BOLD</b> . <sup>1</sup> pcpmpl = passenger cars per mile per lane					
Source: Kimley-Horn and Associates, Inc., 2017.					

<b>Table 4.12-6 East County MTSOs</b>		
MTSO	Corridors Applied To	MTSO Criteria
DI	SR 4	DI should not exceed 2.5 in the AM and PM peak hours.
HOV Lane Usage	SR 4	HOV lane utilization should exceed 600 vehicles per lane in the peak direction in the peak hour.
Signalized Intersection LOS	Study Intersections	LOS should not exceed LOS D, except on Bailey Road, where LOS E is acceptable.
Source: Kimley-Horn and Associates, Inc., 2017.		

The MTSOs outlined in the Central County Action Plan for Routes of Regional Significance are summarized in Table 4.12-7 below.

### Delay Index

The DI is defined as the ratio between the peak congested travel time and the uncongested travel time along a roadway facility. Table 4.12-8 shows the existing DI and congested travel time for all of the roadway segments outlined in the East and Central County Action Plans. As shown in the

table, all roadway facilities in Central and East County meet the MTSO criteria in the Existing Condition.

<b>Table 4.12-7 Central County MTSOs</b>		
<b>MTSO</b>	<b>Corridors Applied To</b>	<b>MTSO Criteria</b>
DI	SR 242	DI should not exceed 3.0 in the AM and PM peak hours.
	SR 4	DI should not exceed 5.0 in the AM and PM peak hours.
Roadway Average Speed	Clayton Road	Average speed should exceed 15 mph.
Roadway Average Stopped Delay	Bailey Road and Concord Boulevard	Three signal cycles to clear.
	Baily Road and Clayton Road	
	Clayton Road and Ygnacio Valley Road/Kirker Pass Road	
	Clayton Road and Treat Boulevard/Denkinger Road	
	Treat Boulevard and Cowell Road	Five signal cycles to clear.
	Treat Boulevard and Oak Grove Road	
Roadway V/C Ratio	Ygnacio Valley Road/Kirker Pass Road	V/C ratio should be less than 1.5.
<i>Source: Kimley-Horn and Associates, Inc., 2017.</i>		

Table 4.12-8 Delay Index Summary – Existing Conditions							
Roadway Segment	Distance (miles)	Uncongested Travel Time		AM Peak Hour		PM Peak Hour	
		AM Peak	PM Peak	CTT	DI	CTT	DI
East County							
EB SR 4	4.23	234.5	234.5	234.5	1.0	249.9	1.1
WB SR 4	4.23	234.5	234.5	241.9	1.0	234.5	1.0
Central County							
Eastbound SR-4	6.13	339.5	339.5	339.5	1.0	367.8	1.1
Westbound SR-4	6.13	339.5	339.5	361.8	1.1	339.5	1.0
Northbound SR-242	3.52	194.7	194.7	194.7	1.0	194.7	1.0
Southbound SR-242	3.52	194.7	194.7	197.8	1.0	194.7	1.0
Note: CTT = Congested Travel Time, measured in seconds.							
Source: Kimley-Horn and Associates, Inc., 2017.							

#### Average Speed, Average Stopped Delay, LOS, and V/C

Table 4.12-9 summarizes roadway average speed, roadway average stopped delay, roadway segment LOS, roadway V/C for the Routes of Regional Significance in the Central County in the Existing Condition. As shown in the table, all corridors currently comply with the applicable established thresholds (where such thresholds are provided) for all the listed measures of effectiveness.

<b>Table 4.12-9 MTSO Summary – Existing Conditions</b>					
<b>Corridor</b>	<b>Measure of Effectiveness</b>	<b>Direction</b>	<b>Threshold</b>	<b>AM Peak Hour</b>	<b>PM Peak Hour</b>
<b>Central County</b>					
Bailey Road	Average Speed (mph)	NB	None	18	18
		SB	None	21	20
	Average Stopped Delay	Concord Blvd	3.0	0.3	0.3
		Clayton Rd	3.0	0.2	0.2
	LOS	NB	None	D	D
		SB	None	C	C
	V/C	NB	None	0.19	0.53
		SB	None	0.55	0.41
Clayton Road	Average Speed (mph)	EB	15	30	29
		WB	15	31	29
	Average Stopped Delay	Bailey Rd	3.0	0.2	0.2
		Ygnacio Valley Rd	3.0	0.3	0.3
		Treat Blvd	3.0	0.3	0.4
	LOS	EB	None	B	B
		WB	None	B	B
	V/C	EB	None	0.24	0.68
		WB	None	0.68	0.35
Treat Boulevard	Average Speed (mph)	NB	None	27	28
		SN	None	26	28
	Average Stopped Delay	Clayton Rd	3.0	0.3	0.4
		Cowell Rd	5.0	0.5	0.5
		Oak Grove Rd	5.0	0.4	0.5
	LOS	NB	None	C	C
		SB	None	B	B
	V/C	NB	1.5	0.24	0.89
		SB	1.5	0.81	0.33
Ygnacio Valley Road	Average Speed (mph)	NB	None	18	3
		SB	None	16	29
	Average Stopped Delay	Clayton Rd	3.0	0.3	0.3
	LOS	NB	None	D	F
		SB	None	E	B
	V/C	NB	1.50	0.20	0.73
		SB	1.50	0.68	0.28

Source: Kimley-Horn and Associates, Inc., 2017.

### HOV Usage

HOV lane usage was observed for SR 4 within the study corridor. Table 4.12-10 summarizes the persons using the HOV lane in the peak direction in the Existing Condition.

<b>Table 4.12-10 HOV Lane Summary – SR 4 – Existing Conditions</b>			
<b>Peak Hour</b>	<b>Direction</b>	<b>Vehicles Using HOV Lane</b>	<b>Persons Using HOV Lane</b>
AM	EB	1,755	3,608
PM	WB	703	1,470
<i>Source: Kimley-Horn and Associates, Inc., 2017.</i>			

As shown in the table, the number of vehicles in the HOV lane would exceed the 600-vehicle utilization goal established by the CCTA for each peak direction in the Existing Condition.

### **Transit System**

Three major public mass transit operators provide service within or adjacent to the study area, including Bay Area Rapid Transit (BART), the Eastern Contra Costa Transit Authority (or Tri Delta Transit), and the County Connection.

#### **BART**

BART is a rapid mass transit system which provides regional transportation connections to much of the Bay Area. BART runs from the North Bay Area in Richmond to the South Bay Area in Fremont. In the east-west direction BART runs from Pittsburg to the San Francisco Airport and Milbrae with several connections in Oakland. The Pittsburg/Bay Point BART station, which is approximately 1.33 miles northeast of the project site, serves all of Pittsburg, Bay Point, Antioch, and all other surrounding cities and runs from 4:00 AM to 12:00 AM daily, with a weekday frequency of 15 minutes. A future E-BART extension to Hillcrest Avenue in Antioch is currently under construction. The E-BART service will connect with BART at the Bay Point BART station. It should be noted that an additional E-BART Station is also planned at Railroad Avenue and the widening of SR 4 is currently underway to accommodate the planned station.

#### **Tri Delta Transit**

Tri Delta Transit serves the East County including Brentwood, Oakley, Pittsburg, Antioch, Bay Point and unincorporated areas of East County. Tri Delta Transit operates fourteen local bus routes from Monday to Friday, including three express services, and three local bus routes during weekends and holidays. The Tri Delta Transit routes that run closest to the proposed project are routes 200, 201, 300, 380, 387, 388, 389, 390, 391, 392, 393, and 394.

Currently, bus routes do not pass directly adjacent to the proposed project site because roadway access to the vacant project site is lacking. Current bus routes do not exist along Avila Road, San Marco Boulevard south of W. Leland Road, and Bailey Road south of W. Leland Road. Tri-Delta Transit connects passengers to the Antioch Park-and-Ride, Kaiser Medical Center, Pittsburg/Bay Point BART Station, Tri Delta Transit Station, various local schools, Brentwood Park-and-Ride, and the Streets of Brentwood. In addition, Tri-Delta Transit provides convenient connections to many locations in the City and connections to other local and regional transit routes. Detailed

information related to each Tri-Delta Transit bus route servicing the project area is included in the TIS (see Appendix N).

### County Connection

The County Connection currently operates a total of 31 fixed-route bus routes on weekdays throughout Central CCC with limited service to the East County area. Routes 10, 11, 15, and 19 operate within the study area. The County Connection connects passengers to the Antioch Park-and-Ride, Kaiser Medical Center, Pittsburg/Bay Point BART Station, Tri Delta Transit Station, various local schools, Brentwood Park-and-Ride, and the Streets of Brentwood. In addition, County Connection provides convenient connections to many locations in the City and connections to other local and regional transit routes. Detailed information related to each County Connection bus route servicing the project area is included in the TIS (see Appendix N).

### **Bicycle and Pedestrian System**

Sidewalks and crosswalks are mostly provided throughout the study area in Pittsburg to allow for pedestrians to access nearby transit stops, residential uses, and commercial uses. Sidewalks do not exist along Avila Road, Willow Pass Road near Avila Road and the SR 4 ramps, Range Road near Parkside Drive, sections of Farm Bureau Road between Willow Pass Road and Clayton Road, and a majority of Bailey Road between Myrtle Drive and Dessira Court.

Bicycle paths, lanes, and routes are typical examples of bicycle transportation facilities, which are defined by the California Department of Transportation (Caltrans) as being in one of the following three classes: Class I, Class II, or Class III. The existing and proposed bicycle network in the vicinity of the project site is shown in Figure 4.12-2.

#### Class I

Class I bike paths provide a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.

Class I bike paths located within the project study area include the Delta De Anza Regional Trail, a bike path along the East Bay Municipal Utility District (EBMUD) right-of-way in East County, and the Contra Costa County Trail. A Class I bike path is proposed adjacent to San Marco Boulevard between W. Leland Road and Rio Verde Circle, as well as between Tomales Bay Drive and Rio Verde Circle.

#### Class II

Class II bike lanes provide a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.







Class II bike lanes are located within the project study area on Concord Boulevard between Kirker Pass Road and west of Farm Bureau Road, W. Leland Road between west of San Marco Boulevard and Burton Avenue, Willow Pass Road between Port Chicago Highway and Loftus Road, Bailey Road between Willow Pass Road and W. Leland Road, and Crestview Drive between Olympia Drive and the Frontage Road. Class II bike lanes are proposed on the following locations within the project study area: Willow Pass Road between Evora Road and immediately north of Lynwood Drive, San Marco Boulevard between Rio Verde Circle and Bailey Road, Range Road between Willow Pass Road and SR 4, and Railroad Avenue between the Contra Costa Canal and California Avenue.

### Class III

Class III bike routes provide a route designated by signs or permanent markings and are shared with pedestrians and motorists. Class III bike routes are located within the project study area on Willow Pass Road east of Loftus Road and on Bailey Road between the SR 4 EB ramps and Highland Boulevard. Class III bike routes are proposed in the following locations within the project study area: Farm Bureau Road between Willow Pass Road and Clayton Road, W. Leland Road between Burton Road and Railroad Avenue, and Railroad Avenue between SR 4 and 10<sup>th</sup> Street.

### **Existing Funding Programs**

The following funding programs are currently in effect for improvements to the transportation network within the vicinity of the project site.

#### Pittsburg Local Traffic Mitigation Fee

The City of Pittsburg has a local traffic mitigation fee (LTMF) for development projects within the City of Pittsburg. The fee was designed to aid in funding for capital improvement projects within the City limits, such as the extension of W. Leland Road and/or the widening of Avila Road and Willow Pass Road. In addition, the fee may be used for implementing signal interconnect on local roadways, installing traffic signals and other intersection improvements. The most recent LTMF schedule states that for a single-family residential land use the LTMF fee is \$7,123 with City administrative costs per dwelling unit. The City of Concord has a similar program, the traffic mitigation fee (TMF) program, which collects fees from developers to aid in the funding of capital improvement projects.

#### Pittsburg 5-Year Capital Improvement Program

The City of Pittsburg's 5-Year Capital Improvement Program (CIP) is a multi-year planning instrument for the construction of new and expansion, rehabilitation, or replacement of existing City-owned assets. The 5-Year CIP is used by City staff members as a guide for project prioritization to accomplish community goals. The Program is updated annually to account for projects that have been completed, changing priorities, new priorities, and funding availability.



The 5-Year CIP for Fiscal Year 2012/2013 through 2016/2017 includes various projects for the Pittsburg area. Each of the projects meets some or all of the following criteria:

- Elimination of potentially hazardous or unsafe conditions and potential liabilities;
- Replacement of high maintenance and inefficient/ineffective infrastructure;
- Improvement to and/or creation of new services to the public;
- Outside agency regulatory requirements and mandates;
- Stimulation of the local economy/eliminate blighted conditions;
- Compliance with the City of Pittsburg General Plan; and
- Preservation of existing assets.

The schedule for capital improvement projects is based on available funding, public benefit, and funding restrictions. The project schedule is updated annually with the annual 5-Year CIP update.

#### Regional Transportation Development Impact Mitigation

The East Contra Costa Regional Fee & Financing Authority (ECCRFFA) establishes a funding source for capital improvements projects in Eastern CCC. The fee was designed to collect funds for regional transportation improvements, such as the W. Leland Road extension, the SR 4 bypass, and the widening of SR 4 through Pittsburg and Antioch. The 2017 ECCRFFA fee schedule states that for a single-family residential land use, the Regional Transportation Development Impact Mitigation (RTDIM) fee is \$21,395 with a temporary fee credit in 2017 of 15 percent or \$3,209.

#### Contra Costa Congestion Management Program

The Contra Costa Transportation Authority (the Authority) is responsible for preparing and adopting a Congestion Management Program (CMP) and updating the Program every other year. The Authority adopted the County's first CMP in October 1991. The 2011 Contra Costa CMP Update represents the twelfth biennial update.

The 2015 update, which was prepared with help from and consultation with representatives of local, regional and State agencies, transit operators and the public, responds to changes in regional transportation planning, projects, and programs made since 2013. The 2015 CMP focuses primarily on bringing the required seven-year CIP up-to-date, while also responding to primarily technical changes and corrections from the 2013 CMP.

#### Concord Capital Improvement Program

The City of Concord Adopted Capital Improvement & Transportation Improvement Program, 2010/2011–2019/2020 10-Year Plan, contains various transportation and infrastructure improvement projects planned by the City of Concord. The CIP are included in the City Budget. The City Council adopted the CIP on June 22, 2010 by City Council Resolution 10-47 and the CIP budget took effect on July 1, 2010.

### 4.12.3 REGULATORY CONTEXT

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Existing transportation policies, laws, and regulations that would apply to the proposed project are summarized below and provide a context for the impact discussion related to the project's consistency with the applicable regulatory conditions.

#### **Federal Regulations**

Federal plans, policies, regulations, or laws related to transportation, traffic, and circulation do not apply to the proposed project.

#### **State Regulations**

Caltrans has jurisdiction over State highways. Therefore, Caltrans controls all construction, modification, and maintenance of State highways, such as SR 4. Any improvements to such roadways would require Caltrans' approval.

#### Guide for the Preparation of Traffic Impact Studies

Caltrans' *Guide for the Preparation of Traffic Impact Studies* provides general guidance regarding the preparation of traffic impact studies for projects that may have an impact on the State Highway System. The guidance includes when a traffic study should be prepared and the methodology to use when evaluating operating conditions on the State highway system, including requiring that weave segments use the Liesch method to analyze traffic operations. The *Guide for the Preparation of Traffic Impact Studies* states that where "an existing State highway facility is operating at less than the appropriate target LOS, the existing measure of effectiveness (MOE) should be maintained."<sup>3</sup>

#### **Local Regulations**

Local rules and regulations applicable to the proposed project are discussed below.

#### Contra Costa Countywide Comprehensive Transportation Plan Update (2009)

The CCCTA is a public agency formed by the Contra Costa voters to manage the County's transportation sales tax program and to do countywide transportation planning. The 2017 Countywide Comprehensive Transportation Plan, adopted September 20, 2017, is the CCTA's most recent, broadest policy and planning document. The Plan identifies the criteria for analyzing transportation impacts and sets forth plans for future roadway improvements in the County. In addition, the Plan relies on collaboration with and between partners, both on the countywide and regional levels. Each of the county's five Regional Transportation Planning Committees created an Action Plan, which identifies a complete list of actions to be completed as a result of the Action Plan.

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<sup>3</sup> Caltrans. *Guide for the Preparation of Traffic Impact Studies* [pg. 1]. 2002.

## Central and East County Action Plans

As part of the Action Plan process, each Regional Transportation Planning Committee identified projects and programs in the form of actions to be included in the Action Plan for the Routes of Regional Significance. Each Action Plan states the vision, goals, and policies; designates Routes of Regional Significance; sets objectives for such routes; and presents specific actions to achieve established objectives. The actions are listed on both a route-by-route and a regional scale, and aim to support the transportation objectives as specified by each Regional Transportation Planning Committee. The latest *East County Action Plan for Routes of Regional Significance* was adopted September 2017.

## City of Pittsburg General Plan

The following are applicable policies related to transportation, traffic, and circulation from the Transportation Element of the Pittsburg General Plan.

- Goal 7-G-1     Achieve service level standards for roadway intersections that are based on the roadway's classification and location shown in Figure 7-2 of the Pittsburg General Plan.
- Goal 7-G-3     Coordinate circulation system plans with other jurisdictions' and agencies' plans, including Antioch and Concord, the CCTA, and Caltrans.
- Goal 7-G-4     Work with the CCTA to manage morning commute traffic from East to Central CCC by studying and implementing arterial metering management plans.
- Goal 7-G-5     Provide adequate capacity on arterial roadways to meet LOS standards and to avoid traffic diversion to local roadways or the freeway.  
  
                    As congestion increases on SR 4, monitor and evaluate the need to implement neighborhood traffic management controls on local streets to eliminate or minimize the impact of diverted traffic.
- Goal 7-G-6     Locate high traffic-generating uses so that they have direct access or immediate secondary access to arterial roadways.
- Goal 7-G-7     Complete arterial roadway improvements required to mitigate traffic impacts of an approved project before the project is fully occupied. Arterial improvements should be completed by creating funding sources, which include but are not limited to Traffic Mitigation Fees, Development Agreements, and Assessment Districts.
- Policy 7-P-1     Require mitigation for development proposals that are not part of the Traffic Mitigation Fee program which contribute more than one percent of the volume to an existing roadway or intersections with inadequate capacity to meet cumulative demand.

Development projects that contribute to future traffic congestion on existing roadways shall provide mitigation to ensure adequate future capacities. Traffic analysis of development plans will determine the proportion of cumulative impact each project is creating.

Policy 7-P-2 Use the adopted Regional and Local Transportation Impact Mitigation Fee ordinances to ensure that all new development pays an equitable pro-rata share of the cost of transportation improvements. Review the Traffic Impact Mitigation Fee schedule annually and update every five years at a minimum.

Policy 7-P-3 Review and update the City's Engineering Design Standards for each functional roadway classification, according to Table 7-1 of the Pittsburg General Plan.

Roadway standards are illustrated in the City's Engineering Design Standards for typical midblock applications. Additional right-of-way may be needed for turn lanes at some intersection approaches.

Policy 7-P-4 Require that all traffic studies be conducted by professional transportation consultants selected by the Planning and Building and Engineering Departments, with the City acting as the lead agency. Ensure that all costs associated with the traffic study are paid by the applicant.

Policy 7-P-5 Apply for federal Congestion Mitigation Air Quality grant funding, designed to improve air quality through roadway improvement projects.

Policy 7-P-6 Ensure that all Regional Routes of Significance within the City maintain the following traffic LOS standards (applicable to non-freeway routes and routes not subject to a Traffic Management Program):

- LOS mid D (peak hour volume to capacity ratio less than or equal to 0.85) at intersections along major arterials, except for intersections along Bailey Road;
- LOS high E (peak hour volume to capacity ratio less than or equal to 0.99) at intersections along Bailey Road between West Leland Road and SR 4; and
- LOS mid E (peak hour volume to capacity ratio less than or equal to 0.95) at intersections on Kirker Pass Road.

Policy 7-P-7 Endeavor to implement Transportation Element improvements prior to deterioration in levels of service below those set forth in Goal 7-G-1.



Development approvals should require reasonable demonstration that traffic improvements necessary to serve the development will be in place in time to accommodate trips generated by the project.

Policy 7-P-8 Ensure that all non-Regional Routes within the City (not designated as RRS in Figure 7-2 of the Pittsburg General Plan) maintain the following traffic LOS standards based on their location in rural, semi-rural, suburban, urban or downtown areas, as designated in Figure 7-2 of the Pittsburg General Plan:

- Rural – LOS low C (peak hour volume to capacity ratio less than or equal to 0.74)
- Semi-rural – LOS high C (peak hour volume to capacity ratio less than or equal to 0.79)
- Suburban – LOS low D (peak hour volume to capacity ratio less than or equal to 0.84)
- Urban – LOS high D (peak hour volume to capacity ratio less than or equal to 0.89)
- Downtown – LOS high D (peak hour volume to capacity ratio less than or equal to 0.89)

Specific improvements should be identified and implemented on the basis of detailed traffic studies or Environmental Impact Reports. Improvements may include intersection approach lane expansion, related channelization improvements and traffic signal installations.

Policy 7-P-9 Implement the intersection improvements (including signalization and additional or reallocated lanes) as illustrated in Appendix A of the Pittsburg General Plan.

Policy 7-P-10 Require mitigation for development proposals which result in projected parking demand that would exceed the proposed parking supply on a regular and frequent basis.

Policy 7-P-11 Maximize the carrying capacity of arterial roadways by controlling the number of intersections and driveways, minimizing residential access, implementing Transportation Systems Management (TSM) measures, and requiring sufficient on-site parking to meet the needs of each project (see also Table 7-1 of the Pittsburg General Plan).

Additional guidelines for arterial access include providing smooth ingress/egress to development. This includes designing parking areas so that traffic turning into the parking areas does not stack up on the arterial roadway; combining driveways to serve small parcels; and maintaining adequate distance between driveways and

intersections to permit efficient traffic merges. In the built environment, roadway right-of-way may not be available to increase arterial capacity. Therefore, improving the efficiency of existing arterials through TSM measures should be one of the first considerations to meet level of service standards. TSM measures include signal coordination, channelization and signal improvements at intersections, and implementation of new traffic control technology.

- Policy 7-P-12 Continue to collect fees, plan and design for the future construction of Buchanan Bypass. Ensure preparation of a feasibility and environmental impact study to determine the precise alignment, costs, mitigation measures, and impacts on adjacent uses.
- Policy 7-P-13 Upgrade or extend the hillside access routes from Bailey Road, Buchanan Road, Kirker Pass Road, and proposed San Marco Boulevard, as development potential warrants.
- Policy 7-P-14 Increase access to alternative north-south routes providing connection to SR 4, other than Railroad Avenue.
- Policy 7-P-15 Support Caltrans' planned improvements to the Railroad Avenue and Loveridge Road interchanges in conjunction with SR 4 widening projects. Work with Federal, State and regional authorities to ensure timely completion of these projects needed to adequately serve local circulation needs.
- Policy 7-P-16 Continue to collect fees for the extension of West Leland Road to Willow Pass Road, subject to the Traffic Mitigation Fee program. As established by nexus, require new development adjacent to the extension to dedicate right-of-way and construct or fund new intersections and frontage improvements.
- Policy 7-P-21 Design local residential streets and implement traffic-control measures to keep traffic below 5,000 vehicles per day.

Policy 7-P-22 Avoid adding traffic roadways carrying volumes above the standards, and consider traffic control measures where perceived nuisance is severe.

Goal 7-G-8 Cooperate with public agencies and other jurisdictions to promote local regional public transit serving Pittsburg and provide an express bus system between Pittsburg, Brentwood, Oakley, Antioch, and the Pittsburg/Bay Point BART Station.

The City should encourage transit development, expansion, coordination and aggressive marketing throughout eastern CCC to serve a broader range of local and regional transportation needs including commuter and express service.

Policy 7-P-26 Require mitigation for development proposals which increase transit demand above the service levels provided by public transit operators and agencies.

Policy 7-P-27 Support the expansion of the existing transit service area and an increase in the service levels of existing transit. Support increased Tri- Delta and County Connection express bus service to the Pittsburg/Bay Point BART Station to reduce traffic demand on SR 4.

Policy 7-P-28 Encourage the extension of BART to Railroad Avenue within the median of SR 4. Cooperate with BART and regional agencies to develop station area plans and transit-oriented development patterns.

Policy 7-P-29 Preserve options for future transit use when designing improvements for roadways. Ensure that developers provide bus turnouts and/or shelters, where appropriate, as part of projects.

Policy 7-P-30 Work with Tri-Delta and planning area residents to plan for local bus routes that more effectively serve potential riders within local neighborhoods.

Goal 7-G-10 Study the feasibility of a comprehensive network of on- and off-road bike routes to encourage the use of bikes for commute, recreational and other trips.

A continuous network of safe and convenient bikeways has the potential to connect neighborhoods with major activity centers, parks, schools, employment centers, civic uses, the waterfront, and the County bicycle system.

Goal 7-G-11 Coordinate with neighboring communities and regional agencies to establish a continuous regional system of bicycle and pedestrian facilities.

- Goal 7-G-14 Develop urban design and streetscape standards and guidelines to improve pedestrian environments and accessibility in new development projects and in Downtown.
- Goal 7-G-15 Encourage walking as a regular means of transportation for people who live within a half-mile walk of school, work, or routine shopping destinations.
- Goal 7-G-16 Ensure that current bicycle-friendly roadways, featuring wide shoulders or marked bicycle lanes, are not redesigned to improve traffic LOS, unless all other alternative roadways possible to alleviate congestion are exhausted.

Policy 7-P-33 Require mitigation for development proposals which result in potential conflicts, or fail to provide adequate access, for pedestrians and bicycles.

Policy 7-P-34 As part of development approval, ensure that safe and contiguous routes for pedestrians and bicyclists are provided within new development projects and on any roadways that are impacted as a result of new development.

Policy 7-P-36 Ensure continued compliance with Title 24 of the Uniform Building Code, requiring removal of all barriers to disabled persons on arterial and collector streets.

Policy 7-P-38 Develop a series of continuous pedestrian systems within Downtown and residential neighborhoods, connecting major activity centers and trails with City and County open space areas.

Sidewalks should be creatively designed to invite safe use by pedestrians, and be free of obstacles, such as newspaper racks, bus benches, utility poles, and fire hydrants.

Policy 7-P-39 Ensure that residential and commercial developments provide pedestrian pathways between lots for direct routes to commercial centers, schools, and transit facilities.

Policy 7-P-40 Ensure provision of sufficiently wide sidewalks and pedestrian paths in all new residential development.

Policy 7-P-41 Ensure the provision of multi-use trails or trailheads within new hillside developments, preferably connecting to the regional trail network.

Policy 7-P-42 Improve pedestrian crossing safety at heavily used intersections by installing crossing controls that provide adequate time for pedestrians to cross the street.

- Policy 7-P-43 Provide adequate roadway width dedications for bicycle lanes, paths, and routes as designated in Figure 7-4 of the Pittsburg General Plan.
- Policy 7-P-45 During review of development projects, encourage secure bicycle facilities and other alternative transportation facilities at employment sites, public facilities, and multi-family residential complexes.
- Policy 7-P-46 Construction or expansion of roadways and intersections within the City shall not result in the severance of an existing bicycle route, unless an alternative exists or is provided.
- Policy 7-P-48 Ensure that construction of bulb-outs and curb extensions at intersections for pedestrian safety does not endanger bicyclists by forcing them into traffic lanes.
- Policy 7-P-52 Require that new arterial and collector streets accommodate bicyclists.
- Policy 7-P-53 Require that any grind and overlay of existing arterial and collector streets consider the needs of bicyclists.
- Policy 7-P-54 Amend engineering standards to require the use of bicycle grates on all new catch basins and storm drain inlet replacements on streets.

#### **4.12.4 IMPACTS AND MITIGATION MEASURES**

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The standards of significance to be used in identifying project-specific and cumulative impacts are presented. The standards are based on policies of the City of Pittsburg and other responsible agencies. In addition, the methods used to analyze the impacts of the project on the roadway, bicycle, pedestrian, and transit systems are provided in this section. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

##### **Standards of Significance**

According to CEQA guidelines, a significant impact would occur if the proposed project would result in the following:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit (Initial Study Question XVI.a.);

- Conflict with an applicable congestion management program, including, but not limited to, LOS standards, and travel demand measures, or other standards established by a county congestion management agency for designated roadways (Initial Study Question XVI.b.);
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities (Initial Study Question XVI.f.);
- Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition;
- Result in an internal circulation system design that does not meet City standards;
- Substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (Initial Study Question XVI.d.); or
- Result in inadequate emergency access (Initial Study Question XVI.e.).

The applicable LOS standards for each of the study intersections, freeway segments, and freeway ramps are included in Table 4.12-3, Table 4.12-4, and Table 4.12-5 above. For study intersections, a significant impact would occur under either of the following scenarios:

- If the intersection operates at an acceptable LOS without the project and degrades to an unacceptable LOS with the project; or
- If the intersection operates at an unacceptable LOS without the project and experiences an increase in delay, and the project contributes more than one percent of the volume to the intersection.

For freeway segments and ramps, a significant impact would occur under either of the following scenarios:

- If the freeway segment or ramp operates at an acceptable LOS without the project and degrades to an unacceptable LOS with the project.
- If the freeway segment or ramp operates at an unacceptable LOS without the project and experiences an increase in density, and the project contributes more than one percent of the volume to the freeway segment or ramp.

#### Regional Routes of Significance

For the traffic service objectives, a significant impact to Regional Routes of Significance would occur under the following scenarios:

- If the DI operates at an acceptable DI without the project and degrades to an unacceptable DI with the project;
- If the DI operates at an unacceptable DI without the project and experiences an increase in DI;
- If the roadway segment operates at an acceptable V/C without the project and degrades to an unacceptable V/C with the project;

- If the roadway segment operates at an unacceptable V/C without the project and experiences an increase in V/C;
- If the persons in vehicles in the HOV lane exceeds the established criteria without the project and is reduced to less than the established criteria with the project;
- If the roadway segment operates at an acceptable average speed without the project and degrades to an unacceptable average speed with the project;
- If the roadway segment operates at an unacceptable average speed without the project and experiences a decrease in average speed;
- If the intersection meets the acceptable number of signal cycles to clear without the project and the project increases the number of signal cycles to clear to an unacceptable number; or
- If the intersection exceeds the number of signal cycles to clear without the project and experiences an increase in the number of signal cycles to clear.

Table 4.12-6 and Table 4.12-7 above include a summary of the East and Central County MTSOs evaluated, as well as the standards used in this analysis.

#### Issues Not Discussed Further

It should be noted that as presented in the Introduction to Analysis chapter of this EIR, the Initial Study prepared for the proposed project (see Appendix C) determined that development of the proposed project would result in no impact related to change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (Initial Study Question XVI.c.). Accordingly, impacts related to such are not further addressed within this chapter.

#### **Method of Analysis**

The analysis methodology provided in the TIS prepared for the proposed project by Kimley-Horn and Associates, Inc. is discussed below.

#### Analysis Scenarios

The following analysis scenarios are included in this chapter:

- **Existing Conditions:** LOS based on current (2017) traffic counts, existing roadway geometry, and existing traffic control.
- **Existing Plus Project Conditions:** Existing traffic volumes, roadway geometry, and traffic control plus trips from the proposed project.
- **Long-Term (2035) Conditions:** Based on future year traffic forecasts from the CCTA Travel Demand Forecast model. Future year corresponds with the approximate buildout of the City's General Plan and includes road projects anticipated to be in place under the long-term condition.

- **Long-Term (2035) Plus Project Conditions:** Based on the CCTA traffic forecasts and traffic generated by the proposed project. Future year corresponds with the approximate buildout of the City's General Plan and includes road projects anticipated to be in place under the long-term condition.

The CCTA's Travel Demand Forecast model can model traffic volumes between the base year of 2010, and the future growth year of 2030. Model outputs were used to compare 2010 base year volumes and year 2030 model forecasts to determine the annual incremental growth in traffic volumes at study intersections. Year 2035 turning movement volumes were calculated by adding the growth increment to the existing traffic counts to calculate the final adjusted roadway link forecast volume.

### Intersections

Traffic counts at the study intersections were conducted in June of 2017. Volumes were collected during the AM (7:00 AM to 9:00 PM) and PM (4:00 PM to 6:00 PM) peak periods of a typical weekday when local schools were in session. Ramp volumes were counted during the same time as the study intersections. Ramp metering was active during the data collection for the existing conditions and may affect the merge-diverge analysis.

#### *Signalized Intersections*

The HCM methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average control delay (in seconds per vehicle) for the various movements within the intersection (e.g. the delay for a vehicle turning left, right, or moving straight through a given intersection). A combined weighted average control delay and LOS are presented for the intersection. The combined weighted average control delay and LOS represent the average amount of delay and the average LOS experienced by drivers at the intersection. Using a weighted average allows for equal consideration of all intersection movements, where some movements may take longer or shorter than other movements. A summary of the HCM results and copies of the detailed HCM LOS calculations are included in Appendix N to this EIR.

#### *Unsignalized Intersections*

The HCM describes the method for evaluating LOS and delay at unsignalized (all-way stop controlled and two-way stop controlled) intersections. LOS at unsignalized intersections is also defined by the average control delay per vehicle (measured in seconds). The control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. The average delay for the overall intersection is reported for all-way stop controlled intersections. The delay ranges for unsignalized intersections are lower than for signalized intersections as drivers expect less delay at unsignalized intersections.

### Multi-Modal Transportation Service Objectives

Routes of Regional Significance were analyzed using MTSOs for all the analysis scenarios. As noted previously, in CCC, action plans exist for each region (East County and Central County)



that describe the MTSOs that are needed to be analyzed. Table 4.12-6 lists the MTSOs for the East County and Table 4.12-7 lists the MTSOs for the Central County. MTSOs analyzed per the CCTA established criteria include delay index, average speed, average stopped delay, arterial LOS, V/C, and HOV usage.

#### *Delay Index*

The DI for the freeway segments was calculated using HCS software using HCM 2010 methodology, consistent with the freeway analysis. The DI for arterial roadways was calculated using Synchro software. Travel times were determined under peak congestion and also under uncongested conditions. For roadways without specific standards mentioned for DI, speeds are used for comparison purposes only.

#### *Average Speed*

For arterial roadways, the average speed is determined from the Synchro analysis. For freeways, the average speed is determined from the Highway Capacity Software (HCS) analysis. The only roadway corridor that has a specified average speed threshold is Clayton Road with an average speed of 15 mph or better. Specific standards mentioned for average speeds for the other corridors do not exist and, therefore, the speeds are used for comparison purposes only.

#### *Average Stopped Delay*

The average stopped delay is determined from the Synchro analysis for each arterial roadway and is measured in the number of cycle lengths to clear the intersection. The number of cycle lengths was calculated by taking the average intersection delay divided by the cycle length, resulting in the number of cycles for a vehicle to get through the intersection. As shown in Table 4.12-6, only five intersections have a specified average stopped delay threshold: Baily Road and Concord Boulevard; Bailey Road and Clayton Road; Clayton Road and Ygnacio Valley Road/Kirker Pass Road; Clayton Road and Treat Boulevard/Denkinger Road; Treat Boulevard and Cowell Road; and Treat Boulevard and Oak Grove Road. The remaining intersections do not have specific standards mentioned for average stopped delay and, therefore, the average stopped delay is used for comparison purposes only.

#### *Arterial Roadway LOS*

The arterial roadway LOS is determined from the Synchro analysis for each roadway. Specified arterial LOS for each of the listed roadways do not exist. Instead, the LOS threshold is listed for specific intersections. Therefore, the arterial LOS are used for comparison purposes only.

#### *Volume to Capacity Ratio*

The V/C is the ratio of the traffic volume on a specified corridor to the corridor's operational capacity. The capacity for each roadway is mentioned in the CCTA Countywide Travel Demand Model. The V/C thresholds are only mentioned for Treat Boulevard and Ygnacio Valley

Road/Kirker Pass Road. Therefore, the V/C ratios for the other corridors are used for comparison purposes only.

### HOV Usage

The HOV usage is determined by the Caltrans' HOV lane utilization report. The most recent version of the report that includes the study corridors is from 2010. Future HOV lane usage was determined by using the CCTA model to estimate the future growth rate for the HOV lane and applying that rate to the existing HOV volume. The same vehicle occupancy percentages in 2010 were assumed for the future scenario to determine the persons in vehicle using the HOV lane. The HOV lane utilization shall exceed 600 vehicles per lane in the peak direction during the peak hour.

### Project Trip Generation

The Draft Master Plan specifies that the total number of dwelling units within the project site would not be permitted to exceed 1,500, consistent with Policy 2-P-96 in the City's General Plan. As such, maximum buildout of the proposed project site is assumed to include 1,500 residential units for purposes of this CEQA analysis. The trip generation calculations for buildout of the proposed project site are summarized in Table 4.12-11 below.

<b>Table 4.12-11 Project Trip Generation</b>				
<b>Time Period</b>	<b>Equation</b>	<b>Trips</b>		
		<b>In</b>	<b>Out</b>	<b>Total</b>
Daily	$\text{Ln}(T) = 0.92 \text{ Ln}(X) + 2.71$	6,280	6,280	12,560
AM Peak	$T = 0.70(X) + 9.74$	265	795	1,060
PM Peak	$\text{Ln}(T) = 0.90 \text{ Ln}(X) + 0.51$	757	445	1,202
<i>Source: Kimley-Horn and Associates, Inc., 2017.</i>				

The trip generation rates for Single-Family Detached Housing (Land Use Code 210) from the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9<sup>th</sup> Edition, were utilized. The total trip generation reflects all vehicle trips that would be counted at the project driveways, both inbound and outbound. Adjustments were not applied to trip generation to account for pass-by or internal trips because the project would consist solely of residential development. As shown in the table, the project would generate approximately 1,060 new peak AM trips and approximately 1,202 new peak PM trips.

### Project Trip Distribution

The proposed project trip distribution is based on the County's travel forecast demand model provided by CCTA as well as existing traffic patterns and field observations. A select zone analysis was run for the proposed project to determine the distribution of vehicle trips throughout the study area. The results were checked to ensure that trips were using San Marco Boulevard and Bailey Road to access the project site in the Existing Plus Project Condition and the Leland Road access in the Cumulative Plus Project Condition.

Figure 4.12-3 shows the traffic distribution for the proposed project assumed in the TIS. Based on the assumed trip distribution, new vehicle trips generated by the proposed project were assigned to the street network in the Existing Plus Project and Cumulative Plus Project Conditions.

It should be noted that in the Cumulative Plus Project Condition, Leland Road will be extended to Avila Road, and, thus, trip distribution would differ from the Existing Plus Project Condition.

#### Existing Scenario

The existing scenarios include Existing Conditions and Existing Plus Project Conditions. The existing scenario is based on current (2017) traffic counts, existing roadway geometry, and existing traffic control. The Existing Plus Project Condition includes the Existing Condition plus traffic generated by buildout of the Draft Master Plan Area.

#### Long-Term (2035) Scenario

The long-term scenarios include Long-Term (2035) Conditions and Long-Term (2035) Plus Project Conditions. Several roadway improvements are planned in the study area for the Long-Term (2035) Condition, as identified by the City of Pittsburg and the City of Concord. The future intersection improvements and roadway improvements that would affect the study area include:

- Intersection #1 – At the intersection of Avila Road and Willow Pass Road, the westbound approach will have two left turn lanes and one right turn lane. The southbound approach will be restriped to include a left turn lane and two through lanes. In addition, the intersection will be signalized.
- Intersection #2 – At the intersection of Willow Pass Road and SR 4 EB ramps, the southbound approach will be widened to include a left turn lane. In addition, the intersection will be signalized.
- Intersection #3 – At the intersection of Willow Pass Road and SR 4 WB ramps, the northbound approach will be widened to include a left turn lane and two through lanes. In addition, the intersection will be signalized.
- Intersection #6 – At the intersection of San Marco Boulevard and W. Leland Road, the northbound approach will be widened to include an additional left turn lane and add an exclusive right turn lane. The existing westbound yielding right turn lane will be a free right turn lane. The free right turn lane will have its own auxiliary lane on the northbound departure.
- Intersection #18 – At the intersection of Bailey Road and W. Leland Road, the eastbound approach will be widened to include an additional left turn lane and add an exclusive right turn lane.
- Intersection #33 – At the intersection of Olivera Road and Willow Pass Road, the northbound and southbound approaches will be widened to add an additional northbound through lane and an additional southbound through lane.
- Intersection #34 – At the intersection of Farm Bureau Road and Concord Boulevard, the northbound and southbound approaches will be widened to add an additional northbound through lane and an additional southbound through lane.







- Intersection #38 – At the intersection of Farm Bureau Road and Clayton Road, the southbound approach will be widened to include an additional southbound lane that drops into the southbound right turn lane.
- Intersection #42 – The intersection of W. Leland Road and Santa Teresa Drive will be a new intersection in the Long-Term (2035) Condition. The intersection will be used by the San Marco Plan development. The eastbound approach will be two through lanes and a right turn lane. The westbound approach will be two through lanes and one left turn lane. The northbound approach will be one left turn lane and one right turn lane.
- Intersection #43 – The intersection of Bailey Road and the Project entrance will be a new intersection in the Long-term. The intersection will extend San Marco Boulevard to Bailey Road. The eastbound approach will be one left turn lane and one right turn lane. The northbound approach will be one left turn lane and one through lane. The southbound approach will be one right turn lane and one through lane.

In the Long-Term (2035) Condition, W. Leland Road is planned to be extended from San Marco Boulevard to Avila Road and Avila Road will be improved to the City's major arterial standards (i.e., a four-lane roadway with a raised median), regardless of whether the proposed project is developed or not. It should be noted that the City of Concord has historically objected to such improvements.

In addition, James Donlon Boulevard is planned to be extended from Somersville Road to Kirker Pass Road. Although the roadway is not within the study area, the extension could affect the volume distribution in the Long-Term (2035) Condition. Another planned major roadway improvement is the extension of San Marco Boulevard from its existing terminus to Bailey Road.

### **Impacts and Mitigation Measures**

The proposed project impacts on the transportation system are evaluated in this section based on the standards of significance and methodology described above. Each impact is followed by recommended mitigation to reduce the identified impacts, if needed.

**4.12-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system during construction. Based on the analysis below, the impact would be *less than significant*.**

Construction of the project, including site preparation and construction, and delivery activities, would generate contractor employee trips and a variety of construction-related vehicles. As a result, construction activities could include disruptions to the transportation network near the project site, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures. The increase in traffic as a result of construction activities associated with the proposed project has been quantified assuming a worst-case, single-phase construction period of five years.

### Heavy Equipment

Heavy equipment transport to and from the site could temporarily increase traffic on area roadways and intersections in the vicinity of the project site during construction. However, prior to tentative subdivision map approval, future development occurring within the project site would be required by the City to include the submittal of a Traffic Control Plan. The purpose of the Traffic Control Plan would be to ensure that construction-related traffic is managed in an orderly fashion and does not adversely affect local circulation systems.

The requirements within the Traffic Control Plan include, but are not limited to, the following: truck drivers would be notified of and required to use the most direct route between the site and SR 4, as determined by the City Engineering Department; all site ingress and egress would occur only at the main driveways to the project site and construction activities may require installation of temporary (or ultimate) traffic signals as determined by the City Engineer; specifically designated travel routes for large vehicles would be monitored and controlled by flaggers for large construction vehicle ingress and egress; warning signs indicating frequent truck entry and exit would be posted on major roadways in the area; and any debris and mud on nearby streets caused by trucks would be monitored daily and may require instituting a street cleaning program.

### Employees

The weekday work would likely begin at approximately 7:00 AM and end at 4:00 PM (noise producing activities are restricted by City ordinance between 8:00 AM and 5:00 PM). The construction worker arrival peak would occur between 6:30 AM and 7:30 AM, and the departure peak would occur between 4:00 PM and 5:00 PM. The construction worker peak hours are slightly before the citywide commute peaks. It should be noted that the number of trips generated during construction would occur over a five-year period. Construction workers would require parking areas during the peak construction period. Additionally, deliveries, visits, and other activities may generate peak non-worker parking demand for trucks and automobiles. Furthermore, the Traffic Control Plan requires construction employee parking be provided on the project site to eliminate conflicts with nearby residential areas and ensure a safe flow of traffic in the project area.

### Construction Material Import

The project would also require the importation of construction material, including raw materials for the building pads, the buildings, the parking areas, and landscaping. Importing this material would require trucks for raw materials, concrete, and trucks for the parking lots, asphalt paving, and landscaping material. Each truck would generate one inbound and one outbound trip, accounting for two trips each. Under the provisions of the Traffic Control Plan, if importation and exportation of material becomes a traffic nuisance, then the City Engineer may limit the hours the activities can take place.



## Conclusion

Based on the above, preparation of a Traffic Control Plan would ensure that acceptable operating conditions on local roadways and freeway facilities are maintained during construction activities, including requiring parking for construction employees on-site. Therefore, the proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system during construction, and a ***less-than-significant*** impact would occur. To the extent construction could result in noise or air quality impacts, please see Chapter 4.3, Air Quality and Greenhouse Gas Emissions, and Chapter 4.10, Noise, of this EIR.

This analysis assumed construction of the entire project in one phase to identify the potential worst-case traffic effects. If the project is built in phases over time, the overall intensity of construction would be reduced due to smaller areas of disturbance and distribution of construction traffic over a longer period of time. Each phase would be subject to a Traffic Control Plan and oversight by the City Engineer. The Traffic Control Plan would be required to prescribe specific durations and times for any required lane closures, provide an overview of the planned construction schedule, detail all required traffic control devices, and incorporate all other applicable information detailed in the City's standard Temporary Traffic Control Plan Checklist.

City review and approval of the Traffic Control Plan would ensure that construction traffic does not substantially impede safe and acceptable traffic flow on area roadways. The last phase may require added worker parking measures, depending on the circumstances, as remaining vacant land for parking would not be available; however, location of final phase construction worker parking would be determined through the Traffic Control Plan process.

## Mitigation Measure(s)

*None required.*

- 4.12-2 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the study intersections under Existing Plus Project Conditions. Based on the analysis below, because traffic generated by the proposed project would cause unacceptable LOS, increase delay, and increase traffic volumes by one percent or more at a number of intersections under Existing Plus Project Conditions, even with mitigation, the impact would be *significant and unavoidable*.**

As noted previously, buildout of the Draft Master Plan Area would generate approximately 12,560 new daily trips, including 1,060 new AM peak hour trips and 1,202 new PM peak hour trips. In order to evaluate project impacts, such trips were assigned to the study intersections in accordance with the trip generation and distribution assumptions described above. Table 4.12-12 shows the Existing Plus Project LOS results at the study intersections.

Table 4.12-12 Intersection LOS – Existing Plus Project Conditions													
Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	Existing			Existing Plus Project							
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		PM Peak Hour		
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Δ
1. Avila Road/Willow Pass Road	SSSC	E	A	0.1	A	0.5	A	0.2	A	0.1	A	0.6	0.1
<i>Worst Approach</i>			B	10.5	C	23.8	B	10.6	D	29.5	D	29.5	5.7
2. EB SR 4 Ramps/ Willow Pass Road	AWSC	E	F	117.5	F	201.1	F	136.7	F	19.2	F	255.8	54.7
3. WB SR 4 Ramps/ Willow Pass Road	AWSC	E	F	143.6	C	19.2	F	165.4	F	21.8	C	22.7	3.5
4. Rio Verde Circle/San Marco Boulevard	AWSC	E	B	11.9	A	8.2	C	24.5	B	12.6	B	12.3	4.1
5. Santa Teresa Drive/San Marco Boulevard	AWSC	D	C	28.3	B	15.9	D	37.7	B	9.4	B	15.0	-0.9
6. W. Leland Road/San Marco Boulevard	Signal	D	D	39.7	C	25.9	E	66.0	C	26.3	C	26.9	1.0
7. EB SR 4 Ramps/San Marco Boulevard	Signal	D	A	9.5	B	13.7	B	12.3	C	2.8	C	23.8	10.1
8. WB SR 4 Ramp/San Marco Boulevard	Signal	D	C	26.9	B	18.5	C	30.8	B	3.9	B	19.8	1.3
9. Willow Pass Road/Port Chicago Highway	Signal	D	B	15.8	B	11.0	B	16.5	B	0.7	B	11.1	0.1
10. Willow Pass Road/Bailey Road	Signal	D	C	27.9	D	39.8	C	28.1	D	0.2	D	40.0	0.2
11. Willow Pass Road/Loftus Road	Signal	D	F	107.2	C	24.5	F	108.4	C	1.2	C	25.3	0.8
12. EB Willow Pass Road/Range Road	SSSC	E	A	5.5	A	6.6	A	5.8	A	0.3	A	6.7	0.1
<i>Worst Approach</i>			B	11.1	B	11.5	B	11.3	B	0.2	B	11.6	0.1
13. WB Willow Pass Road/Range Road	SSSC	E	A	0.2	A	0.5	A	0.2	A	0.0	A	0.5	0.0
<i>Worst Approach</i>			A	0.8	A	0.8	A	0.8	A	0.0	A	0.9	0.1

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Table 4.12-12 Intersection LOS – Existing Plus Project Conditions													
Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	Existing			Existing Plus Project							
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Δ
14. Willow Pass Road/Railroad Avenue	Signal	D	C	23.1	C	20.6	C	23.2	C	20.8	C	20.8	0.2
15. W. Leland Road/Alves Ranch Road	Signal	D	B	11.8	A	9.7	B	11.8	A	9.6	A	9.6	-0.1
16. W. Leland Road/Woodhill Drive	Signal	D	A	8.2	A	7.8	A	8.2	A	7.7	A	7.7	-0.1
17. W. Leland Road/Southwood Drive	Signal	D	B	18.4	C	21.2	B	18.9	C	21.2	C	21.2	0.0
18. W. Leland Road/Bailey Road	Signal	E	F	97.6	D	52.3	F	98.9	E	63.9	E	63.9	11.6
19. Maylard Street/Bailey Road	Signal	E	B	11.6	B	18.1	B	12.3	B	18.7	B	18.7	0.6
20. EB SR 4 Ramps/Bailey Road	Signal	E	C	22.4	D	35.2	C	22.4	C	36.5	D	36.5	1.3
21. WB SR 4 Ramp/Bailey Road	Signal	E	C	25.2	B	19.3	C	28.3	C	19.5	B	19.5	0.2
22. Canal Road/Bailey Road	Signal	D	B	13.5	B	10.9	B	13.6	B	11.0	B	11.0	0.1
23. W. Leland Road/Chestnut Drive	Signal	D	F	112.9	C	27.8	F	115.9	C	26.4	C	26.4	-1.4
24. W. Leland Road/Jacqueline Drive	Signal	D	E	75.2	C	34.2	E	78.7	C	31.7	C	31.7	-2.5
25. W. Leland Road/Montevideo Drive	Signal	D	A	6.4	A	6.5	A	6.6	A	6.7	A	6.7	0.2
26. W. Leland Road/Range Road	Signal	D	C	31.8	D	46.2	C	31.4	C	45.5	D	45.5	-0.7
27. W. Leland Road/Dover Way	Signal	D	C	28.9	C	33.1	C	28.8	C	31.9	C	31.9	-1.2
28. W. Leland Road/Burton Avenue	Signal	D	B	16.9	C	30.9	B	17.9	B	29.8	C	29.8	-1.1

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Table 4.12-12 Intersection LOS – Existing Plus Project Conditions												
Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	Existing				Existing Plus Project					
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
29. W. Leland Road/Crestview Drive	Signal	D	F	111.8	D	39.0	F	114.1	D	38.5	D	-0.5
30. W. Leland Road/Railroad Avenue	Signal	D	D	52.1	D	45.3	D	52.5	D	46.1	D	0.8
31. EB SR 4 Ramps/Railroad Avenue	Signal	D	C	25.4	E	63.1	C	25.6	E	63.0	E	-0.1
32. WB SR 4 Ramp/Railroad Avenue	Signal	D	D	41.3	C	30.9	D	41.3	C	30.7	C	-0.2
33. Willow Pass Road/Olivera Road	Signal	D	B	16.7	D	47.2	B	17.0	D	50.9	D	3.7
34. Concord Boulevard/Farm Bureau Road	Signal	D	C	25.4	C	26.5	C	25.9	C	27.2	C	0.7
35. Concord Boulevard/Bailey Road	Signal	D	E	64.5	E	65.0	F	100.9	F	88.0	F	23.0
36. Bailey Road/Myrtle Drive	SSSC		A	5.0	A	1.9	B	13.0	A	2.4	A	0.5
Worst Approach			F	62.2	C	19.8	F	203.9	D	29.1	D	9.3
37. Clayton Road/Babel Lane	Signal	D	C	25.4	C	30.9	C	25.5	C	31.3	C	0.4
38. Clayton Road/Farm Bureau Road	Signal	D	C	24	B	16.0	C	23.7	B	16.2	B	0.2
39. Clayton Road/Treat Boulevard	Signal	D	D	46	E	55.2	D	47.7	E	57.5	E	2.3
40. Clayton Road/Bailey Road	Signal	D	C	32.4	C	32.5	D	43.2	C	33.6	C	1.1
41. Cowell Road/Treat Boulevard	Signal	D	E	73.2	F	89.0	E	78.6	F	90.7	F	1.7

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Table 4.12-12 Intersection LOS – Existing Plus Project Conditions											
Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	Existing			Existing Plus Project					
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Δ Delay
42. W. Leland Road/Santa Teresa Drive	Signal	D	Future Intersection			Future Intersection					
43. Bailey Road/Project Entrance	Signal	D	Future Intersection with Project			C	30.8	30.8	B	10.8	10.8
44. Treat Boulevard/Oak Grove Road	Signal	D	E	59.7	F	93.5	E	60.3	F	96.4	2.9
45. Willow Pass Road/Diamond Boulevard	Signal	D	B	17.2	D	39.4	B	17.2	D	39.5	0.1
46. Willow Pass Road/Market Street	Signal	E	D	38.2	D	43.8	D	39.6	D	44.1	0.3
47. Willow Pass Road/Galindo Street	Signal	E	D	37.8	D	51.0	D	37.6	D	51.2	0.2
48. Concord Boulevard/Port Chicago Highway	Signal	E	E	61.5	C	23.6	E	75.3	C	24.7	1.1
49. Kirker Pass Road/Oakhurst Drive/Concord Boulevard	Signal	D	F	665.4	F	341.6	F	664.0	F	339.7	-1.9
50. Kirker Pass Road/Oakhurst Drive/Concord Boulevard	Signal	D	D	39.3	D	47.1	D	39.2	D	47.1	0.0
Notes: Intersections that are operating below acceptable levels are shown in <b>BOLD</b> and significant impacts are <b>SHADED</b> . 1. Each study intersection is controlled by a traffic signal, a side-street stop-control (SSSC), or an all-way stop-control (AWSC). 2. LOS criteria is based on seconds of delay.											
Source: Kimley-Horn and Associates, 2017.											

Per Table 4.12-12, traffic generated by buildout of the Draft Master Plan Area would result in unacceptable LOS, increase delay, and increase traffic volumes by one percent or more at the following study intersections under the Existing Plus Project Condition:

- EB SR 4 ramps and Willow Pass Road (Intersection #2) (AM and PM peak hours);
- WB SR 4 ramps and Willow Pass Road (Intersection #3) (AM peak hour);
- W. Leland Road and San Marco Boulevard (Intersection #6) (AM peak hour);
- Willow Pass Road and Loftus Road (Intersection #11) (AM peak hour);
- W. Leland Road and Bailey Road (Intersection #18) (AM peak hour);
- W. Leland Road and Chestnut Drive (Intersection #23) (AM peak hour);
- W. Leland Road and Jacqueline Drive (Intersection #24) (AM peak hour);
- W. Leland Road and Crestview Drive (Intersection #29) (AM peak hour);
- Concord Boulevard and Bailey Road (Intersection #35) (AM and PM peak hours);
- Bailey Road and Myrtle Drive (Intersection #36) (AM peak hour);
- Clayton Road and Treat Boulevard (Intersection #39) (PM peak hour);
- Cowell Road and Treat Boulevard (Intersection #41) (AM and PM peak hours);  
and
- Treat Boulevard and Oak Grove Road (Intersection #44) (AM peak hour).

All other study intersections would either operate acceptably both with and without the proposed project or would not increase traffic volumes by one percent or more. Nonetheless, the Draft Master Plan could conflict with applicable General Plan LOS thresholds, and a *significant* impact could occur.

Mitigation Measure(s)

Table 4.12-13 shows the study intersection LOS in the Existing Plus Project Condition both with and without mitigation. With the exception of the following intersections, which would remain *significant and unavoidable*, implementation of the following mitigation measures would reduce impacts to the remaining intersections to less-than-significant levels:

- EB SR 4 Ramps/Willow Pass Road (Intersection #2);
- WB SR 4 Ramps/Willow Pass Road (Intersection #3);
- Concord Boulevard and Bailey Road (Intersection #35);
- Bailey Road and Myrtle Drive intersection (Intersection #36);
- Clayton Road Treat Boulevard intersection (Intersection #39); and
- Treat Boulevard and Oak Grove Road (Intersection #44).

A discussion of the mitigation measure(s) required for each impacted intersection, as well as a description of how the measures would reduce impacts at that intersection, is provided below, immediately following the list of mitigation measures.

**Table 4.12-13**  
**Intersection LOS – Existing Plus Project Conditions with Mitigation**

Intersection	Delay Criteria <sup>1</sup>	Existing Plus Project						Existing Plus Project (Mitigated)					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		LOS	Delay	Δ Delay	LOS	Delay	Δ Delay	LOS	Delay	Δ Delay	LOS	Delay	Δ Delay
1. Avila Road/Willow Pass Road	E	A	0.2	0.1	A	0.6	0.1						
<i>Worst Approach</i>		B	10.6	0.1	D	29.5	5.7						
2. EB SR 4 Ramps/ Willow Pass Road	E	<b>F</b>	<b>136.7</b>	<b>19.2</b>	<b>F</b>	<b>255.8</b>	<b>54.7</b>	B	10.5	-107.0	B	10.7	-190.4
3. WB SR 4 Ramps/ Willow Pass Road	E	<b>F</b>	<b>165.4</b>	<b>21.8</b>	C	22.7	3.5	<b>E</b>	<b>66.2</b>	<b>-77.4</b>			
4. Rio Verde Circle/San Marco Boulevard	E	C	24.5	12.6	B	12.3	4.1						
5. Santa Teresa Drive/San Marco Boulevard	D	D	37.7	9.4	B	15.0	-0.9						
6. W. Leland Road/San Marco Boulevard	D	<b>E</b>	<b>66.0</b>	<b>26.3</b>	C	26.9	1.0	D	50.3	10.6			
7. EB SR 4 Ramps/San Marco Boulevard	D	B	12.3	2.8	C	23.8	10.1						
8. WB SR 4 Ramp/San Marco Boulevard	D	C	30.8	3.9	B	19.8	1.3						
9. Willow Pass Road/Port Chicago Highway	D	B	16.5	0.7	B	11.1	0.1						
10. Willow Pass Road/Bailey Road	D	C	28.1	0.2	D	40.0	0.2						
11. Willow Pass Road/Loftus Road	D	<b>F</b>	<b>108.4</b>	<b>1.2</b>	C	25.3	0.8	C	26.9	-80.3			
12. EB Willow Pass Road/Range Road	E	A	5.8	0.3	A	6.7	0.1						
<i>Worst Approach</i>		B	11.3	0.2	B	11.6	0.1						
13. WB Willow Pass Road/Range Road	E	A	0.2	0.0	A	0.5	0.0						
<i>Worst Approach</i>		A	0.8	0.0	A	0.9	0.1						
14. Willow Pass Road/Railroad Avenue	D	C	23.2	0.1	C	20.8	0.2						
15. W. Leland Road/Alves Ranch Road	D	B	11.8	0.0	A	9.6	-0.1						
16. W. Leland Road/Woodhill Drive	D	A	8.2	0.0	A	7.7	-0.1						
17. W. Leland Road/Southwood Drive	D	B	18.9	0.5	C	21.2	0.0						
18. W. Leland Road/Bailey Road	E	<b>F</b>	<b>98.9</b>	<b>1.3</b>	E	63.9	11.6	<b>F</b>	<b>85.3</b>	<b>-12.3</b>			
19. Maylard Street/Bailey Road	E	B	12.3	0.7	B	18.7	0.6						
20. EB SR 4 Ramps/Bailey Road	E	C	22.4	0.0	D	36.5	1.3						
21. WB SR 4 Ramp/Bailey Road	E	C	28.3	3.1	B	19.5	0.2						
22. Canal Road/Bailey Road	D	B	13.6	0.1	B	11.0	0.1						
23. W. Leland Road/Chestnut Drive	D	<b>F</b>	<b>115.9</b>	<b>3.0</b>	C	26.4	-1.4	<b>E</b>	<b>57.9</b>	<b>-55.0</b>			
24. W. Leland Road/Jacqueline Drive	D	<b>E</b>	<b>78.7</b>	<b>3.5</b>	C	31.7	-2.5	D	51.1	-24.1			
25. W. Leland Road/Montevideo Drive	D	A	6.6	0.2	A	6.7	0.2						
26. W. Leland Road/Range Road	D	C	31.4	-0.4	D	45.5	-0.7						
27. W. Leland Road/Dover Way	D	C	28.8	-0.1	C	31.9	-1.2						
28. W. Leland Road/Burton Avenue	D	B	17.9	1.0	C	29.8	-1.1						
29. W. Leland Road/Crestview Drive	D	<b>F</b>	<b>114.1</b>	<b>2.3</b>	D	38.5	-0.5	<b>F</b>	<b>102.5</b>	<b>-9.3</b>			
30. W. Leland Road/Railroad Avenue	D	D	52.5	0.4	D	46.1	0.8						
31. EB SR 4 Ramps/Railroad Avenue	D	C	25.6	0.2	E	63.0	-0.1						
32. WB SR 4 Ramp/Railroad Avenue	D	D	41.3	0.0	C	30.7	-0.2						
33. Willow Pass Road/Olivera Road	D	B	17.0	0.3	D	50.9	3.7						
34. Concord Boulevard/Farm Bureau Road	D	C	25.9	0.5	C	27.2	0.7						
35. Concord Boulevard/Bailey Road	D	<b>F</b>	<b>100.9</b>	<b>36.4</b>	<b>F</b>	<b>88.0</b>	<b>23.0</b>	<b>E</b>	<b>70.7</b>	<b>6.2</b>	<b>E</b>	<b>56.1</b>	<b>-8.9</b>
36. Bailey Road/Myrtle Drive	E	B	13.0	8.0	A	2.4	0.5						
<i>Worst Approach</i>		<b>F</b>	<b>203.9</b>	<b>141.7</b>	D	29.1	9.3	B	16.8	-45.4			

(Continued on next page)

Table 4.12-13 Intersection LOS – Existing Plus Project Conditions with Mitigation													
Intersection	Delay Criteria <sup>1</sup>	Existing Plus Project						Existing Plus Project (Mitigated)					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		LOS	Delay	Δ Delay	LOS	Delay	Δ Delay	LOS	Delay	Δ Delay	LOS	Delay	Δ Delay
37. Clayton Road/Babel Lane	D	C	25.5	0.1	C	31.3	0.4						
38. Clayton Road/Farm Bureau Road	D	C	23.7	-0.3	B	16.2	0.2						
39. Clayton Road/Treat Boulevard	D	D	47.7	1.7	E	57.5	2.3				D	52.8	-2.4
40. Clayton Road/Bailey Road	D	D	43.2	10.8	C	33.6	1.1						
41. Cowell Road/Treat Boulevard	D	E	78.6	5.4	F	90.7	1.7	E	72.6	-0.6	D	46.4	-42.6
42. W. Leland Road/Santa Teresa Drive	D	Future Intersection											
43. Bailey Road/Project Entrance	D	C	30.8	30.8	B	10.8	10.8						
44. Treat Boulevard/Oak Grove Road	D	E	60.3	0.6	F	96.4	2.9	E	60.3	0.6	E	72.8	-20.7
45. Willow Pass Road/Diamond Boulevard	D	B	17.2	0.0	D	39.5	0.1						
46. Willow Pass Road/Market Street	E	D	39.6	1.4	D	44.1	0.3						
47. Willow Pass Road/Galindo Street	E	D	37.6	-0.2	D	51.2	0.2						
48. Concord Boulevard/Port Chicago Highway	E	E	75.3	13.8	C	24.7	1.1						
49. Kirker Pass Road/Oakhurst Drive/Concord Boulevard	D	F	664.0	-1.4	F	339.7	-1.9						
50. Kirker Pass Road/Oakhurst Drive/Concord Boulevard	D	D	39.2	-0.1	D	47.1	0.0						
Notes: Intersections that are operating below acceptable levels are shown in <b>BOLD</b> and significant impacts are <b>SHADED</b> . <sup>1</sup> LOS criteria is based on seconds of delay.													
Source: Kimley-Horn and Associates, 2017.													



4.12-2(a) *As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Capital Improvement Program for the 2015 Update to the Contra Costa CMP (Project 1028). Such improvements would include, but would not necessarily be limited to, the following:*

- *The EB SR-4 Ramps/Willow Pass Road intersection shall be signalized, a southbound left turn lane shall be added, the shared southbound through-left lane shall be restriped to be a through lane, and the eastbound approach shall be restriped to be an eastbound left turn lane and a shared eastbound through-right lane; and*
- *The WB SR-4 Ramps/Willow Pass Road shall be signalized, a northbound left turn lane shall be added, the northbound shared through-left turn lane shall be restriped to be a through lane, and the westbound approach shall be restriped to be two westbound left turn lanes and a shared westbound through-right lane.*

*Proof of payment shall be submitted to the City of Pittsburg Community Development Department.*

4.12-2(b) *As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP (Project ST-7) to the City of Pittsburg Community Development Department. Such improvements would include, but would not necessarily be limited to, optimization of cycle lengths/intersection timing splits at the following intersections:*

- *W. Leland Road and San Marco Boulevard (Intersection #6);*
- *Willow Pass Road and Loftus Road (Intersection #11);*
- *Leland Road and Bailey Road (Intersection #18);*
- *Leland Road and Jacqueline Drive (Intersection #24);*
- *Leland Road and Crestview Drive (Intersection #29).*

*Proof of payment shall be submitted to the City of Pittsburg Community Development Department.*

4.12-2(c) *As part of future development applications, the project applicant shall show that the westbound left turn and eastbound left turn movements at W. Leland Road and Chestnut Drive (Intersection #23) would be converted from protected left turn phasing to permitted left turn phasing. Implementation of the required improvements shall be accomplished by way of one of the following methods:*

*If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the*

*construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.*

*Or*

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

4.12-2(d) *As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Concord CIP (Project 2049). Such improvements would include, but would not necessarily be limited to, the following:*

- The southbound approach at the Concord Boulevard and Bailey Road intersection shall be widened and restriped to include a southbound left turn lane, a southbound through lane, and a southbound right turn lane. In addition, the northbound approach shall be widened to be a northbound left turn lane and a shared through-right turn lane; and*
- The Bailey Road and Myrtle Drive intersection shall be signalized, a southbound left turn lane shall be added, and the shared southbound through-left lane shall be restriped to be a through lane.*

4.12-2(e) *As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Concord CIP (Project 2144). Such improvements would include, but would not necessarily be limited to, the following:*

- The Clayton Road and Treat Boulevard intersection shall be widened for the northbound approach to be two northbound left turn lanes, two northbound through lanes, and a northbound right turn lane. In addition, the northbound and southbound phases shall be changed from split phasing to protected phasing and the intersection timing splits shall be optimized.*

4.12-2(f) *Prior to occupancy of the proposed buildings, the project applicant shall optimize the intersection timing splits at the following City of Concord intersections: Cowell Road and Treat Boulevard (Intersection #41); and Treat Boulevard and Oak Grove Road (Intersection #44).*

*EB SR 4 ramps and Willow Pass Road (Intersection #2)*

As presented above, Mitigation Measure 4.12-2(a) includes the following improvements to the EB SR 4 ramps and Willow Pass Road intersection: signalization; addition of a southbound left turn lane; restriping of the shared southbound through-left lane to be a through lane; and restriping of the eastbound approach to be an eastbound left turn lane and a shared eastbound through-right lane. The aforementioned improvement has been planned by the Capital Improvement Program for the 2015 Update to the Contra Costa CMP (Project 1028); however, funding sources have not yet been identified, and a timeframe for the improvement has not been established. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(a) would improve the operations at the EB SR 4 ramps and Willow Pass Road intersection to LOS B in the AM and PM peak hours which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. However, given that funding is not available for the required improvements, the impact to the EB SR 4 ramps and Willow Pass Road intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-2(a).

*WB SR 4 Ramps and Willow Pass Road (Intersection #3)*

As shown above, Mitigation Measure 4.12-2(a) includes the following improvements to the WB SR 4 ramps and Willow Pass Road intersection: signalization; addition of a northbound left turn lane; restriping of the northbound shared through-left turn lane to be a through lane; and restriping of the westbound approach to be two westbound left turn lanes and a shared westbound through-right lane. The aforementioned improvement has been planned by the Capital Improvement Program for the 2015 Update to the Contra Costa CMP (Project 1028), although funding sources have not yet been identified, and a timeframe for the improvement has not been established. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(a) would improve the operations at the WB SR 4 ramps and Willow Pass Road intersection to LOS E in the AM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. Although the intersection would operate better than without the proposed project, funding is not available for the required improvements. Therefore, the project impact to the WB SR 4 ramps and Willow Pass Road intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-2(a).

*W. Leland Road and San Marco Boulevard (Intersection #6)*

As shown above, Mitigation Measure 4.12-2(b) includes optimization of the intersection cycle length at the W. Leland Road and San Marco Boulevard intersection. The aforementioned improvement has been planned by the Pittsburg CIP (Project S-7) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(b) would improve the

operations at the W. Leland Road and San Marco Boulevard intersection to LOS C in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburgh. Therefore, implementation of Mitigation Measure 4.12-2(b) would reduce the impact to the W. Leland Road and San Marco Boulevard intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-2(b).

*Willow Pass Road and Loftus Road (Intersection #11)*

As shown above, Mitigation Measure 4.12-2(b) includes optimization of the intersection cycle length at the Willow Pass Road and Loftus Road intersection. The aforementioned improvement has been planned by the Pittsburgh CIP (Project S-7) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(b) would improve the operations at the Willow Pass Road and Loftus Road intersection to LOS D in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburgh. Therefore, implementation of Mitigation Measure 4.12-2(b) would reduce the impact to the Willow Pass Road and Loftus Road intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-2(b).

*W. Leland Road and Bailey Road (Intersection #18)*

As shown above, Mitigation Measure 4.12-2(b) includes optimization of the intersection cycle length at the W. Leland Road and Bailey Road intersection. The aforementioned improvement has been planned by the Pittsburgh CIP (Project S-7) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(b) would improve the operations at the W. Leland Road and Bailey Road intersection to LOS F in the AM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburgh. However, the intersection would operate better than without the proposed project. Therefore, implementation of Mitigation Measure 4.12-2(b) would reduce the project impact to the W. Leland Road and Bailey Road intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-2(b).

*W. Leland Road and Chestnut Drive (Intersection #23)*

As shown above, Mitigation Measure 4.12-2(c) includes conversion of the westbound left turn and eastbound left turn movements from protected left turn phasing to permitted left turn phasing at the W. Leland Road and Chestnut Drive intersection. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(c) would improve the operations at the W. Leland Road and Chestnut Drive intersection; however, the intersection would

continue to operate at LOS F in the AM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburgh. Nonetheless, the intersection would operate better than without the proposed project. Therefore, implementation of Mitigation Measure 4.12-2(c) would reduce the project impact to the W. Leland Road and Chestnut Drive intersection to a *less-than-significant* level. Because the intersection already operated at LOS F without the project, and the proposed mitigation improves the intersection operations to better than the without project conditions, the project shall be responsible for a proportionate share of the mitigation costs.

- Implement Mitigation Measure 4.12-2(c).

*W. Leland Road and Jacqueline Drive (Intersection #24)*

As shown above, Mitigation Measure 4.12-2(b) includes optimization of the intersection cycle length at the W. Leland Road and Jacqueline Drive intersection. The aforementioned improvement has been planned by the Pittsburgh CIP (Project S-7) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(b) would improve the operations at the W. Leland Road and Jacqueline Drive intersection to LOS D in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburgh. Therefore, implementation of Mitigation Measure 4.12-2(b) would reduce the impact to the W. Leland Road and Jacqueline Drive intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-2(b).

*W. Leland Road and Crestview Drive (Intersection #29)*

As shown above, Mitigation Measure 4.12-2(b) includes optimization of the intersection cycle length at the W. Leland Road and Crestview Drive intersection. The aforementioned improvement has been planned by the Pittsburgh CIP (Project S-7) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(b) would improve the operations at the W. Leland Road and Crestview Drive intersection; however, the intersection would continue to operate at LOS F in the AM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. Nonetheless, the intersection would operate better than without the proposed project. Therefore, implementation of Mitigation Measure 4.12-2(b) would reduce the project impact to the W. Leland Road and Crestview Drive intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-2(b).

*Concord Boulevard and Bailey Road (Intersection #35)*

As shown above, Mitigation Measure 4.12-2(d) includes the following improvements to the Concord Boulevard and Bailey Road intersection: widening of the southbound approach and restriping to include a southbound left turn lane, a southbound through lane, and a southbound right turn lane; and restriping of the northbound approach to be a northbound left turn lane and a shared through-right turn lane. The aforementioned improvement has been planned by the Concord CIP (Project 2049) with funding from traffic mitigation fees, grant funds, and Concord-owned ROW. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(d) would improve the operations at the Concord Boulevard and Bailey Road intersection to LOS E in the AM and PM peak hours, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. During the PM peak hour, the delay would operate better than without the proposed project. However, during the AM peak hour, the delay would continue to be substantially worse with the inclusion of project-generated traffic. As such, the impact to the Concord Boulevard and Bailey Road intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-2(d).

*Bailey Road and Myrtle Drive (Intersection #36)*

As shown above, Mitigation Measure 4.12-2(d) includes the following improvements to the Bailey Road and Myrtle Drive intersection: signalization; addition of a southbound left turn lane; and restriping of the shared southbound through-left lane to be a through lane. The aforementioned improvement has been planned by the Concord CIP (Project 2049) with funding from traffic mitigation fees, grant funds, and Concord-owned ROW. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(d) would improve the operations at the Bailey Road and Myrtle Drive intersection to LOS B in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. However, given that a timeframe has not been established, completion of the proposed improvements prior to buildout of the project site cannot be guaranteed. As such, the impact to the Bailey Road and Myrtle Drive intersection would temporarily remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-2(d).

*Clayton Road and Treat Boulevard (Intersection #39)*

As shown above, Mitigation Measure 4.12-2(e) includes the following improvements to the Clayton Road and Treat Boulevard intersection: widening of the northbound approach to be two northbound left turn lanes, two northbound through lanes, and a northbound right turn lane; and changing of the northbound and southbound phases from split phasing to protected phasing. The aforementioned improvement has been planned by the Concord CIP (Project 2144), with funding from the Measure J bond, Proposition 111, and Measure C local funds. As shown in Table 4.12-13, implementation of

Mitigation Measure 4.12-2(e) would improve the operations at the Clayton Road and Treat Boulevard intersection to LOS D in the PM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. However, given that a timeframe has not been established, completion of the proposed improvements prior to buildout of the project cannot be guaranteed. Therefore, the impact to the Clayton Road and Treat Boulevard intersection would temporarily remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-2(e).

*Cowell Road and Treat Boulevard (Intersection #41)*

As shown above, Mitigation Measure 4.12-2(f) includes optimization of the intersection timing splits at the Cowell Road and Treat Boulevard intersection. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(f) would improve the operations at the Cowell Road and Treat Boulevard intersection to LOS E in the AM peak hour and LOS D in the PM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. However, the intersection would operate better than without the proposed project. Nonetheless, given that the Concord CIP does not include a city-wide timing update, the project impact to the Cowell Road and Treat Boulevard intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-2(f).

*Treat Boulevard and Oak Grove Road (Intersection #44)*

As shown above, Mitigation Measure 4.12-2(f) includes optimization of the intersection timing splits at the Treat Boulevard and Oak Grove Road intersection. As shown in Table 4.12-13, implementation of Mitigation Measure 4.12-2(f) would improve the operations at the Treat Boulevard and Oak Grove Road intersection to LOS E in the AM and PM peak hours, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. During the PM peak hour, the delay would operate better than without the proposed project. However, during the AM peak hour, the delay would continue to be substantially worse with the inclusion of project-generated traffic. In addition, the Concord CIP does not include a city-wide timing update. As such, even with implementation of Mitigation Measure 4.12-2(b), the impact to the Treat Boulevard and Oak Grove Road intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-2(f).

**4.12-3 Conflict with an applicable congestion management program, including, but not limited to, LOS standards, and travel demand measures, or other standards established by a county congestion management agency for designated roadways. Based on the analysis below, the impact would be *less than significant*.**

The Central and East County Routes of Regional Significance were evaluated based on the respective MTSO criteria, including DI, roadway average speed, roadway average stopped delay, LOS, V/C, and persons in vehicles in the HOV lane. A discussion regarding each MTSO criteria is provided below.

Delay Index

Table 4.12-15 summarizes the delay index for the Routes of Regional Significance in the study area. SR 4 in the East County operates at a DI of 1.1 or better for the Existing and Existing Plus Project Conditions, which meets the applicable DI criteria of 2.5 or better for that roadway. SR 4 in the Central County operates at a DI of 1.1 or better for the Existing and Existing Plus Project Conditions, which meets the applicable DI criteria of 1.0 or better for that roadway. SR 242 in the Central County operates at a DI of 1.0 or better for the Existing and Existing Plus Project Conditions, which meets the applicable DI criteria of 3.0 or better for that roadway. Therefore, all roadway facilities in Central and East County meet the MTSO DI criteria for the Existing and Existing Plus Project Conditions.

Other MTSCOs

Other MTSOs analyzed per the CCTA established criteria include average speed, average stopped delay, arterial LOS, V/C, and HOV usage. Table 4.12-16 summarizes the MTSOs for the Routes of Regional Significance in the Central County. As shown in Table 4.12-16, all of the study corridors in the Central County meet the MTSO criteria for the Existing and Existing Plus Project Condition.

HOV Lane Summary

Table 4.12-14 summarizes the persons using the HOV lane in the peak direction for the Existing Plus Project Condition. As shown in Table 4.12-14, the number of vehicles in the HOV lane would exceed the 600-vehicle utilization goal for each peak direction and scenario. Thus, the project would not conflict with the applicable HOV lane utilization standard.

Table 4.12-14 HOV Lane Summary – SR 4 – Existing Plus Project Conditions				
Scenario	Peak	Direction	Vehicles Using HOV Lane	Persons Using HOV Lane
Existing	AM	EB	1,755	3,608
	PM	WB	703	1,470
Existing Plus Project	AM	EB	1,823	3,747
	PM	WB	737	1,539
Source: Kimley-Horn and Associates, 2017.				



**Table 4.12-15  
Delay Index Summary – Existing Plus Project Conditions**

Roadway Segment	Distance (miles)	Uncongested Travel Time		Existing						Existing Plus Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		AM Peak	PM Peak	CTT	DI	CTT	DI	CTT	DI	CTT	DI	CTT	DI
East County													
EB SR 4	4.23	234.5	234.5	234.5	1.0	249.9	1.1	234.5	1.0	254.0	1.1		
WB SR 4	4.23	234.5	234.5	241.9	1.0	234.5	1.0	245.8	1.0	234.5	1.0		
Central County													
Eastbound SR 4	6.13	339.5	339.5	339.5	1.0	367.8	1.1	339.5	1.0	374.0	1.1		
Westbound SR 4	6.13	339.5	339.5	361.8	1.1	339.5	1.0	367.8	1.1	339.5	1.0		
Northbound SR 242	3.52	194.7	194.7	194.7	1.0	194.7	1.0	194.7	1.0	197.8	1.0		
Southbound SR 242	3.52	194.7	194.7	197.8	1.0	194.7	1.0	200.9	1.0	194.7	1.0		

*Note: CTT = Congested Travel Time, measured in seconds*

*Source: Kimley-Horn and Associates, 2015.*

Table 4.12-16 MTSO Summary – Existing Plus Project Conditions							
Corridor	Measure of Effectiveness	Direction	Threshold	Central County			
				AM Peak Hour	PM Peak Hour	Existing Plus Project AM Peak Hour	Existing Plus Project PM Peak Hour
Bailey Road	Average Speed (mph)	NB	None	18	18	18	13
		SB	None	21	20	22	20
	Average Stopped Delay	Concord Blvd	3.0	0.3	0.3	0.5	0.5
		Clayton Rd	3.0	0.2	0.2	0.3	0.2
	LOS	NB	None	D	D	D	E
		SB	None	C	C	C	C
Clayton Road	V/C	NB	None	0.19	0.53	0.22	0.60
		SB	None	0.55	0.41	0.63	0.45
	Average Speed (mph)	EB	15	30	29	30	29
		WB	15	31	29	29	28
	Average Stopped Delay	Bailey Rd	3.0	0.2	0.2	0.3	0.2
		Ygnacio Valley Rd	3.0	0.3	0.3	0.3	0.3
		Treat Blvd	3.0	0.3	0.4	0.3	0.4
	LOS	EB	None	B	B	B	B
		WB	None	B	B	B	B
	V/C	EB	None	0.24	0.68	0.25	0.68
Treat Boulevard		WB	None	0.68	0.35	0.75	0.35
	Average Speed (mph)	NB	None	27	28	26	27
		SN	None	26	28	25	28
	Average Stopped Delay	Clayton Rd	3.0	0.3	0.4	0.3	0.4
		Cowell Rd	5.0	0.5	0.5	0.5	0.6
		Oak Grove Rd	5.0	0.4	0.5	0.4	0.7
	LOS	NB	None	C	C	C	C
		SB	None	B	B	B	B
	V/C	NB	1.5	0.24	0.89	0.25	0.91
		SB	1.5	0.81	0.33	0.83	0.35

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Table 4.12-16 MTSO Summary – Existing Plus Project Conditions						
Corridor	Measure of Effectiveness	Direction	Threshold	Existing		Existing Plus Project
				AM Peak Hour	PM Peak Hour	AM Peak Hour
Ygnacio Valley Road	Average Speed (mph)	NB	None	18	3	3
		SB	None	16	29	29
	Average Stopped Delay	Clayton Rd	3.0	0.3	0.3	0.3
		NB	None	D	F	F
	LOS	SB	None	E	B	B
		NB	1.50	0.20	0.73	0.74
	V/C	SB	1.50	0.68	0.28	0.28

Source: Kimley-Horn and Associates, Inc., 2017.

## Conclusion

Based on the above analysis, all roadway facilities in Central and East County would continue to meet the MTSO criteria for Routes of Regional Significance. Therefore, the proposed project would have a *less-than-significant* impact to the Central and East County Routes of Regional Significance under the Existing Plus Project Condition and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policy (g), as discussed in Appendix J of this EIR.

## Mitigation Measure(s)

*None required.*

- 4.12-4 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Based on the analysis below, with adequate infrastructure to accommodate the increased demand on transit, bicycle, and pedestrian systems in the area and with implementation of mitigation, the impact would be *less than significant*.**

The proposed project's impact on local transit, bicycle, and pedestrian systems under the Existing Plus Project Condition is described below.

## Transit System

Residents would have the option of driving, walking, or bicycling; however, due to the remote nature of the project site, most residents would likely drive. Existing transit routes are not located adjacent to the proposed project entrances along San Marco Boulevard, Bailey Road, or Avila Road. However, the Pittsburg BART station is approximately two miles from the project entrances, and some residents would likely drive to BART and commute from this BART station.

According to the 2011-2015 U.S. Census, 10.5 percent of Pittsburg residents use transit to travel to work.<sup>4</sup> The nine percent typically represents the highest level of transit ridership during the day. However, transit routes providing access to the proposed project site do not exist, so residents are not anticipated to extensively use the transit facilities. The proposed project would not conflict with any transit plans or goals of the City or the CCTA, or interfere with any existing bus routes and would not remove or relocate any existing bus stops. Policy 7-P-29 of the Pittsburg General Plan requires options for future transit use preserved when designing improvements for roadways. In addition, the policy aims to ensure that developers provide bus turnouts and/or shelters, where appropriate, as part of projects. The Draft Master Plan does not include specific designs for transit facilities for the project do not exist at this time; however, upon future submittal of a

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<sup>4</sup> Kimley-Horn and Associates, Inc. *Traffic Impact Study, Faria Annexation, Pittsburg, CA* [pg. 49]. November 2017.

Tentative Subdivision Map, the City's Design Review process would ensure that adequate transit infrastructure is provided consistent with City policies.

### Bicycle and Pedestrian System

The proposed project would generate additional pedestrian and bicycle traffic in the area, thereby potentially increasing conflicts between vehicles, bicycles, and pedestrians. Sidewalks currently exist on San Marco Boulevard near the proposed project entrance, which would provide pedestrian connectivity to the adjacent land uses along San Marco Boulevard. Pedestrian facilities do not exist along Avila Road, but few destinations for pedestrians exist along Avila Road. Along Bailey Road, near the proposed project entrance, pedestrian facilities do not exist; however, nearby destinations that pedestrians would want to access do not exist along Bailey Road.

Cyclists would be able to access the residential development using the proposed bike lanes along San Marco Boulevard between Rio Verde Circle and Bailey Road. A Class I bike path exists parallel to San Marco Boulevard from Rio Verde Circle to W. Leland Road. The aforementioned path provides connectivity to the existing bike lanes along W. Leland Road from San Marco Boulevard to Burton Avenue. Bicycle facilities at the other two proposed project entrances are not anticipated.

As discussed in Chapter 4.11, Public Services and Utilities, of this EIR regional trails provide opportunities for hiking, biking, and jogging along open space corridors throughout the region. The Delta De Anza Regional Trail is a paved multi-use hiking, bicycling and equestrian trail currently spanning over 15 miles of the planned 25-mile length, which is easily accessible from the project site. When completed, the Delta De Anza Regional Trail would generally follow the East Bay Municipal Utility District's corridor and the CCWD's canal. The trail intersects Bailey Road north of the project site, near the Bailey Road SR 4 overpass, approximately two miles away from the project site. The trail also connects the cities of Concord, Bay Point, Pittsburg, Antioch, and Oakley and provides access to Contra Loma Regional Park (and Black Diamond Mines Regional Preserve) through Antioch Community Park. The Delta De Anza Regional Trail and the Black Diamond Mines Regional Preserve are under the jurisdiction of the East Bay Regional Park District (EBRPD). It should be noted that the EBRPD has partnered with the City of Concord and the National Park Service to provide a new regional park in Concord on the former CNWS located to the west of the project site. The EBRPD has developed a Land Use Plan for the future regional park on the former CNWS, known as the Concord Hills Regional Park.

The Draft Master Plan does not include specific connections to the aforementioned trail systems; however, the Design Review Guidelines included in the Draft Master Plan require that future development prioritizes pedestrian circulation by developing linear parks, public trails, and/or trailheads to connect pedestrians to schools, commercial centers, parks, and other neighborhoods and local and regional open space areas, including those planned within the CNWS.

## Conclusion

The proposed project would generate an increase in population that would increase the demand on transit, bicycle, and pedestrian systems in the area. With implementation of existing General Plan policies, as well compliance with the Design Review Guidelines included in the Draft Master Plan, adequate infrastructure would be provided to accommodate the increased demand. However, if future development fails to incorporate the required facilities, a **significant** impact could occur.

## Mitigation Measure(s)

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

4.12-4(a) *As part of any future development applications, the project applicant shall demonstrate that the project would include bus turnouts, including shelters and bicycle racks, where appropriate. The turnouts, shelters, and bicycle racks shall be constructed with the roadway improvements consistent with General Plan Policy 7-P-29. The final location and design of the turnouts, shelters, and bicycle racks shall be submitted to the City Engineer for review and approval prior to approval of a future tentative subdivision map.*

4.12-4(b) *As part of any future development applications, the project applicant shall demonstrate that the project would provide linkages to nearby pedestrian and bicycle facilities consistent with the Design Review Guidelines provided in the Draft Master Plan. The final location and design of the linkage shall be submitted to the City Engineer for review and approval prior to approval of a future tentative subdivision map.*

**4.12-5 Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition at a freeway segment under Existing Plus Project Conditions. Based on the analysis below, the impact would be *less-than-significant*.**

Traffic operations were evaluated at the study freeway segments under Existing Plus Project traffic conditions. Freeway segment volumes were calculated by adding the proposed project trips to the existing segment volumes. Table 4.12-17 shows the Existing Plus Project LOS results at the study freeway segments. As shown in the table, all study freeway segments would continue to meet established LOS standards under Existing Plus Project Conditions. As such, the proposed project would result in a ***less-than-significant*** impact to study freeway segments under Existing Plus Project Conditions.

## Mitigation Measure(s)

*None required.*

**Table 4.12-17  
Freeway Segment LOS – Existing Plus Project Conditions**

Freeway Section	Criteria LOS	Existing				Existing Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)
Northbound									
SR 242 between I 680 and Clayton Road	E	A	5.1	D	26.6	A	5.4	D	27.7
SR 242 between Clayton Road and Concord Avenue	E	A	4.1	C	21.1	A	4.4	C	22.1
SR 242 between Concord Avenue and Grant Street	E	A	4.5	C	22.9	A	4.7	C	23.7
SR 242 between Grant Street and Olivera Road	E	A	4.5	C	23.0	A	4.7	C	23.7
SR 242 between Olivera Road and SR 4	E	A	5.5	D	29.5	A	5.8	D	30.8
Southbound									
SR 242 between SR 4 and Olivera Road	F	D	30.3	B	16.8	D	31.8	B	17.4
SR 242 between Olivera Road and Grant Street	F	C	23.6	B	13.7	C	24.4	B	14.1
SR 242 between Grant Street and Concord Avenue	F	C	23.8	B	13.8	C	24.6	B	14.2
SR 242 between Concord Avenue and Clayton Road	F	C	21.7	B	12.7	C	22.7	B	13.2
SR 242 between Clayton Road and I 680	F	D	28.2	B	15.9	D	29.5	B	16.5
Eastbound									
SR 4 between I 680 and Solano Way	E	A	6.0	D	33.0	A	6.3	D	34.7
SR 4 between Solano Way and SR 242	E	A	5.9	D	32.2	A	6.2	D	34.0
SR 4 between SR 242 and Port Chicago Highway	F	A	2.8	B	15.6	A	3.1	B	16.6
SR 4 between Port Chicago Highway and Willow Pass Road	F	A	6.1	F	46.3	A	6.5	F	50.7
SR 4 between Willow Pass Road and San Marco Boulevard	F	A	6.0	D	27.7	A	6.4	D	29.2
SR 4 between San Marco Boulevard and Bailey Road	F	A	5.2	D	34.3	A	5.5	E	35.5
SR 4 between Bailey Road and Railroad Avenue	F	A	4.9	D	31.3	A	5.4	D	31.8
Westbound									
SR 4 between Railroad Avenue and Bailey Road	F	D	28.1	B	15.5	D	28.3	B	16.0

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Table 4.12-17 Freeway Segment LOS – Existing Plus Project Conditions									
Freeway Section	Criteria LOS	Existing			Existing Plus Project				
		AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour		
		LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)
SR 4 between Bailey Road and San Marco Boulevard	F	D	30.5	B	16.5	D	31.4	B	16.8
SR 4 between San Marco Boulevard and Willow Pass Road	F	C	25.2	C	18.9	D	26.4	C	19.6
SR 4 between Willow Pass Road and Port Chicago Highway	F	E	37.4	C	19.2	E	40.2	C	20.0
SR 4 between Port Chicago Highway and SR 242	F	B	14.9	A	8.7	B	15.9	A	9.3
SR 4 between SR 242 and Solano Way	E	E	35.2	C	18.6	E	37.3	C	19.2
SR 4 between Solano Way and I 680	E	E	36	C	18.8	E	38.2	C	19.4
Notes:									
<sup>1</sup> pcpmpl = passenger cars per mile per lane.									
Source: Kimley-Horn and Associates, 2017.									



**4.12-6 Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition at a freeway ramp under Existing Plus Project Conditions. Based on the analysis below, the impact would be *less than significant*.**

Traffic operations were evaluated at the study freeway ramps under Existing Plus Project traffic conditions. Ramp volumes were calculated by adding the proposed project trips to the existing ramp volumes. Table 4.12-18 shows the peak hour LOS and density for each freeway ramp in the study area.

As shown in the table, all study freeway ramps would continue to meet established LOS standards under Existing Plus Project Conditions. As such, the proposed project would result in a *less-than-significant* impact to study freeway ramps under Existing Plus Project Conditions.

Mitigation Measure(s)  
*None required.*

**4.12-7 Result in an internal circulation system design that does not meet City standards, substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), or result in inadequate emergency access. Based on the analysis below, the impact would be *less than significant*.**

The proposed project is in the program-level general plan and zoning stage and does not have a detailed site plan. Therefore, on-site circulation and access evaluation would be speculative.

However, three access points exist for the project that would connect to existing streets: along San Marco Boulevard, along Bailey Road, and along Santa Teresa Drive to W. Leland Road in the future. The access along Bailey Road would be a signalized intersection with full access. The access along San Marco Boulevard connects to the existing dead end just south of Rio Verde Circle. The operations of the signalized intersections are discussed in the intersection LOS sections for each scenario.

It should be noted that the Draft Master Plan includes Design Review Guidelines derived from existing General Plan Policies. The Design Review Guidelines provide specific standards related to circulation systems within the Draft Master Plan Area. Upon annexation of the proposed project site into the City of Pittsburg, the project applicant would be required to submit a Tentative Subdivision Map and detailed plans for Design Review approval to the City of Pittsburg. Design Review of future development, consistent with Chapter 18.36 of the City's Municipal Code, would ensure that future development occurring within the project site would comply with the proposed Design Review Guidelines.

Table 4.12-18 Freeway Ramp LOS – Existing Plus Project Conditions									
Freeway Section	Criteria LOS	Existing			Existing Plus Project				
		AM Peak Hour		PM Peak Hour	AM Peak Hour		PM Peak Hour		
		LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)		
Eastbound SR 4									
Willow Pass Road Off-Ramp	F	A	5.2	F	A	5.7	F		37.6
Willow Pass Road On-Ramp	F	A	9.0	F	B	17.2	F		47.0
San Marco Boulevard Off-Ramp	F	A	8.6	D	A	9.3	E		36.1
SB San Marco Boulevard Loop On-Ramp	F	A	8.0	D	A	8.1	D		29.6
NB San Marco Boulevard Diagonal On-Ramp	F	A	5.5	C	A	5.8	C		27.1
SB Bailey Road Diagonal Off-Ramp	F	A	5.1	C	A	5.5	C		26.5
NB Bailey Road Loop Off-Ramp	F	A	7.3	C	A	7.4	C		26.1
Bailey Road On-Ramp	F	B	11.6	E	B	11.3	E		35.5
Westbound SR 4									
NB Bailey Road Diagonal Off-Ramp	F	C	27.3	B	C	27.5	B		15.8
SB Bailey Road Loop Off-Ramp	F	C	25.1	B	C	22.8	C		20.6
Bailey Road On-Ramp	F	C	24.3	B	C	25.3	B		14.8
San Marco Boulevard Off-Ramp	F	D	28.2	B	D	28.7	B		16.8
NB San Marco Boulevard Loop On-Ramp	F	E	36.7	B	E	38.1	B		18.2
SB San Marco Boulevard Diagonal On-Ramp	F	F	45.4	B	F	45.7	B		16.7
Willow Pass Road Off-Ramp	F	C	27.3	B	D	28.6	B		17.4
Willow Pass Road On-Ramp	F	E	37.3	C	E	38.5	C		21.0
Notes:									
<sup>1</sup> pcpmpl = passenger cars per mile per lane.									
Source: Kimley-Horn and Associates, 2017.									

According to Section 18.36.100 of the Municipal Code, the purpose of the Design Review process is to avoid substandard development, ensure that improvements within residential neighborhoods maintain consistent standards of design, and ensure that development is consistent with criteria adopted under Section 18.36.120 of the City's Municipal Code.

With regard to emergency access, several factors determine whether a project has sufficient access for emergency vehicles, including the following:

- Number of access points (both public and emergency access only);
- Width of access points; and
- Width of internal roadways.

Based on the Contra Costa County Fire District Ordinance (503.1.2.1), the following guidance is provided for access to residential developments:

The minimum number of access roads serving residential development(s) shall be based upon the number of dwelling units served as follows:

- 1-25 units, one public or private access road.
- 26-150 units, one public or private access road and one emergency access road.
- 151+ units, a minimum of two public or private access roads.

Based on the above, the proposed project would result in an internal circulation system design that would meet City standards. However, given that the proposed project does not have a detailed site plan at this time, whether the project would increase hazards due to design features and the project's ability to provide adequate emergency access meeting the standards above cannot be verified. Therefore, the proposed project could result in inadequate emergency access, and a *significant* impact could occur.

Mitigation Measure(s)

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

- 4.12-7      *As part of any future development applications, the project applicant shall submit a circulation plan to the City identifying how many units would be constructed before implementation of the proposed secondary access point at Bailey Road. The circulation plan shall comply with all applicable Contra Costa County Fire District standards related to emergency access.*

## Cumulative Impacts and Mitigation Measures

As discussed above, the Long-Term (2035) Conditions at each of the study intersections are based on future year traffic forecasts from the CCTA 2030 model. Future year corresponds with the approximate buildout of the Pittsburg General Plan and includes the addition of traffic from all

planned and approved projects anticipated in the region. In addition, the Long-Term (2035) Conditions assume that the roadway improvements outlined in the Method of Analysis section above have been completed. Cumulative impacts of the proposed project on the transportation system are identified in this section. Each impact is followed by recommended mitigation measures to reduce the significance of identified impacts.

**4.12-8 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the study roadway intersections under Long-Term (2035) Plus Project Conditions. Based on the analysis below, because traffic generated by the proposed project would cause unacceptable LOS, increase delay, and increase traffic volumes by one percent or more at a number of intersections under Long-Term (2035) Plus Project Conditions, even with implementation of mitigation, the impact would remain *significant and unavoidable*.**

Table 4.12-19 summarizes the LOS results for Long-Term (2035) Conditions and Long-Term (2035) Plus Project Conditions for each of the project study intersections. Vehicle trips associated with buildout of the Draft Master Plan Area were added to the long-term traffic volumes for the Long-Term (2035) Plus Project Conditions.

As shown in the table, the proposed project would result in an increased delay at some of the study intersections. However, some of the intersections with an increased delay are anticipated to function unacceptably even without the project. For those intersections that would experience unacceptable operations without the project, a significant impact would occur if the project would contribute more than one percent of the volume to the intersection.

Per Table 4.12-19, traffic generated by buildout of the Draft Master Plan Area would result in significant impacts at the following study intersections under the Long-Term (2035) Plus Project Condition:

- Avila Road and Willow Pass Road: LOS F (AM peak hour);
- WB SR-4 Ramps and Willow Pass Road: LOS F (AM peak hour);
- Rio Verde Circle and San Marco Boulevard: LOS F (AM peak hour);
- W. Leland Road and San Marco Boulevard: LOS F (AM and PM peak hours);
- EB SR-4 Ramps and San Marco Boulevard: LOS E (AM peak hour);
- WB SR-4 Ramps and San Marco Boulevard: LOS E (AM peak hour);
- W. Leland Road and Southwood Drive: LOS F (AM peak hour);
- W. Leland Road and Bailey Road: LOS F (PM peak hour);
- W. Leland Road and Chestnut Drive: LOS F (AM peak hour);
- W. Leland Road and Jacqueline Drive: LOS F (AM peak hour);
- W. Leland Road and Range Road: LOS E (AM peak hour);
- W. Leland Road and Dover Way: LOS F (AM peak hour);
- W. Leland Road and Burton Avenue: LOS F (AM peak hour);
- W. Leland Road and Crestview Drive: LOS F (AM peak hour) and LOS E (PM peak hour);

**Table 4.12-19**  
**Intersection LOS – Long-Term (2035) Plus Project Conditions**

	Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	Long-Term (2035)				Long-Term (2035) Plus Project					
				AM Peak		PM Peak		AM Peak		PM Peak			
				LOS	Delay	LOS	Delay	LOS	Delay	Δ	LOS	Delay	Δ
1.	Avila Road/Willow Pass Road	Signal	E	C	30.0	4.5	F	C	30.0	4.5	F	121.7	17.1
2.	EB SR 4 Ramps/ Willow Pass Road	Signal	E	B	12.0	0.3	C	B	12.0	0.3	C	26.3	1.4
3.	WB SR 4 Ramps/ Willow Pass Road	Signal	E	F	343.6	B	15.9	F	358.2	14.6	B	16.6	0.7
4.	Rio Verde Circle/San Marco Boulevard	AWSC	E	D	32.3	A	9.2	F	67.4	35.1	B	13.8	4.6
5.	Santa Teresa Drive/San Marco Boulevard	Signal	E	C	34.5	B	18.5	D	46.6	12.1	B	18.3	-0.2
6.	W. Leland Road/San Marco Boulevard	Signal	D	F	91.6	F	143.1	F	98.8	7.2	F	147.0	3.9
7.	EB SR 4 Ramps/San Marco Boulevard	Signal	D	D	47.6	E	56.3	E	62.3	14.7	E	78.6	22.3
8.	WB SR 4 Ramp/San Marco Boulevard	Signal	D	F	129.0	C	30.4	F	132.8	3.8	C	32.0	1.6
9.	Willow Pass Road/Port Chicago Highway	Signal	D	B	13.6	B	11.0	B	13.9	0.3	B	11.2	0.2
10.	Willow Pass Road/Bailey Road	Signal	D	F	146.6	F	110.6	F	146.9	0.3	F	111.6	1.0
11.	Willow Pass Road/Loftus Road	Signal	D	C	27.7	B	19.0	C	27.8	0.1	B	19.2	0.2
12.	EB Willow Pass Road/Range Road	SSSC	E	A	6.9	A	9.1	A	7.2	0.3	A	9.3	0.2
	Worst Approach			B	12.4	B	14.0	B	12.7	0.3	B	14.3	0.3
13.	WB Willow Pass Road/Range Road	SSSC	E	A	0.2	A	0.4	A	0.2	0.0	A	0.4	0.0
	Worst Approach			A	0.6	A	0.6	A	0.6	0.0	A	0.7	0.1

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**Table 4.12-19**  
**Intersection LOS – Long-Term (2035) Plus Project Conditions**

	Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	Long-Term (2035)				Long-Term (2035) Plus Project					
				AM Peak		PM Peak		AM Peak		PM Peak			
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay		
14.	Willow Pass Road/Railroad Avenue	Signal	D	E	58.0	C	31.4	E	58.2	0.2	C	31.9	0.5
15.	W. Leland Road/Alves Ranch Road	Signal	D	C	32.5	C	22.0	C	32.7	0.2	C	22.1	0.1
16.	W. Leland Road/Woodhill Drive	Signal	D	B	13.5	B	12.1	B	13.6	0.1	B	12.2	0.1
17.	W. Leland Road/Southwood Drive	Signal	D	F	92.9	D	47.0	F	96.2	3.3	D	47.9	0.9
18.	W. Leland Road/Bailey Road	Signal	D	F	165.8	E	66.8	F	174.8	9.0	F	104.0	37.2
19.	Maylard Street/Bailey Road	Signal	E	C	21.8	C	26.2	C	21.4	-0.4	C	26.5	0.3
20.	EB SR 4 Ramps/Bailey Road	Signal	E	C	24.9	D	41.6	C	24.6	-0.3	E	55.2	13.6
21.	WB SR 4 Ramp/Bailey Road	Signal	E	D	48.2	C	23.0	D	53.9	5.7	C	24.3	1.3
22.	Canal Road/Bailey Road	Signal	E	C	32.2	B	12.8	C	32.3	0.1	B	13.1	0.3
23.	W. Leland Road/Chestnut Drive	Signal	D	F	230.4	C	25.9	F	232.3	1.9	C	28.1	2.2
24.	W. Leland Road/Jacqueline Drive	Signal	D	F	179.7	C	27.6	F	182.1	2.4	C	27.3	-0.3
25.	W. Leland Road/Montevideo Drive	Signal	D	B	11.3	A	5.3	B	11.9	0.6	A	5.4	0.1
26.	W. Leland Road/Range Road	Signal	D	E	70.0	C	33.8	E	72.4	2.4	C	33.5	-0.3
27.	W. Leland Road/Dover Way	Signal	D	F	83.8	C	25.8	F	87.3	3.5	C	25.0	-0.8
28.	W. Leland Road/Burton Avenue	Signal	D	F	95.7	C	30.0	F	115.5	19.8	C	31.9	1.9

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**Table 4.12-19  
Intersection LOS – Long-Term (2035) Plus Project Conditions**

	Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	Long-Term (2035)				Long-Term (2035) Plus Project					
				AM Peak		PM Peak		AM Peak		PM Peak			
				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay		
									Δ		Δ		
29.	W. Leland Road/Crestview Drive	Signal	D	F	202.7	E	60.2	F	208.3	5.6	E	64.0	3.8
30.	W. Leland Road/Railroad Avenue	Signal	D	F	183.8	F	172.8	F	165.7	-18.1	F	171.2	-1.6
31.	EB SR 4 Ramps/Railroad Avenue	Signal	D	C	27.6	F	94.8	C	27.9	0.3	F	94.7	-0.1
32.	WB SR 4 Ramp/Railroad Avenue	Signal	D	D	41.9	D	35.5	D	41.9	0.0	D	35.4	-0.1
33.	Willow Pass Road/Olivera Road	Signal	D	D	51.0	E	67.7	D	53.5	2.5	E	71.2	3.5
34.	Concord Boulevard/Farm Bureau Road	Signal	D	D	47.4	D	36.1	D	49.6	2.2	D	37.3	1.2
35.	Concord Boulevard/Bailey Road	Signal	D	F	204.7	F	120.8	F	251.4	46.7	F	157.5	36.7
36.	Bailey Road/Myrtle Drive	SSSC	E	A	4.3	F	281.4	F	231.8	227.5	F	379.8	98.4
				B	10.4	F	1096.4	F	6,648.8	6,638.4	F	1,630.1	533.7
37.	Clayton Road/Babel Lane	Signal	D	C	31.1	C	31.3	C	31.2	0.1	C	31.6	0.3
38.	Clayton Road/Farm Bureau Road	Signal	D	F	90.1	F	87.3	F	92.1	2.0	F	86.8	-0.5
39.	Clayton Road/Treat Boulevard	Signal	D	F	83.5	F	102.2	F	89.0	5.5	F	122.7	20.5
40.	Clayton Road/Bailey Road	Signal	D	F	198.6	C	33.5	F	229.4	30.8	C	34.5	1.0
41.	Cowell Road/Treat Boulevard	Signal	D	F	89.8	F	124.5	F	96.0	6.2	F	129.0	4.5

**Table 4.12-19**  
**Intersection LOS – Long-Term (2035) Plus Project Conditions**

Intersection	Intersection Control <sup>1</sup>	Delay Criteria <sup>2</sup>	Long-Term (2035)				Long-Term (2035) Plus Project					
			AM Peak		PM Peak		AM Peak			PM Peak		
			LOS	Delay	LOS	Delay	LOS	Delay	Δ	LOS	Delay	Δ
42. W. Leland Road/Santa Teresa Drive	Signal	D	A	9.2	A	7.1	B	12.2	3.0	A	8.1	1.0
43. Bailey Road/Project Entrance	Signal	D	B	16.3	A	5.9	F	129.4	113.1	B	16.6	10.7
44. Treat Boulevard/Oak Grove Road	Signal	D	F	237.7	F	272.5	F	237.9	0.2	F	276.6	4.1
45. Willow Pass Road/Diamond Boulevard	Signal	D	B	18.0	D	41.1	B	17.9	-0.1	D	41.2	0.1
46. Willow Pass Road/Market Street	Signal	D	D	40.6	D	49.5	D	40.7	0.1	D	49.8	0.3
47. Willow Pass Road/Galindo Street	Signal	E	D	54.7	F	111.7	D	54.4	-0.3	F	111.8	0.1
48. Concord Boulevard/Port Chicago Highway	Signal	E	F	130.0	C	23.1	F	147.8	17.8	C	24.2	1.1
49. Kirker Pass Road/Oakhurst Drive/Concord Boulevard	Signal	E	F	699.3	F	336.6	F	693.9	-5.4	F	334.5	-2.1
50. Ygnacio Valley Road/Clayton Road	Signal	D	F	289.0	F	108.7	F	288.1	-0.9	F	110.2	1.5

Notes:

Intersections that are operating below acceptable levels are shown in **BOLD** and significant impacts are **SHADED**.

1. Each study intersection is controlled by a traffic signal, a side-street stop-control (SSSC), or an all-way stop-control (AWSC).

2. LOS criteria is based on seconds of delay.

Source: Kimley-Horn and Associates, 2017.



- Willow Pass Road and Olivera Road: LOS E (PM peak hour);
- Concord Boulevard and Bailey Road: LOS F (AM and PM peak hours);
- Bailey Road and Myrtle Drive: LOS F (AM and PM peak hours);
- Clayton Boulevard and Treat Boulevard: LOS F (AM and PM peak hours);
- Clayton Road and Bailey Road: LOS F (AM peak hour);
- Cowell Road and Treat Boulevard: LOS F (AM and PM peak hours);
- Bailey Road and Project Entrance: LOS F (AM peak hour);
- Treat Boulevard and Oak Grove Road: LOS F (AM and PM peak hours); and
- Concord Boulevard and Port Chicago Highway: LOS F (AM peak hour).

All other study intersections would either operate acceptably both with and without the proposed project, or would not experience an increase in traffic volumes by one percent or more, where the intersection would already operate unacceptably without the proposed project. Nonetheless, based on the above, the Draft Master Plan could conflict with applicable General Plan LOS thresholds, and a *significant* impact could occur.

Mitigation Measure(s)

Table 4.12-20 shows the study intersection LOS in the Long Term (2035) Plus Project Condition both with and without mitigation. With the exception of impacts to the following intersections, which would all remain *significant and unavoidable*, implementation of the following mitigation measures would reduce impacts to the remaining intersections to less-than-significant levels:

- Avila Road/Willow Pass Road (Intersection #1);
- WB SR4 Ramps/Willow Pass Road (Intersection #3);
- W. Leland Road/San Marco Boulevard (Intersection #6);
- Concord Boulevard and Bailey Road (Intersection #35);
- Bailey Road and Myrtle Drive (Intersection #36);
- Clayton Road and Treat Boulevard (Intersection #39);
- Cowell Road/Treat Boulevard (Intersection #41);
- Bailey Road/Project Entrance (Intersection #43);
- Treat Boulevard and Oak Grove Road (Intersection #44); and
- Concord Boulevard/Port Chicago Highway (Intersection #48).

A discussion of the mitigation measure(s) required for each impacted intersection, as well as a description of how the measures would reduce impacts at that intersection, is provided below, immediately following the list of mitigation measures.

4.12-8(a) *Prior to occupancy of the proposed buildings, the project applicant shall complete the following improvements at intersections within the City of Concord.*

- *The northbound approach at the Avila Road and Willow Pass Road intersection shall be restriped to include one through lane and one right turn lane; and*



Table 4.12-20 Intersection LOS – Long-Term (2035) Plus Project Conditions with Mitigation													
Intersection	Delay Criteria <sup>1</sup>	Long-Term (2035) Plus Project						Long-Term (2035) Plus Project (Mitigated)					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		LOS	Delay	Δ Delay	LOS	Delay	Δ Delay	LOS	Delay	Δ Delay	LOS	Delay	Δ Delay
1. Avila Road/Willow Pass Road	E	C	30.0	4.5	F	121.7	17.1				E	62.2	-42.4
2. EB SR 4 Ramps/ Willow Pass Road	E	B	12.0	0.3	C	26.3	1.4						
3. WB SR 4 Ramps/ Willow Pass Road	E	F	358.2	14.6	B	16.6	0.7	F	102.6	-241.0			
4. Rio Verde Circle/San Marco Boulevard	E	F	67.4	35.1	B	13.8	4.6	E	38.8	6.5			
5. Santa Teresa Drive/San Marco Boulevard	D	D	46.6	12.1	B	18.3	-0.2						
6. W. Leland Road/San Marco Boulevard	D	F	98.8	7.2	F	147.0	3.9	F	98.8	7.2	F	147.0	3.9
7. EB SR 4 Ramps/San Marco Boulevard	D	E	62.3	14.7	E	78.6	22.3	B	13.6	-34.0	C	23.9	-32.4
8. WB SR 4 Ramp/San Marco Boulevard	D	F	132.8	3.8	C	32.0	1.6						
9. Willow Pass Road/Port Chicago Highway	D	B	13.9	0.3	B	11.2	0.2						
10. Willow Pass Road/Bailey Road	D	F	146.9	0.3	F	111.6	1.0						
11. Willow Pass Road/Loftus Road	D	C	27.8	0.1	B	19.2	0.2						
12. EB Willow Pass Road/Range Road	E	A	7.2	0.3	A	9.3	0.2						
Worst Approach		B	12.7	0.3	B	14.3	0.3						
13. WB Willow Pass Road/Range Road	E	A	0.2	0.0	A	0.4	0.0						
Worst Approach		A	0.6	0.0	A	0.7	0.1						
14. Willow Pass Road/Railroad Avenue	D	E	58.2	0.2	C	31.9	0.5						
15. W. Leland Road/Alves Ranch Road	D	C	32.7	0.2	C	22.1	0.1						
16. W. Leland Road/Woodhill Drive	D	B	13.6	0.1	B	12.2	0.1						
17. W. Leland Road/Southwood Drive	D	F	96.2	3.3	D	47.9	0.9						
18. W. Leland Road/Bailey Road	E	F	174.8	9.0	F	104.0	37.2	F	145.1	-20.7	E	75.4	8.6
19. Maylard Street/Bailey Road	E	C	21.4	-0.4	C	26.5	0.3						
20. EB SR 4 Ramps/Bailey Road	E	C	24.6	-0.3	E	55.2	13.6						
21. WB SR 4 Ramp/Bailey Road	E	D	53.9	5.7	C	24.3	1.3						
22. Canal Road/Bailey Road	D	C	32.3	0.1	B	13.1	0.3						
23. W. Leland Road/Chestnut Drive	D	F	232.3	1.9	C	28.1	2.2	F	155.9	-74.5			
24. W. Leland Road/Jacqueline Drive	D	F	182.1	2.4	C	27.3	-0.3	F	147.8	-31.9			
25. W. Leland Road/Montevideo Drive	D	B	11.9	0.6	A	5.4	0.1						
26. W. Leland Road/Range Road	D	E	72.4	2.4	C	33.5	-0.3	E	64.8	-5.2			
27. W. Leland Road/Dover Way	D	F	87.3	3.5	C	25.0	-0.8	D	37.8	-46.0			
28. W. Leland Road/Burton Avenue	D	F	115.5	19.8	C	31.9	1.9	B	12.2	-83.5			
29. W. Leland Road/Crestview Drive	D	F	208.3	5.6	E	64.0	3.8	E	58.1	-144.6	C	23.9	-36.3
30. W. Leland Road/Railroad Avenue	D	F	165.7	-18.1	F	171.2	-1.6						
31. EB SR 4 Ramps/Railroad Avenue	D	C	27.9	0.3	F	94.7	-0.1						
32. WB SR 4 Ramp/Railroad Avenue	D	D	41.9	0.0	D	35.4	-0.1						
33. Willow Pass Road/Olivera Road	D	D	53.5	2.5	E	71.2	3.5						
34. Concord Boulevard/Farm Bureau Road	D	D	49.6	2.2	D	37.3	1.2						
35. Concord Boulevard/Bailey Road	D	F	251.4	46.7	F	157.5	36.7	F	177.8	-26.9	F	93.2	-27.6
36. Bailey Road/Myrtle Drive	E	F	231.8	227.5	F	379.8	98.4	F	92.4	88.1	F	159.7	-121.7
Worst Approach		F	6,648.8	6,638.4	F	1,630.1	533.7						
37. Clayton Road/Babel Lane	D	C	31.2	0.1	C	31.6	0.3						
38. Clayton Road/Farm Bureau Road	D	F	92.1	2.0	F	86.8	-0.5						

Table 4.12-20 Intersection LOS – Long-Term (2035) Plus Project Conditions with Mitigation													
Intersection	Delay Criteria <sup>1</sup>	Long-Term (2035) Plus Project						Long-Term (2035) Plus Project (Mitigated)					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		LOS	Delay	Δ Delay	LOS	Delay	Δ Delay	LOS	Delay	Δ Delay	LOS	Delay	Δ Delay
39. Clayton Road/Treat Boulevard	D	F	89.0	5.5	F	122.7	20.5	E	72.3	-11.2	F	99.7	-2.5
40. Clayton Road/Bailey Road	D	F	229.4	30.8	C	34.5	1.0	E	76.7	-121.9			
41. Cowell Road/Treat Boulevard	D	F	96.0	6.2	F	129.0	4.5	F	88.5	-1.3	F	93.7	-30.8
42. W. Leland Road/Santa Teresa Drive	D	B	12.2	3.0	A	8.1	1.0						
43. Bailey Road/Project Entrance	D	F	129.4	113.1	B	16.6	10.7	C	21.9	5.6			
44. Treat Boulevard/Oak Grove Road	D	F	237.9	0.2	F	276.6	4.1	F	157.5	-80.2	F	216.0	-56.5
45. Willow Pass Road/Diamond Boulevard	D	B	17.9	-0.1	D	41.2	0.1						
46. Willow Pass Road/Market Street	E	D	40.7	0.1	D	49.8	0.3						
47. Willow Pass Road/Galindo Street	E	D	54.4	-0.3	F	111.8	0.1						
48. Concord Boulevard/Port Chicago Highway	E	F	147.8	17.8	C	24.2	1.1	C	34.4	-95.6			
49. Kirker Pass Road/Oakhurst Drive/Concord Boulevard	D	F	693.9	-5.4	F	334.5	-2.1						
50. Ygnacio Valley Road/Clayton Road	D	F	288.1	-0.9	F	110.2	1.5						
Notes: Intersections that are operating below acceptable levels are shown in <b>BOLD</b> and significant impacts are <b>SHADED</b> . <sup>1</sup> LOS criteria is based on seconds of delay.  <i>Source: Kimley-Horn and Associates, 2017.</i>													

- *The intersection timing splits at the following intersections shall be optimized: Cowell Road and Treat Boulevard (Intersection #41); Treat Boulevard and Oak Grove Road (Intersection #44); and Concord Boulevard/Port Chicago Highway (Intersection #48).*

4.12-8(b) *As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Capital Improvement Program for the 2015 Update to the Contra Costa CMP (Project 1832). Such improvements would include, but would not necessarily be limited to, the following:*

- *The southbound right turn lane at the WB SR-4 Ramps and Willow Pass Road intersection shall be converted to a free right turn lane.*

*Or*

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

4.12-8(c) *As part of future development applications, the project improvement plans shall show that an eastbound left turn lane would be added to the Rio Verde Circle and San Marco Boulevard intersection. Implementation of the required improvements shall be accomplished by way of one of the following methods:*

*If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.*

*Or*

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

4.12-8(d) *As part of future development applications, the project improvement plans shall show that the eastbound approach of the EB SR 4 ramps and San Marco Boulevard intersection would be restriped to be an eastbound left turn lane, a shared left-through-right lane, and an eastbound right turn lane. Implementation of the required improvements shall be accomplished by way of one of the following methods:*

*If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.*

*Or*

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

- 4.12-8(e) *As part of future development applications, the project improvement plans shall show that one of the northbound through lanes at the WB SR-4 Ramps and San Marco Boulevard intersection would be converted to a northbound left turn lane. Implementation of the required improvements shall be accomplished by way of one of the following methods:*

*If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.*

*Or*

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

- 4.12-8(f) *As part of future development applications, the project improvement plans shall show that the northbound approach at the W. Leland Road and Southwood Drive Intersection would be restriped to be a northbound left turn lane and a northbound right turn lane. Implementation of the required improvements shall be accomplished by way of one of the following methods:*

*If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are*

*subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.*

*Or*

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

- 4.12-8(g) *As part of future development applications, the project improvement plans shall show that a northbound right turn lane at the W. Leland Road and Bailey Road intersection would be striped and the shared northbound through-right lane would be restriped to be through lane. In addition, the project improvement plans shall show that a southbound right turn overlap phase and a westbound right turn overlap phase would be implemented. Implementation of the required improvements shall be accomplished by way of one of the following methods:*

*If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.*

*Or*

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

- 4.12-8(h) *Implement Mitigation Measure 4.12-2(c)*

- 4.12-8(i) *As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP (Project S-16) to the City of Pittsburg Community Development Department. Such improvements would include conversion of the westbound left turn and eastbound left turn movements from protected left turn phasing to permitted left turn phasing at the W. Leland Road and Jacqueline Drive intersection. Proof of payment shall be submitted to the City of Pittsburg Community Development Department.*

- 4.12-8(j) *As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP*

*(Project S-16) to the City of Pittsburg Community Development Department. Such improvements would include optimization of timing splits at the following intersections:*

- *W. Leland Road and Range Road;*
- *W. Leland Road and Dover Way;*
- *W. Leland Road and Burton Avenue.*

*Proof of payment shall be submitted to the City of Pittsburg Community Development Department.*

- 4.12-8(k) *As part of future development applications, the project improvement plans shall show that the eastbound left turn phase and westbound left turn phase at the W. Leland and Crestview Drive intersection would be changed from protected to permitting phasing. Implementation of the required improvements shall be accomplished by way of one of the following methods:*

*If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.*

*Or*

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

- 4.12-8(l) *As part of future development applications, the project improvement plans shall show that the southbound approach at the Willow Pass Road and Olivera Road intersection would be restriped to be two southbound left turn lanes, a southbound through lane, and a shared southbound through-right turn lane. Implementation of the required improvements shall be accomplished by way of one of the following methods:*

*If the required improvements are not included in the Pittsburg CIP prior to issuance of building permits, the project shall be responsible for the construction of the improvements. The improvements shall be completed prior to occupancy of the proposed residences. If the improvements are subsequently included in an update to the Pittsburg CIP, the project applicant may be subject to fee credits.*



Or

*If, prior to issuance of building permits, the City's then-current CIP includes the needed improvements, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP to the City of Pittsburg Community Development Department.*

4.12-8(m) *Implement Mitigation Measure 4.12-2(d).*

4.12-8(n) *Implement Mitigation Measure 4.12-2(e)*

4.12-8(o) *As part of future development applications, the project applicant shall pay the fair-share fee for the improvements planned in the Pittsburg CIP (Project ST-27) to the City of Pittsburg Community Development Department. Such improvements would include widening of Bailey Road from two lanes two four lanes. Proof of payment shall be submitted to the City of Pittsburg Community Development Department.*

*Avila Road and Willow Pass Road (Intersection #1)*

As shown above, Mitigation Measure 4.12-8(a) includes restriping of the northbound approach to include one through lane and one right turn lane at the Avila Road and Willow Pass Road intersection. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-8(a) would improve the operations at the Avila Road and Willow Pass Road intersection; however, the intersection would continue to operate at LOS F in the PM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord, although the intersection would operate better than without the proposed project. Nonetheless, because the intersection is located outside of the City of Pittsburg's jurisdiction, completion of the proposed improvements cannot be guaranteed. Therefore, the project impact to the Avila Road and Willow Pass Road intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(a).

*WB SR-4 Ramps and Willow Pass Road (Intersection #3)*

As shown above, Mitigation Measure 4.12-8(b) includes conversion of the southbound right turn lane at the WB SR-4 Ramps and Willow Pass Road intersection to a free right turn lane. The aforementioned improvement has been planned by the Capital Improvement Program for the 2015 Update to the Contra Costa CMP (Project 1832); however, funding sources have not yet been identified, and a timeframe for the improvement has not been established. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-8(b) would improve the operations at the Avila Road and Willow Pass Road intersection; however, the intersection would continue to operate at LOS F in the AM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. Although the intersection

would operate better than without the proposed project, given that funding is not available for the required improvements, the project impact to the WB SR-4 Ramps and Willow Pass Road intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(b).

*Rio Verde Circle and San Marco Boulevard (Intersection #4)*

As shown above, Mitigation Measure 4.12-8(c) includes addition of an eastbound left turn lane at the Rio Verde Circle and San Marco Boulevard intersection. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(c) would improve the operations at the Rio Verde Circle and San Marco Boulevard intersection to LOS E in the AM peak hour, which would meet the LOS requirement of LOS E or better for a signalized intersection in the City of Pittsburg. Therefore, implementation of Mitigation Measure 4.12-8(c) would reduce the impact to the Rio Verde Circle and San Marco Boulevard intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(c).

*W. Leland Road and San Marco Boulevard (Intersection #6)*

Feasible mitigation to reduce the impact at the W. Leland Road and San Marco Boulevard intersection does not exist without widening the approaches to the intersection. Given that areas directly adjacent to the right-of-way have been previously developed, existing properties adjacent to the intersection would need to be purchased, and the overlying structures demolished, in order to widen the right-of-way. In addition, widening of the intersection approaches could require relocation of storm drainage infrastructure and major utilities. Therefore, widening of the approaches is not possible. As such, the impact would remain *significant and unavoidable*.

*EB SR 4 Ramps and San Marco Boulevard (Intersection #7)*

As presented above, Mitigation Measure 4.12-8(d) includes the following improvements to the EB SR 4 ramps and San Marco Boulevard intersection: restriping of the eastbound approach to include an eastbound left turn lane; a shared left-through-right lane; and an eastbound right turn lane. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-8(d) would improve the operations at the EB SR 4 ramps and San Marco Boulevard intersection to LOS B in the AM peak hour and LOS C in the PM peak hour, which would meet the LOS requirement of LOS E or better for a signalized intersection in the City of Pittsburg. Therefore, implementation of Mitigation Measure 4.12-8(d) would reduce the impact to the EB SR 4 ramps and San Marco Boulevard intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(d).

*WB SR 4 Ramps and San Marco Boulevard (Intersection #8)*

As presented above, Mitigation Measure 4.12-8(e) includes conversion of one of the northbound through lanes at the WB SR-4 Ramps and San Marco Boulevard intersection to a northbound left turn lane. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-8(e) would improve the operations at the WB SR 4 ramps and San Marco Boulevard intersection. However, the intersection would continue to operate at LOS F in the AM peak hour, which would not meet the LOS requirement of LOS E or better for a signalized intersection in the City of Pittsburgh. Nonetheless, the intersection would operate better than without the proposed project. Therefore, implementation of Mitigation Measure 4.12-8(e) would reduce the project impact to the WB SR-4 Ramps and San Marco Boulevard intersection to a *less-than-significant* level.

*W. Leland Road and Southwood Drive (Intersection #17)*

As presented above, Mitigation Measure 4.12-8(f) includes the following improvements to the W. Leland Road and Southwood Drive intersection: restriping of the northbound approach to include a northbound left turn lane and a northbound right turn lane. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(f) would improve the operations at the intersection to LOS C in the AM peak hour, which would meet the LOS requirement of LOS E or better for a signalized intersection in the City of Pittsburgh. Therefore, implementation of Mitigation Measure 4.12-8(f) would reduce the impact to the W. Leland Road and Southwood Drive intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(f).

*W. Leland Road and Bailey Road (Intersection #18)*

As presented above, Mitigation Measure 4.12-8(g) includes the following improvements to the W. Leland Road and Bailey Road intersection: striping of a northbound right turn lane; restriping of the shared northbound through-right lane to be through lane; and addition of a southbound right turn overlap phase and a westbound right turn overlap phase. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(g) would improve the operations at the W. Leland Road and Bailey Road intersection; however, the intersection would continue to operate at LOS F in the AM peak hour, which would not meet the LOS requirement of LOS E or better for a signalized intersection in the City of Pittsburgh. Nonetheless, the intersection would operate better than without the proposed project. Therefore, implementation of Mitigation Measure 4.12-8(g) would reduce the project impact to the W. Leland Road and Bailey Road intersection to a *less-than-significant* level. It should be noted that other intersection improvements are already planned in the CIP for the 2015 Update to the Contra Costa CMP (Project 0914) for the intersection, although funding sources were not identified and a timeframe for the improvements was not established.

- Implement Mitigation Measure 4.12-8(g).

*W. Leland Road and Chestnut Drive (Intersection #23)*

As presented above, Mitigation Measure 4.12-8(h) includes the following improvement to the W. Leland Road and Chestnut Drive intersection: conversion of the westbound left turn and eastbound left turn movements from protected left turn phasing to permitted left turn phasing. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(h) would improve the operations at the W. Leland Road and Chestnut Drive intersection; however, the intersection would continue to operate at LOS F in the AM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburgh. Nonetheless, the intersection would operate better than without the proposed project. Therefore, implementation of Mitigation Measure 4.12-8(h) would reduce the project impact to the W. Leland Road and Chestnut Drive intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(h).

*W. Leland Road and Jacqueline Drive (Intersection #24)*

As presented above, Mitigation Measure 4.12-8(i) includes optimization of the intersection timing splits at the W. Leland Road and Jacqueline Drive intersection. The aforementioned improvement has been planned by the Pittsburgh CIP (Project S-7) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(i) would improve the operations at the W. Leland Road and Jacqueline Drive intersection; however, the intersection would continue to operate at LOS F in the AM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburgh. Nonetheless, the intersection would operate better than without the proposed project. Therefore, implementation of Mitigation Measure 4.12-8(i) would reduce the project impact to the W. Leland Road and Jacqueline Drive intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(i).

*W. Leland Road and Range Road (Intersection #26)*

As presented above, Mitigation Measure 4.12-8(j) includes optimization of the intersection timing splits at the W. Leland Road and Range Road intersection. The aforementioned improvement has been planned by the Pittsburgh CIP (Project S-16) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(j) would improve the operations at the at the W. Leland Road and Range Road intersection; however, the intersection would continue to operate at LOS E in the AM peak hour, which would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburgh. Nonetheless, the intersection would operate better than without the proposed project. Therefore, implementation of Mitigation Measure 4.12-8(j) would reduce the

project impact to the W. Leland Road and Range Road intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(j).

*W. Leland Road and Dover Way (Intersection #27)*

As presented above, Mitigation Measure 4.12-8(j) includes optimization of the intersection timing splits at the W. Leland Road and Dover Way intersection. The aforementioned improvement has been planned by the Pittsburg CIP (Project S-16) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(j) would improve the operations at the W. Leland Road and Dover Way intersection to LOS D in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburg. Therefore, implementation of Mitigation Measure 4.12-8(j) would reduce the impact to the W. Leland Road and Dover Way intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(j).

*W. Leland Road and Burton Avenue (Intersection #28)*

As presented above, Mitigation Measure 4.12-8(j) includes optimization of the intersection timing splits at the W. Leland Road and Burton Avenue intersection. The aforementioned improvement has been planned by the Pittsburg CIP (Project S-16) as a general Citywide on-going signal retiming project with funding from a gas tax. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(j) would improve the operations at the W. Leland Road and Burton Avenue intersection to LOS B in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburg. Therefore, implementation of Mitigation Measure 4.12-8(j) would reduce the impact to the W. Leland Road and Burton Avenue intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(j).

*W. Leland Road and Crestview Drive (Intersection #29)*

As presented above, Mitigation Measure 4.12-8(k) includes changing the eastbound left turn phase and westbound left turn phase at the W. Leland Road and Crestview Drive intersection from protected to permitting phasing. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(k) would improve the operations at the intersection to LOS E in the AM peak hour and LOS C in the PM peak hour, which would not meet the LOS requirement of LOS D or better during the AM peak hour for a signalized intersection in the City of Pittsburg. Nonetheless, the intersection would operate better than without the proposed project. Therefore, implementation of

Mitigation Measure 4.12-8(k) would reduce the project impact to the W. Leland Road and Crestview Drive intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(k).

*Willow Pass Road and Olivera Road (Intersection #33)*

As presented above, Mitigation Measure 4.12-8(l) includes the following improvements to the Willow Pass Road and Olivera Road intersection: restriping of the southbound approach to be two southbound left turn lanes; a southbound through lane; and a shared southbound through-right turn lane. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(l) would improve the operations at the Willow Pass Road and Olivera Road intersection to LOS D in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburg. Therefore, implementation of Mitigation Measure 4.12-8(l) would reduce the impact to the W. Leland Road and Crestview Drive intersection to a *less-than-significant* level.

- Implement Mitigation Measure 4.12-8(l).

*Concord Boulevard and Bailey Road (Intersection #35)*

As presented above, Mitigation Measure 4.12-8(m) includes the following improvements to the Concord Boulevard and Bailey Road intersection: widening of the southbound approach; restriping of the southbound approach to include a southbound left turn lane, a southbound through lane, and a southbound right turn lane; and widening of the northbound approach to be a northbound left turn lane and a shared through-right turn lane. The aforementioned improvements have been planned in the Concord CIP (Project 2049) with funding from traffic mitigation fees, grant funds, and Concord-owned ROW. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(m) would improve the operations at the Concord Boulevard and Bailey Road intersection to LOS E in the AM and PM peak hours. However, even with implementation of Mitigation Measure 4.12-8(m), the intersection would not meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord, and the delay would continue to be substantially worse with the inclusion of project-generated traffic. Therefore, the impact to the Concord Boulevard and Bailey Road intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(m).

*Bailey Road and Myrtle Drive (Intersection #36)*

As presented above, Mitigation Measure 4.12-8(m) includes the following improvements to the Bailey Road and Myrtle Drive intersection: signalization; addition of a southbound left turn lane; and restriping of the shared southbound through-left lane to be a through lane. The aforementioned improvements have been planned in the Concord CIP (Project 2049) with funding from traffic mitigation fees, grant funds, and Concord-owned ROW.

It should be noted that the intersection does not meet the peak hour traffic signal warrant in the Existing plus Project scenario (two vehicles less than the threshold on the minor street approach), but does meet the warrant in the Long-Term (2035) Plus Project Condition. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-8(m) would improve the operations at the Bailey Road and Myrtle Drive intersection to LOS B in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. However, given that a timeframe has not been established, completion of the proposed improvements prior to buildout of the project site cannot be guaranteed. Therefore, the impact to the Bailey Road and Myrtle Drive intersection would temporarily remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(m).

*Clayton Road and Treat Boulevard (Intersection #39)*

As presented above, Mitigation Measure 4.12-8(n) includes the following improvements to the Clayton Road and Treat Boulevard intersection: widening the northbound approach to include two northbound left turn lanes, two northbound through lanes, and a northbound right turn lane; and changing of the northbound and southbound phases should be changed from split phasing to protected phasing. The aforementioned improvement has been planned by the Concord CIP (Project 2144), with funding from the Measure J bond, Proposition 111, and Measure C local funds. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(n) would improve the operations at the Clayton Road and Treat Boulevard intersection to LOS B in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. However, given that a timeframe has not been established, completion of the proposed improvements prior to 2035 cannot be guaranteed. Therefore, the impact to the Clayton Road and Treat Boulevard intersection would temporarily remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(n).

*Cowell Road and Treat Boulevard (Intersection #41)*

As presented above, Mitigation Measure 4.12-8(a) includes optimization of the intersection timing splits at the Cowell Road and Treat Boulevard intersection. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-8(a) would improve the operations at the Cowell Road and Treat Boulevard intersection to LOS E in the AM peak hour and LOS D in the PM peak hour, which would not meet the LOS requirement of LOS D or better during the AM peak hour for a signalized intersection in the City of Concord. Nonetheless, the intersection would operate better than without the proposed project. Nonetheless, given that the Concord CIP does not include a city-wide timing update, the project impact to the Cowell Road and Treat Boulevard intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(a).

*Bailey Road and Project Entrance (Intersection #43)*

As presented above, Mitigation Measure 4.12-8(o) includes widening of Bailey Road from two lanes to four lanes. The aforementioned improvement has been planned by the Pittsburg CIP (Project ST-27), although a timeframe has not been established. While funding sources have not been identified, the improvements are eligible for Measure J funding. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-8(o) would improve the operations at the Bailey Road and Project Entrance intersection to LOS C in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Pittsburg. However, given that a timeframe has not been established, completion of the proposed improvements prior to buildout of the project site cannot be guaranteed. Therefore, the impact to the Bailey Road and Project Entrance intersection would temporarily remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(o).

*Treat Boulevard and Oak Grove Road (Intersection #44)*

As presented above, Mitigation Measure 4.12-8(a) includes optimization of the intersection timing splits at the Treat Boulevard and Oak Grove Road intersection. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(a) would improve the operations at the Treat Boulevard and Oak Grove Road intersection to LOS E in the AM and PM peak hours, which would not meet the LOS requirement of LOS D or better during the AM peak hour for a signalized intersection in the City of Concord. Although, the intersection would operate better than without the proposed project, the Concord CIP does not include a city-wide timing update. Thus, the project impact to the Treat Boulevard and Oak Grove Road intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(a).

*Concord Boulevard and Port Chicago Highway (Intersection #48)*

As presented above, Mitigation Measure 4.12-8(a) includes optimization of the intersection timing splits at the Concord Boulevard and Port Chicago Highway intersection. As shown in Table 4.12-20, implementation of Mitigation Measure 4.12-2(a) would improve the operations at the Concord Boulevard and Port Chicago Highway intersection to LOS C in the AM peak hour, which would meet the LOS requirement of LOS D or better for a signalized intersection in the City of Concord. However, the Concord CIP does not include a city-wide timing update. Therefore, the project impact to the Concord Boulevard and Port Chicago Highway intersection would remain *significant and unavoidable*.

- Implement Mitigation Measure 4.12-8(a).



**4.12-9 Impacts related to Central and East County Routes of Regional Significance under Long-Term (2035) Plus Project Conditions. Based on the analysis below, the impact would be *less than significant*.**

The Central and East County Routes of Regional Significance were evaluated based on the respective MTSO criteria, including DI, roadway average speed, roadway average stopped delay, LOS, V/C, and persons in vehicles in the HOV lane for the Long-Term (2035) Plus Project Condition. A discussion regarding each MTSO criteria is provided below.

Delay Index

As noted previously, the DI is defined as the ratio between the peak congested travel time and the uncongested travel time along a roadway facility. Table 4.12-21 summarizes the DI for the Routes of Regional Significance in the study area under the Long-Term (2035) Plus Project Condition. As shown in the table, SR 4 in the East County operates at a DI of 1.1 or better in the Long-Term (2035) Plus Project Condition, which meets the applicable DI criteria of 2.5 or better for that roadway. In addition, SR 4 in the Central County operates at a DI of 1.1 or in the Long-Term (2035) Plus Project Condition, which meets the applicable DI criteria of 5.0 or better for that roadway. Furthermore, SR 242 in the Central County operates at a DI of 1.0 or better in the Long-Term (2035) Plus Project Condition, which meets the applicable DI criteria of 3.0 or better for that roadway. Therefore, the DI for SR 4 and SR 242 would not significant increase as a result of the proposed project in the Long-Term (2035) Plus Project Condition.

Other MTSCOs

Other MTSCOs analyzed per the CCTA established criteria include average speed, average stopped delay, arterial LOS, V/C, and HOV usage. Table 4.12-22 summarizes the MTSCOs for the Routes of Regional Significance in the Central County.

As shown in the table, all of the study corridors in the Central County meet the MTSO criteria for the Long-Term (2035) Plus Project Condition.

HOV Lane Summary

Table 4.12-23 summarizes the persons using the HOV lane in the peak direction for the Long-Term (2035) Plus Project Condition. As shown in the table, the number of vehicles in the HOV lane would exceed the 600-vehicle utilization goal for each peak direction with the project. Thus, the project would not conflict with the applicable HOV lane utilization standard.

Table 4.12-21 Delay Index Summary – Long-Term (2035) Plus Project Conditions											
Roadway Segment	Distance (miles)	Uncongested Travel Time		Long-Term (2035)				Long-Term (2035) Plus Project			
		AM Peak	PM Peak	AM Peak Hour	DI	CTT	PM Peak Hour	AM Peak Hour	DI	CTT	PM Peak Hour
		East County									
EB SR 4	4.23	234.5	234.5	234.5	1.0	262.8	1.1	234.5	1.0	262.8	1.1
WB SR 4	4.23	234.5	234.5	258.3	1.1	234.5	1.0	258.3	1.1	234.5	1.0
Central County											
Eastbound SR 4	6.13	339.5	339.5	339.5	1.0	374.0	1.1	339.5	1.0	380.5	1.1
Westbound SR 4	6.13	339.5	339.5	424.4	1.3	339.5	1.0	441.4	1.3	339.5	1.0
Northbound SR 242	3.52	194.7	194.7	194.7	1.0	200.9	1.0	194.7	1.0	204.2	1.0
Southbound SR 242	3.52	194.7	194.7	204.2	1.0	194.7	1.0	207.5	1.1	194.7	1.0
Note: CTT = Congested Travel Time, measured in seconds.											
Source: Kimley-Horn and Associates, 2017.											

Table 4.12-22							
MTSO Summary – Long-Term (2035) Plus Project Conditions							
Corridor	Measure of Effectiveness	Direction	Threshold	Long-Term (2035)			
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Central County							
Bailey Road	Average Speed (mph)	NB	None	18	15	17	12
		SB	None	22	20	22	20
	Average Stopped Delay	Concord Blvd	3.0	1.2	0.8	1.7	1.0
		Clayton Rd	3.0	1.4	0.2	1.6	0.2
	LOS	NB	None	D	D	D	E
		SB	None	C	C	C	C
	V/C	NB	None	0.20	0.55	0.23	0.62
		SB	None	1.10	0.45	1.18	0.49
	Average Speed (mph)	EB	15	30	28	30	28
		WB	15	22	27	22	27
	Average Stopped Delay	Bailey Rd	3.0	1.4	0.2	1.6	0.2
		Ygnacio Valley Rd	3.0	1.9	0.7	1.9	0.7
Clayton Road		Treat Blvd	3.0	0.6	0.7	0.6	0.9
	LOS	EB	None	B	B	B	B
		WB	None	D	B	D	C
	V/C	EB	None	0.29	0.82	0.30	0.83
		WB	None	0.75	0.45	0.76	0.45
	Average Speed (mph)	NB	None	27	22	27	21
Treat Boulevard		SN	None	23	27	21	26
	Average Stopped Delay	Clayton Rd	3.0	0.6	0.7	0.6	0.9
		Cowell Rd	5.0	0.6	0.9	0.6	0.9
		Oak Grove Rd	5.0	1.6	1.9	1.6	2.0
	LOS	NB	None	C	D	C	D
		SB	None	C	B	C	B
	V/C	NB	1.5	0.42	1.01	0.43	1.04
		SB	1.5	0.89	0.59	0.91	0.60

Table 4.12-22 MTSO Summary – Long-Term (2035) Plus Project Conditions							
Corridor	Measure of Effectiveness	Direction	Threshold	Long-Term (2035)		Long-Term (2035) Plus Project	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Ygnacio Valley Road	Average Speed (mph)	NB	None	17	3	17	3
		SB	None	14	23	14	23
	Average Stopped Delay	Clayton Rd	3.0	1.9	0.7	1.9	0.7
		LOS	NB	None	D	F	D
	SB		None	E	C	E	C
	V/C	NB	1.50	0.30	0.91	0.30	0.92
		SB	1.50	0.82	0.39	0.83	0.40
	Source: Kimley-Horn and Associates, Inc., 2017.						

Table 4.12-23 HOV Lane Summary – SR 4 – Long-Term (2035) Plus Project Conditions				
Scenario	Peak	Direction	Vehicles Using HOV Lane	Persons Using HOV Lane
Existing	AM	EB	2,001	4,109
	PM	WB	1,612	3,328
Existing Plus Project	AM	EB	2,001	4,109
	PM	WB	1,646	3,397
Source: Kimley-Horn and Associates, 2017.				

## Conclusion

Based on the above analysis, all roadway facilities in Central and East County would continue to meet the MTSO criteria for Routes of Regional Significance. Therefore, the proposed project would have a *less-than-significant* impact to the Central and East County Routes of Regional Significance under the Long-Term (2035) Plus Project Condition and would be consistent with the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 and Contra Costa County Local Agency Formation Commission Policy (g), as discussed in Appendix J of this EIR.

## Mitigation Measure(s)

*None required.*

- 4.12-10 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities under Long-Term (2035) Plus Project Conditions. Based on the analysis below, with adequate infrastructure to accommodate the increased demand on transit, bicycle, and pedestrian systems in the area and with implementation of mitigation, the impact would be *less than significant*.**

As noted above, the proposed project is expected to generate an increase in demand for alternative transportation facilities, in combination with other proposed and pending projects in the area, the cumulative increase in demand for such facilities could cause potentially significant impacts to the transit, bicycle, and pedestrian systems. With implementation of existing General Plan policies, as well compliance with the Design Review Guidelines included in the Draft Master Plan, adequate infrastructure would be provided to accommodate the increased demand. However, if future development fails to incorporate the required facilities, a *significant* impact could occur.

## Mitigation Measure(s)

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

*4.12-10 Implement Mitigation Measures 4.12-6(a) and 4.12-6(b).*

- 4.12-11 Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition at a freeway segment under Long-Term (2035) Plus Project Conditions. Based on the analysis below, the impact would be *less than significant*.**

Traffic operations were evaluated at the study freeway segments under Long-Term (2035) Plus Project traffic conditions. Freeway volumes for the Long-Term (2035) Plus Project Condition were calculated by adding the proposed project trips to the Long-Term (2035) freeway volumes. Table 4.12-24 shows the peak hour LOS and density for each freeway section in the study area.

Table 4.12-24 Freeway Segment LOS – Long-Term (2035) Plus Project Conditions									
Freeway Section	Criteria LOS	Long-Term (2035)				Long-Term (2035) Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)
Northbound									
SR 242 between I 680 and Clayton Road	E	A	7.8	D	27.4	A	8.1	D	28.7
SR 242 between Clayton Road and Concord Avenue	E	A	9.2	C	23.4	A	9.6	C	24.4
SR 242 between Concord Avenue and Grant Street	E	A	8.1	C	25.1	A	8.4	C	25.9
SR 242 between Grant Street and Olivera Road	E	A	10.0	D	27.0	A	10.3	D	27.8
SR 242 between Olivera Road and SR 4	E	B	12.7	E	38.9	B	13.0	E	40.9
Southbound									
SR 242 between SR 4 and Olivera Road	F	E	39.1	C	23.6	E	41.3	C	24.2
SR 242 between Olivera Road and Grant Street	F	D	26.9	C	18.7	D	27.9	C	19.1
SR 242 between Grant Street and Concord Avenue	F	D	27.2	B	16.8	D	28.1	B	17.2
SR 242 between Concord Avenue and Clayton Road	F	C	24.0	B	15.0	C	25.1	B	15.6
SR 242 between Clayton Road and I 680	F	D	32.2	C	19.1	D	33.8	C	19.6
Eastbound									
SR 4 between I 680 and Solano Way	E	A	3.4	C	23.5	A	3.6	C	24.0
SR 4 between Solano Way and SR 242	E	A	2.9	C	21.1	A	3.1	C	21.6
SR 4 between SR 242 and Port Chicago Highway	F	A	2.6	C	18.2	A	2.9	C	24.0
SR 4 between Port Chicago Highway and Willow Pass Road	F	A	9.2	F	51.9	A	9.7	F	55.9
SR 4 between Willow Pass Road and San Marco Boulevard	F	A	8.5	E	37.1	A	8.9	E	39.3
SR 4 between San Marco Boulevard and Bailey Road	F	A	8.8	E	40.8	A	9.0	E	42.4
SR 4 between Bailey Road and Railroad Avenue	F	A	7.8	D	33.8	A	8.3	D	34.4
Westbound									
SR 4 between Railroad Avenue and Bailey Road	F	D	32.8	B	16.6	D	33.1	B	17.2
SR 4 between Bailey Road and San Marco Boulevard	F	E	38.6	B	17.9	E	40.3	C	18.3
SR 4 between San Marco Boulevard and Willow Pass Road	F	E	38.6	C	18.3	E	41.5	C	18.9

(Continued on next page)

Table 4.12-24 Freeway Segment LOS – Long-Term (2035) Plus Project Conditions									
Freeway Section	Criteria LOS	Long-Term (2035)				Long-Term (2035) Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)
SR 4 between Willow Pass Road and Port Chicago Highway	F	F	150.7	C	23.2	F	194.0	C	24.0
SR 4 between Port Chicago Highway and SR 242	F	C	24.6	A	9.4	C	25.7	A	10.0
SR 4 between SR 242 and Solano Way	E	D	29.4	B	11.7	D	30.1	B	12.0
SR 4 between Solano Way and I 680	E	B	17.8	B	12.3	C	18.3	B	12.6
Notes: Locations that are operating below acceptable levels are shown in <b>BOLD</b> and significant impacts are <b>SHADED</b> . <sup>1</sup> pcpmpl = passenger cars per mile per lane. Source: Kimley-Horn and Associates, 2017.									

Significant impacts for freeway segments occur when the project worsens the LOS from an acceptable LOS to an unacceptable LOS or if the freeway segment operates unacceptably without the project and the project increases the density. As shown in Table 4.12-24, all the freeway segments would operate at an acceptable LOS under Long-Term (2035) Plus Project Conditions. Therefore, impacts to study freeway segments under Long-Term (2035) Plus Project Conditions would be *less than significant*.

Mitigation Measure(s)

*None required.*

**4.12-12 Result in a projected future over-capacity freeway condition where current long-range planning studies show an under-capacity condition at a freeway ramp under Long-Term (2035) Plus Project Conditions. Based on the analysis below, the impact would be *less than significant*.**

Traffic operations were evaluated at the study freeway ramps under Long-Term (2035) Plus Project traffic conditions. Ramp volumes were calculated by adding the proposed project trips to the Long-Term (2035) ramp volumes. Table 4.12-25 shows the peak hour LOS and density for each freeway ramp in the study area. Significant impacts for freeway ramps occur when the project worsens the LOS from an acceptable LOS to an unacceptable LOS or if the freeway ramp operates unacceptably without the project and the project increases the density. As shown in Table 4.12-25, all the freeway ramps would operate at an acceptable LOS under Long-Term (2035) Plus Project Conditions. Therefore, impacts to study freeway ramps under Long-Term (2035) Plus Project Conditions would be *less than significant*.

Mitigation Measure(s)

*None required.*



Table 4.12-25 Freeway Ramp LOS – Long-Term (2035) Plus Project Conditions									
Freeway Section	Criteria LOS	Long-Term (2035)				Long-Term (2035) Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)	LOS	Density <sup>1</sup> (pcpmpl)
Eastbound SR 4									
Willow Pass Road Off-Ramp	F	A	8.3	F	39.7	A	8.8	F	41.0
Willow Pass Road On-Ramp	F	B	11.9	F	35.4	B	12.1	F	36.5
San Marco Boulevard Off-Ramp	F	B	16.1	F	42.6	B	16.5	F	44.2
SB San Marco Boulevard Loop On-Ramp	F	B	10.1	D	33.5	B	10.3	D	34.3
NB San Marco Boulevard Diagonal On-Ramp	F	A	9.8	D	30.6	B	10.2	D	31.4
SB Bailey Road Diagonal Off-Ramp	F	A	9.6	D	29.4	B	10.0	D	30.6
NB Bailey Road Loop Off-Ramp	F	B	10.3	C	26.5	B	10.4	C	26.5
Bailey Road On-Ramp	F	B	14.3	E	35.5	B	15.2	E	36.0
Westbound SR 4									
NB Bailey Road Diagonal Off-Ramp	F	D	29.8	B	16.9	D	30.0	B	17.4
SB Bailey Road Loop Off-Ramp	F	C	25.7	C	21.7	C	26.0	C	22.8
Bailey Road On-Ramp	F	E	36.3	B	16.5	E	37.3	B	17.2
San Marco Boulevard Off-Ramp	F	D	32.2	B	17.9	D	32.8	B	18.3
NB San Marco Boulevard Loop On-Ramp	F	E	36.1	C	23.4	E	37.7	C	24.1
SB San Marco Boulevard Diagonal On-Ramp	F	F	44.6	C	20.1	F	46.4	C	20.5
Willow Pass Road Off-Ramp	F	D	34.0	B	20.0	E	35.3	C	20.6
Willow Pass Road On-Ramp	F	F	56.9	C	23.2	F	59.9	C	24.1
Notes:									
Locations that are operating below acceptable levels are shown in <b>BOLD</b> and significant impacts are <b>SHADED</b> .									
<sup>1</sup> pcpmpl = passenger cars per mile per lane.									
Source: Kimley-Horn and Associates, 2017.									



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## 5. STATUTORILY REQUIRED SECTIONS

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## 5

## STATUTORILY REQUIRED SECTIONS

### 5.1 INTRODUCTION

The Statutorily Required Sections chapter of the Draft EIR includes brief discussions regarding those topics that are required to be included in an EIR, pursuant to *CEQA Guidelines*, Section 15126.2. The chapter includes a discussion of the proposed project's potential to induce economic or population growth. In addition, the chapter includes lists of significant irreversible environmental changes, cumulative impacts, and significant and unavoidable impacts caused by the proposed project.

### 5.2 GROWTH-INDUCING IMPACTS

An EIR must discuss the ways in which a proposed project could foster economic or population growth in the vicinity of the project and how that growth would, in turn, affect the surrounding environment (see *CEQA Guidelines*, Section 15126.2[d]). Growth can be induced in a number of ways, including through the elimination of obstacles to growth or through the stimulation of economic activity within the region. The discussion of the removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth unforeseen at the time of project approval.

A number of issues must be considered when assessing the growth-inducing effects of development plans, such as the proposed project, including the following:

**Elimination of Obstacles to Growth:** The extent to which infrastructure capacity provided to accommodate the proposed project would allow additional development in surrounding areas; and

**Economic Effects:** The extent to which development of the proposed project could cause increased activity in the local or regional economy.

Growth-inducing impacts associated with the proposed project would be considered to be any effects of the project allowing for additional growth or increases in population beyond that proposed by the project or anticipated in the Pittsburg General Plan.

The proposed project consists of annexation of approximately 606 acres into the City of Pittsburg City Limits, the Contra Costa Water District (CCWD) service area and the sanitation district Delta Diablo (DDSD) service area. In addition, the project includes reclassification of site from HPD (Hillside Planned Development) and OS (Open Space) rezoning districts to RS-4P and OS-P rezoning with a Master Plan overlay district. For purposes of this CEQA analysis, the maximum buildout for the proposed project site, per the proposed Draft Master Plan, is 1,500 single family units.

It should be noted that the proposed project site was one of multiple areas identified in the City of Pittsburgh 2005 voter-approved Urban Limit Line and Rezoning Act. The site, already incorporated into the City's Sphere of Influence, was rezoned for residential and open space uses. Thus, the type and intensity of the proposed development would be consistent with what has been previously anticipated for the site by the City.

Based on 3.2 persons per household,<sup>1</sup> buildout of the project site with 1,500 single-family units would result in a potential population growth of 4,800 new residents, which would directly induce population in the area. However, as the proposed project site is located within the City's Urban Limit Line and has been rezoned for residential and open space uses, the project site would likely be developed in the future. Furthermore, the proposed infrastructure has been properly sized and would not be designed to handle additional development adjacent to the project site.

A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services, would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth. The primary infrastructure systems installed as part of the proposed project, including roadways and wastewater, water, and storm drain systems, would be sized to meet demands created by the proposed project. It should be noted that utility lines currently exist in the project vicinity, and the proposed project would include connection to the existing lines.

The proposed project is surrounded by existing, currently approved, and/or planned development, including the San Marco Residential Subdivision and the Vista Del Mar Residential Subdivision to the north, Bailey Estates to the east, the Concord Naval Weapons Station to the west designated for open space and habitat protection, and the Keller Canyon Landfill located approximately one-half mile to the east. Because the surrounding areas are already planned for development, the proposed project would not remove impediments to further growth in the area.

Therefore, because the growth associated with the proposed project would be consistent with the type of development anticipated for the site by the 2005 voter-approved Urban Limit Line and Rezoning Act, the infrastructure required for the proposed project would be sized to meet the demands created solely by the project, and the surrounding areas are already approved for development, the proposed project would not be expected to generate any new growth-inducing impacts.

### 5.3 CUMULATIVE IMPACTS

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*CEQA Guidelines*, Section 15130 requires that an EIR discuss the cumulative and long-term effects of the proposed project that adversely affect the environment. "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (*CEQA Guidelines*, Section 15355). "[I]ndividual effects may be changes resulting from a single project or a number of separate

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<sup>1</sup> City of Pittsburgh. 2015 – 2023 *Housing Element*. May 4, 2015.

projects” (*CEQA Guidelines*, Section 15355, subd. [a]). “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (*CEQA Guidelines*, Section 15355, subd. [b]).

The need for cumulative impact assessment reflects the fact that, although a project may cause an “individually limited” or “individually minor” incremental impact that, by itself, is not significant, the increment may be “cumulatively considerable,” and, thus, significant, when viewed together with environmental changes anticipated from past, present, and probable future projects (*CEQA Guidelines*, Section 15064, subd. [h(1)], Section 15065, subd. [c], and Section 15355, subd. [b]). Accordingly, particular impacts may be less than significant on a project-specific basis but significant on a cumulative basis if their small incremental contribution, viewed against the larger backdrop, is cumulatively considerable. However, it should be noted that *CEQA Guidelines*, Section 15064, Subdivision (h)(5) states, “[...]the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.” Therefore, even where cumulative impacts are significant, any level of incremental contribution is not necessarily deemed cumulatively considerable.

Section 15130(b) of *CEQA Guidelines* indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, but that analysis should reflect the severity of the impacts and their likelihood of occurrence, and that the analysis should be focused, practical, and reasonable. To be adequate, a discussion of cumulative effects must include the following elements:

- (1) Either (a) a list of past, present and probable future projects, including, if necessary, those outside the agency’s control, or (b) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provide that such documents are reference and made available for public inspection at a specified location;
- (2) A summary of the individual projects’ environmental effects, with specific reference to additional information and stating where such information is available; and
- (3) A reasonable analysis of all of the relevant projects’ cumulative impacts, with an examination of reasonable, feasible options for mitigating or avoiding the project’s contribution to such effects (Section 15130[b]).

For some projects, the only feasible mitigation measures will involve the adoption of ordinances or regulations, rather than the imposition of conditions on a project-by-project basis (Section 15130[c]). Section 15130(a)(3) states that an EIR may determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund the project’s fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

## **Cumulative Setting**

The lead agency should define the relevant geographic area of inquiry for each impact category (id., Section 15130, subd. [b][3]), and should then identify the universe of “past, present, and probable future projects producing related or cumulative impacts” relevant to the various categories, either through the preparation of a “list” of such projects or through the use of “a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact” (id., subd. [b][1]).

The cumulative setting analyzed in this EIR includes implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Pittsburg General Plan, as well as development of the most recent planned land uses within the vicinity of the project area, including but not limited to, buildout of the following projects:

- San Marco residential subdivision – 2,938 single- and multi-family residential units;
- Vista Del Mar subdivision – 1,100 single- and multi-family residential units and approximately 257,500 square feet of commercial floor space;
- Concord Community Reuse Plan – Mixed use development and a 2,600-acre regional park; and
- Bailey Estates – 319 single-family residential units.

Cumulative impacts are analyzed in each of the technical chapters of this EIR (Chapters 4.1 through 4.12). Chapter 4.12, Transportation, Traffic, and Circulation, of this EIR, includes a list of future intersection and roadway improvements included in the cumulative traffic analysis.

## **5.4 ENERGY CONSERVATION**

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In order to ensure energy implications are considered in project decisions, Appendix F of CEQA Guidelines requires a discussion of the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

- (1) Decreasing overall per capita energy consumption;
- (2) Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- (3) Increasing reliance on renewable energy sources.

The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2016 California Green Building Standards Code, with which the proposed project would be required to comply, as well as discussions regarding the proposed project’s potential effects related to each form of energy supply during construction and operations is provided below.



## **California Green Building Standards Code**

The 2016 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), became effective January 1, 2017. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California.

### **Building Energy Efficiency Standards**

The 2016 Building Energy Efficiency Standards is a portion of the California Building Standards Code (CBSC), which expands upon energy efficiency measures from the 2013 Building Energy Efficiency Standards resulting in a 28 percent reduction in energy consumption from the 2013 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards would be achieved through various regulations including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high-performance attics and walls.

### **Construction Energy Use**

Appendix F of the CEQA Guidelines identifies several potential sources of energy conservation impacts, including the project's construction energy requirements and energy use efficiencies by amount and fuel type. Construction of the proposed project would result in a temporary increase in energy consumption in the area.

As discussed in Section 4.3, Air Quality and Greenhouse Gas Emissions, of this EIR, construction of the proposed project is conservatively assumed to commence in June 2018 and would occur over approximately five years. Even during the most intense year of construction, due to the different types of construction activities (e.g., demolition, site preparation, building construction), only portions of the site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated per the California Air Resources Board (CARB) In-Use Off-Road Diesel Vehicle Regulation, which includes measures to reduce emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements, imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. Project construction would also be required to implement all of the Basic Construction Mitigation Measures provided in the BAAQMD CEQA Guidelines, which include limits on idling times and requirements related to construction equipment maintenance and upkeep.

As a result, construction equipment operating at the project site would occur over a relatively short duration in comparison to the operational lifetime of the proposed project, and would operate intermittently over the construction period for the project. Furthermore, implementation of Mitigation Measure 4.3-1 would require that all off-road heavy-duty diesel-powered equipment larger than 100 horsepower (e.g., rubber tired dozers, excavators, graders, scrapers, pavers, paving

equipment, and cranes) to be used for each phase of construction of the project (i.e., owned, leased, and subcontractor vehicles) meet USEPA emissions standards for Tier 4 engines or equivalent.

The CARB is currently drafting an update to the State's Climate Change Scoping Plan (*The 2017 Climate Change Scoping Plan Update*),<sup>2</sup> which builds upon previous efforts to reduce greenhouse gas (GHG) emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment.

Nonetheless, buildout of the Draft Master Plan Area would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment. Construction activities would occur during normal daytime working hours, between 8:00 AM and 5:00 PM, as outlined in Section 18.82.040 of the Municipal Code.

#### Electricity Demand During Construction

Typically, at construction sites, electricity from the existing grid is used to power portable and temporary lights or office trailers. Because grid electricity would be utilized primarily for steady sources such as lighting, not sudden, intermittent sources such as welding or other hand-held tools, the increase in electricity usage at the site during construction would not be expected to cause any substantial peaks in demand. However, the base demand for electricity in the area would increase.

The proposed project is anticipated to be built out over multiple phases, one-by-one, where only portions of the project site would be developed at a time, with periods of non-construction between phases. Operation of construction equipment is regulated by federal, State, and local standards, including BAAQMD rules and regulations and the California Air Resources Board (CARB) In-Use Off-Road Diesel Vehicle Regulation. Overall, construction equipment operating at the project site would occur over a relatively short duration in comparison to the operational lifetime of the proposed project, and would operate intermittently over the construction period for the project. As the site develops, operational electricity demand would become the dominant demand source. Operational electricity demand would be much greater than construction, and is discussed in further detail below.

Based on the above, construction of the proposed project would not cause a permanent or substantial increase in demand that would exceed the demand projections or such that the existing

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<sup>2</sup> California Air Resources Board. *The 2017 Climate Change Scoping Plan Update*. January 20, 2017.

PG&E supplies or infrastructure could not handle the increase. Therefore, project construction would not result in any significant impacts on local or regional electricity supplies, the need for additional capacity, or on peak or base period electricity demands. As such, the temporary increase in electricity due to project construction activities would not be considered an inefficient, wasteful, and unnecessary consumption of energy, and significant adverse impacts on electricity resources would not occur.

### Oil Demand During Construction

Worker, delivery, and hauling vehicle trips would be generated during future construction of residential development within the Draft Master Plan Area. Worker vehicle trips are assumed to utilize gasoline, and delivery and hauling trucks are assumed to utilize diesel fuel. Diesel fuel would also be used to power the construction and off-road equipment necessary for construction activities, including rubber tired dozers, tractors, excavators, cranes, and other types of equipment. In addition, diesel-fueled portable generators may be used where electricity from the grid cannot be provided or for where more immediate electricity is needed such as for welding or other hand tools. Overall, construction equipment operating at the project site would occur over a relatively short duration in comparison to the operational lifetime of future residential homes within the Draft Master Plan Area and would be intermittent over the period of construction for the project. Operational oil demand would be much greater than construction oil demand, and is discussed further below.

A number of federal, State, and local standards and regulations exist that require improvements in vehicle efficiency, fuel economy, cleaner-burning engines, and emissions reductions. For example, as noted above, CARB has adopted the In-Use Off-Road Diesel Vehicle Regulation, which is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Any licensed contractor for the project and equipment would have to be in compliance with all applicable regulations, such as the in-use, off-road, heavy-duty vehicle regulation. Thus, the proposed project would comply with existing standards related to construction fuel efficiency. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and emissions associated with construction.

Overall, the temporary increase in gasoline and diesel consumption due to project construction activities would not be an inefficient, wasteful, and unnecessary consumption of energy, and significant adverse impacts on oil resources would not occur.

### Conclusion

Construction of the proposed project would result in a temporary increase in demand for energy resources. However, the temporary increase would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition,

the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand. As such, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, buildout of the Draft Master Plan Area would result in a less-than-significant impact on energy resources during construction.

### **Operational Energy Use**

In order to ensure energy implications are considered in project decisions, Appendix F of the CEQA Guidelines requires a discussion of the potential energy impacts of a project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F identifies several potential methods of evaluating a project's energy use, which are listed as follows and discussed in further detail below, with the exception of the project's construction-related energy requirements and energy use efficiencies, which are discussed above:

- The project's energy requirements and energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

### **Building Energy**

With the exception of two isolated single-family residences associated with existing on-site agricultural operations located near the terminus of San Marco Boulevard, the Draft Master Plan Area is currently vacant and undeveloped. Electricity and natural gas are currently provided to the project site by PG&E. In 2016, approximately 70 percent of PG&E's delivered electricity was derived from renewable energy and GHG-free energy sources such as non-emitting nuclear generation, hydroelectric facilities, wind power, natural gas, and various other sources.<sup>3</sup> In 2015, PG&E reported 9,391 million kilowatt-hours (kWh) of total electricity consumption,<sup>4</sup> and 1087.41 million (MM) therms of natural gas.<sup>5</sup> Approximately 2,797 kWh of electricity consumption and 153 million (MM) therms of natural gas consumption was associated with residential land uses.

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<sup>3</sup> Pacific Gas and Electric Company. *Delivering low-emission energy*. Available at: [https://www.pge.com/en\\_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page](https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page). Accessed October 2017.

<sup>4</sup> California Energy Commission, Energy Consumption Data Management System. *California Energy Consumption Database*. Available at: <http://ecdms.energy.ca.gov/>. Accessed October 2017.

<sup>5</sup> California Energy Commission, Energy Consumption Data Management System. *California Energy Consumption Database*. Available at: <http://ecdms.energy.ca.gov/>. Accessed October 2017.

As discussed in Chapter 4.11, Public Services and Utilities, of this EIR, the proposed project is located adjacent to other existing development to the north that are currently supplied electricity and natural gas services by PG&E. The project site would connect to existing PG&E utility lines in the project vicinity. The existing PG&E infrastructure and supply for the area is expected to be sufficient to handle the proposed project's increase in demand for electricity and natural gas.

The California Public Utilities Commission (CPUC) regulates natural gas utility service, including rates, the transmission and distribution pipeline system, storage, procurement, metering, and billing. Natural gas transported via the interstate pipelines, as well as some of the California-produced natural gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipeline systems, which is then delivered into the local transmission and distribution pipeline systems or to natural gas storage fields. PG&E operates several natural gas storage fields, which help meet peak seasonal natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently.<sup>6</sup>

The maximum buildout for the proposed project site, per the Draft Master Plan, is 1,500 single-family units. Energy use associated with operation of the proposed project would be typical of residential uses, requiring electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. In addition, maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment.

Electricity and natural gas demand associated with the proposed project were estimated using California Emissions Estimator Model (CalEEMod). Based on CalEEMod outputs, development associated with buildout of the Draft Master Plan Area would consume approximately 12,135,900 kWh/yr of electricity and 43,597,600 kBtu/yr of natural gas during operation. As such, the proposed project would increase total energy and natural gas demand associated with the project site. However, increased energy and natural gas demand does not necessarily mean that a project would have an impact related to energy resources. Based on Appendix F of the CEQA Guidelines, a proposed project would result in an impact related to energy resources if a project would result in the inefficient use or waste of energy.

Structures included in the proposed project would be subject to all relevant provisions of the 2016 update of the CBSC, including the Building Energy Efficiency Standards and the Tier 1 provisions of the CALGreen Code. Adherence to the most recent CALGreen and the Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. Therefore, while the proposed project would result in increased electricity and natural gas demand, the electricity and natural gas would be consumed more efficiently, and would be typical of residential development. Furthermore, future updates to the CBSC will likely provide increasingly stringent efficiency standards, and structures built in compliance with future CBSC would be increasingly more energy efficient. As such, the proposed project would not result in the inefficient or wasteful consumption of electricity or natural gas.

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<sup>6</sup> California Public Utilities Commission. *Natural Gas and California*. September 7, 2013. Available at: [http://www.cpuc.ca.gov/natural\\_gas/](http://www.cpuc.ca.gov/natural_gas/). Accessed October 2017.

## Transportation Energy

The annual VMT at full buildout of the proposed project is anticipated to be approximately 28,997,120, based on CalEEMod outputs for the project (see Appendix D). The average fuel economy in miles per gallon (mpg) for the U.S. car (24.9 mpg) and light truck (18.5 mpg) fleet, which each make up 50 percent of new light vehicle sales in the U.S., was obtained from the *Transportation Energy Data Book*. Using the aforementioned data, the overall average fuel economy of the U.S. vehicle fleet was calculated to be 21.7 mpg. Using 21.7 mpg, the proposed project would be expected to result in an increased consumption of approximately 610.17 barrels of gasoline per week. California inventories of gasoline averaged 10.6 million barrels in 2016, similar to 2015 levels.<sup>7</sup> Based on the aforementioned data, the proposed project at full buildout would be expected to result in an increased demand of a maximum of approximately 0.00576 percent of the State's current inventory of gasoline. It should be noted that a portion of the trips associated with the proposed project would not necessarily be new trips. Rather, some trips would be redistributed as residents from other areas relocate to the project site. As such, energy consumption associated with project VMT would not be unique to the project.

California leads the nation in registered alternatively-fueled and hybrid vehicles. In addition, State-specific regulations encourage fuel efficiency and reduction of dependence on oil. Improvements in vehicle efficiency and fuel economy standards help to reduce consumption of gasoline and reduce the State's dependence on petroleum products. The proposed project would be required to comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, as discussed in Chapter 4.12, Transportation, Traffic, and Circulation, of the Draft EIR, the Design Review Guidelines included in the Draft Master Plan require that future development prioritizes pedestrian circulation by developing linear parks, public trails, and/or trailheads to connect pedestrians to schools, commercial centers, parks, and other neighborhoods and local and regional open space areas, including those planned within the CNWS. Such pedestrian infrastructure improvements would help to discourage driving and reduce vehicle trips generated during operation. Based on the above, the proposed project would not be considered to result in the inefficient or wasteful consumption of transportation energy.

## Conclusion

As discussed above, buildout of the Draft Master Plan Area with residential uses would involve an increase in energy consumption. However, the proposed project would comply with all applicable standards and regulations regarding energy conservation and fuel efficiency, which would ensure that the future uses would be designed to be energy efficient to the maximum extent practicable. Accordingly, the proposed project would not be considered to result in a wasteful, inefficient, or unnecessary usage of energy, and impacts related to operational energy would be considered less than significant.

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<sup>7</sup> California Energy Commission. *Petroleum Watch*. February 2015. Available at: [http://www.energy.ca.gov/almanac/petroleum\\_data/petroleum\\_watch/2017\\_Petroleum\\_Watch/2017-01\\_Petroleum\\_Watch.pdf](http://www.energy.ca.gov/almanac/petroleum_data/petroleum_watch/2017_Petroleum_Watch/2017-01_Petroleum_Watch.pdf). Accessed February 15, 2017.

## 5.5 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

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The State CEQA Guidelines mandate that an EIR address any significant irreversible environmental changes that would result if the proposed project were implemented (CEQA Guidelines, Section 15126.2[c]). An impact would fall into this category if any of the following would occur:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves a wasteful use of energy).

The proposed project would likely result in, or contribute to, the following significant irreversible environmental changes:

- Conversion of currently undeveloped land to urban land uses;
- Placement and/or extension of roadways in areas providing access to the proposed project and connecting to adjacent developments;
- Irreversible consumption of goods and services associated with the future population; and
- Irreversible consumption of energy and natural resources associated with the future population.

## 5.6 SIGNIFICANT AND UNAVOIDABLE IMPACTS

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According to CEQA Guidelines, an EIR must include a description of those impacts identified as significant and unavoidable should the proposed action be implemented (CEQA Guidelines §15126.2[b]). Such impacts would be considered unavoidable when the determination is made that either mitigation is not feasible or only partial mitigation is feasible such that the impact is not reduced to a level that is less-than-significant. This section identifies significant impacts that could not be eliminated or reduced to a less-than-significant level by mitigations imposed by the City. The final determination of the significance of impacts and the feasibility of mitigation measures would be made by the City as part of the City's certification action. The significant and unavoidable impacts of the proposed project are summarized below.

### **Substantial degradation of the existing visual character or quality of the project site and/or the site's surroundings. (Impact 4.1-2)**

Without detailed site plans, future project design, and, thus, the extent of visual impacts cannot be fully realized. Thus, the project could have the potential to substantially degrade the existing visual character or quality of the project site and/or the site's surroundings. In addition, General Plan

Policy 4-P-11 is intended to minimize grading of hillside areas. Policy 2-G-8 is intended to preserve ridgelines and viewsheds. The proposed project would involve grading of hillside areas, which would not be consistent with the aforementioned City policies.

**Generation of short-term construction-related criteria air pollutant emissions in excess of 54 lbs/day for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 82 lbs/day for PM<sub>10</sub>. (Impact 4.3-1)**

The proposed project would result in construction-related emissions of NO<sub>x</sub> in excess of the applicable threshold of significance. As such, the project would be considered to conflict with or obstruct implementation of regional air quality plans. Implementation of the mitigation set forth in the Air Quality and Greenhouse Gas Emissions chapter of this EIR would reduce the above impact associated with the generation of NO<sub>x</sub> emissions. However, emissions would continue to exceed the applicable threshold of significance. Because the project would result in a significant and unavoidable impact after the application of all feasible mitigation, in accordance with the BAAQMD CEQA Guidelines, the project would not be considered consistent with the regional air quality plans.

**Generation of operational criteria air pollutant emissions in excess of 54 lbs/day for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 82 lbs/day for PM<sub>10</sub> and conflict with or obstruct implementation of the 2017 Clean Air CAP, and/or the 2001 Ozone Attainment Plan. (Impact 4.3-2)**

Upon buildout of the proposed project site, operational emissions of ROG and NO<sub>x</sub> would exceed the applicable thresholds of significance. It should be noted that the proposed project has been evaluated at a program-level, as detailed project designs have not yet been prepared. Because the environmental analysis included in this EIR is intended to provide a ‘worst case scenario’ evaluation for the development of 1,500 single-family homes, actual project emissions may be less than what has been estimated. Nonetheless, because at maximum allowable buildout, the proposed project could generate long-term operational criteria air pollutant emission in excess of thresholds, the project could contribute to the region’s nonattainment status of ozone and/or violate an air quality standard.

Implementation of the mitigation set forth in the Air Quality and Greenhouse Gas Emissions chapter of this EIR would reduce the above impact associated with the generation of ROG and NO<sub>x</sub> emissions. However, it should be noted that the proposed project has been evaluated at a program-level and a guarantee cannot be made that emissions from future development in the project area would not exceed the thresholds of significance. Therefore, until further project-level design details are available and a project-level air quality analysis can be performed to show otherwise, the impact is assumed to remain significant and unavoidable. Because the project would result in a significant and unavoidable impact after the application of all feasible mitigation, in accordance with the BAAQMD CEQA Guidelines, the project would not be considered consistent with the regional air quality plans.



**Generation of cumulative criteria air pollutant emissions in excess of 10 tons/year for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 15 tons/yr for PM<sub>10</sub>. (Impact 4.3-4)**

The long-term emissions associated with operation of the proposed project in conjunction with other existing or planned development in the area would incrementally contribute to the region's air quality. The proposed project's cumulative emissions of ROG and NO<sub>x</sub> would exceed the applicable cumulative thresholds of significance. Implementation of the mitigation measures set forth in the Air Quality and Greenhouse Gas Emissions chapter of this EIR would reduce the above impact associated with the generation of ROG and NO<sub>x</sub> emissions. However, as noted above, the proposed project has been evaluated at a program-level and a guarantee cannot be made that emissions from future development in the project area would not exceed the thresholds of significance. As further feasible mitigation measures do not exist that would ensure reduction of operational emissions to below the applicable threshold of significance, the impact would remain significant and unavoidable.

**Generation of a cumulatively considerable contribution to GHG emissions in excess of 1,100 MTCO<sub>2e</sub>/yr or 4.6 MTCO<sub>2e</sub>/SP/yr by 2020, and 660 MTCO<sub>2e</sub>/yr or 2.76 MTCO<sub>2e</sub>/SP/yr by 2030. (Impact 4.3-5)**

The long-term GHG emissions associated with operation of the proposed project in conjunction with other existing or planned development in the area would incrementally contribute to global climate change. The proposed project's year 2023 emissions of GHG would be below the BAAQMD's adopted thresholds of significance for compliance with AB 32, but the project's year 2030 GHG emissions would exceed the thresholds of significance for compliance with SB 32 used in this EIR. Implementation of the mitigation measures set forth in the Air Quality and Greenhouse Gas Emissions chapter of this EIR would reduce the above impact associated with the generation of GHG emissions. However, as noted above, the proposed project has been evaluated at a program-level and a guarantee cannot be made that emissions from future development in the project area would not exceed the thresholds of significance. As further feasible mitigation measures do not exist that would ensure reduction of operational emissions to below the applicable threshold of significance, the impact would remain significant and unavoidable.

**Result in substantial adverse physical impacts associated with the provisions of new or physically altered fire protection facilities, and/or the need for new or physically altered fire protection 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 facilities. (Impact 4.11-4)**

The proposed project would conflict with the location standard established by General Plan Policy 11-P-26, as the site would be located outside of the 1.5-mile response time radius of the nearest fire station, which would have the primary responsibility for serving the project site. Therefore, although the proposed project would be required to pay Fire Facility Impact Fees in effect at the time of building permit issuance, the project would still conflict with location and response time standards established by the General Plan.

**Development of the proposed project, in combination with future buildout in the City of Pittsburg, would increase demand for additional public services and utilities. (Impact 4.11-10)**

The proposed project in combination with future buildout in the City of Pittsburg would not result in a significant cumulative impact related to law enforcement, schools, and park and recreation facilities. However, as discussed above, the proposed project would conflict with the location standard established by General Plan Policy 11-P-26.

**Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the study intersections under Existing Plus Project Conditions. (Impact 4.12-2)**

Traffic generated by buildout of the Draft Master Plan Area would result in a significant and unavoidable impact to the following intersections under Existing Plus Project Conditions:

- EB SR 4 Ramps/Willow Pass Road (Intersection #2);
- WB SR 4 Ramps/Willow Pass Road (Intersection #3);
- Concord Boulevard and Bailey Road (Intersection #35);
- Bailey Road and Myrtle Drive intersection (Intersection #36);
- Clayton Road Treat Boulevard intersection (Intersection #39); and
- Treat Boulevard and Oak Grove Road (Intersection #44).

Intersections #2 and #3 are included in the Capital Improvement Program (CIP) for the 2015 Update to the Contra Costa CMP (Project 1028). However, funding sources have not yet been identified, and a timeframe for the improvements has not been established. Both Intersections #35 and #36 are located within the City of Concord and covered by the Concord CIP (Project #2049). Intersection #39 is covered by the Concord CIP (Project 2144). However, a timeline has not been established for the required improvements at the three intersections, and feasible mitigation does not exist to improve operations at Intersection #35 to an acceptable level. It should be noted that the significant and unavoidable impact to Intersections #36 and #39 would be temporary, pending completion of the required improvements covered by the Concord CIP.

Feasible mitigation does not exist to reduce the impact to Intersection #44 to a less-than-significant level. Furthermore, the intersection is located within the City of Concord, and is not included in the Concord CIP.

**Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the study roadway intersections under Long-Term (2035) Plus Project Conditions. (Impact 4.12-8)**

Traffic generated by buildout of the Draft Master Plan Area would result in a significant and unavoidable impact to the following intersections under Long-Term (2035) Plus Project Conditions:

- Avila Road/Willow Pass Road (Intersection #1);
- WB SR4 Ramps/Willow Pass Road (Intersection #3);
- W. Leland Road/San Marco Boulevard (Intersection #6);
- Concord Boulevard and Bailey Road (Intersection #35);
- Bailey Road and Myrtle Drive (Intersection #36);
- Clayton Road and Treat Boulevard (Intersection #39);
- Cowell Road/Treat Boulevard (Intersection #41);
- Bailey Road/Project Entrance (Intersection #43);
- Treat Boulevard and Oak Grove Road (Intersection #44); and
- Concord Boulevard/Port Chicago Highway (Intersection #48).

The significant and unavoidable impacts to Intersections #1, #3, #35, #35, #36, #39, and #44 are discussed above for the Existing Plus Project Condition. Impacts to such intersections would be similar under the Long-Term (2035) Condition. Additional significant and unavoidable impacts occurring under the Long-Term (2035) Condition are discussed below.

Intersection #6 does not exist without widening the approaches to the intersection. Given that areas directly adjacent to the right-of-way have been previously developed, widening of the approaches is not possible. Similar to Intersection #44, Intersections #41 and #48 are located within the City of Concord, and are not included in the Concord CIP. Intersection #43 is included in the Pittsburg CIP. However, a timeframe for the required improvements has not been established, and, thus, completion of the improvements prior to buildout of the project site cannot be guaranteed.



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## 6. ALTERNATIVES ANALYSIS

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## 6

## ALTERNATIVES ANALYSIS

### 6.1 INTRODUCTION

The Alternatives Analysis chapter of the EIR includes consideration and discussion of a range of reasonable alternatives to the proposed project, as required per CEQA Guidelines Section 15126.6. Generally, the chapter includes discussions of the following: the purpose of an alternatives analysis; alternatives considered but dismissed; a reasonable range of project alternatives and their associated impacts in comparison to the proposed project's impacts; and the environmentally superior alternative.

### 6.2 PURPOSE OF ALTERNATIVES

The primary intent of the alternatives evaluation in an EIR, as stated in Section 15126.6(a) of the CEQA Guidelines, is to “[...] describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” In the context of CEQA Guidelines Section 21061.1, “feasible” is defined as:

...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Section 15126.6(f) of CEQA Guidelines states, “The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.” Section 15126.6(f) of CEQA Guidelines further states:

The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

In addition, an EIR is not required to analyze alternatives when the effects of the alternative “cannot be reasonably ascertained and whose implementation is remote and speculative.”

The CEQA Guidelines provide the following guidance for discussing alternatives to a proposed project:

- An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but

would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6[a]).

- Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (CEQA Guidelines Section 15126.6[b]).
- The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination [...] Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6[c]).
- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison (CEQA Guidelines Section 15126.6[d]).
- If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines Section 15126.6[d]).
- The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (CEQA Guidelines Section 15126.6[e][1]).
- If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6[e][2]).

## **Project Objectives**

Based on the above, reasonable alternatives to the project must be capable of feasibly attaining most of the basic objectives of the project. The proposed project is being pursued with the following objectives:

- Ensure orderly planning for the development of a large, undeveloped area in the City's SOI consistent with the General Plan;
- Maintain an environmental equilibrium consistent with existing vegetation, soils, geology, topography, and drainage patterns;



- Avoid premature or inappropriate development that would result in incompatible uses or create public service demands exceeding the capacity of existing or planned facilities; and
- Encourage sensitive site planning and design.

### Significant Impacts Identified in the EIR

In addition to attaining the majority of project objectives, reasonable alternatives to the project must be capable of reducing the magnitude of, or avoiding, identified significant environmental impacts of the proposed project. Significant environmental impacts of the proposed project that have been identified as requiring mitigation measures to ensure that the level of significance is ultimately less than significant include the following:

- ***Aesthetics.*** Potentially significant impacts are identified for substantial adverse effects related to the creation of new sources of light or glare.
- ***Air Quality and Greenhouse Gas Emissions.*** Potentially significant impacts are identified for short-term construction-related criteria air pollutant emissions.
- ***Biological Resources.*** Potentially significant impacts are identified for special-status plant species, birds covered under the ECCC HCP/NCCP as well as birds covered under the Migratory Bird Treaty Act, San Joaquin kit fox, California tiger salamander, California red-legged frog, and conflicts with local policies or ordinances protecting biological resources. In addition, cumulative impacts related to the loss of biological resources in the City of Pittsburg were reduced to less-than-significant levels with mitigation.
- ***Cultural and Tribal Resources.*** Potentially significant impacts are identified for archaeological resources, unique paleontological resources, unique geologic features, and human remains, as well as unique tribal cultural resources, such as a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American tribe.
- ***Geology, Soils, and Seismicity.*** Potentially significant impacts are identified for risks to people and structures associated with earthquakes and the effects thereof, including fault rupture, strong ground shaking, and liquefaction, as well as risks related to unstable or expansive soils, and risks associated with substantial erosion or loss of topsoil. In addition, cumulative impacts related to the cumulative increase in the potential for geological related impacts and hazards were reduced to less-than-significant levels with mitigation.
- ***Hazards and Hazardous Materials.*** Potentially significant impacts are identified for the upset or accidental release of hazardous materials into the environment and the exposure of people or structures to the risk of loss, injury, or death involving wildland fires.
- ***Hydrology and Water Quality.*** Potentially significant impacts are identified for contribution of runoff water which could exceed the capacity of existing or planned

stormwater drainage systems as well as operational water quality associated with urban runoff from the project site.

- **Noise.** Potentially significant impacts are identified for exposure of future residents to transportation-related noise levels in excess of City standards as well as temporary construction noise levels at existing sensitive receptors in the project vicinity.
- **Public Services and Utilities.** Potentially significant impacts are identified for water supply and delivery systems as well as wastewater management facilities.
- **Transportation, Traffic, and Circulation.** Potentially significant impacts are identified for alternative transportation facilities under Existing Plus Project and Long-Term (2035) Plus Project conditions.

The proposed project's impacts that have been determined to remain significant and unavoidable, even after implementation of the feasible mitigation measures set forth in this EIR, include the following:

- **Aesthetics.** A significant and unavoidable impact is identified for the degradation of the existing visual character or quality of the project site.
- **Air Quality and Greenhouse Gas Emissions.** Significant and unavoidable impacts are identified for long-term operational criteria air pollutant emissions, cumulative emissions of criteria air pollutants related to regional air quality, and GHG emissions in excess of SB 32 reduction targets.
- **Geology, Soils, and Seismicity.** Significant and unavoidable impacts are identified for the exposure of people and structures to risks from liquefaction, landslides, unstable soils, and expansive soils.
- **Transportation, Traffic, and Circulation.** Significant and unavoidable impacts are identified for study roadway intersections under Existing Plus Project conditions and Long-Term (2035) Plus Project conditions.

### 6.3 SELECTION OF ALTERNATIVES

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The requirement that an EIR evaluate alternatives to the proposed project or alternatives to the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained while reducing the magnitude of, or avoiding, the environmental impacts of the proposed project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the CEQA Guidelines require the EIR to “set forth only those alternatives necessary to permit a reasoned choice.” The CEQA Guidelines provide a definition for “a range of reasonable alternatives” and thus limit the number and type of alternatives that may need to be evaluated in a given EIR. According to the *CEQA Guidelines* Section 15126.6(f):

The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

First and foremost, alternatives in an EIR must be feasible. In the context of CEQA Guidelines Section 21061.1, “feasible” is defined as:

...capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Finally, an EIR is not required to analyze alternatives when the effects of the alternative “cannot be reasonably ascertained and whose implementation is remote and speculative.”

#### **6.4 ALTERNATIVES CONSIDERED BUT DISMISSED**

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Consistent with CEQA, primary consideration was given to alternatives that could reduce significant impacts, while still meeting most of the basic project objectives. Any alternative that would have impacts identical to or more severe than the proposed project, and/or that would not meet any or most of the project objectives were dismissed from further consideration.

As stated in Guidelines Section 15126.6(c), among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:

- failure to meet most of the basic project objectives;
- infeasibility; or
- inability to avoid significant environmental impacts.

Regarding infeasibility, among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). Not one of these factors establishes a fixed limit on the scope of reasonable alternatives.

Several alternatives were considered but dismissed. The major characteristics and reasons for dismissal of the other alternatives are summarized below.

##### Off-Site Alternative

Section 15126.6(f)(2)(B) of the CEQA Guidelines states, “If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reason in the EIR.”

The CEQA Guidelines Section 15126.6(b) requires that only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR. The Off-Site Alternative would involve the construction of the proposed project on a single, alternative location. The Off-Site Alternative would locate the proposed project on other lands located within the vicinity of the proposed project site. However, other sites in the vicinity would likely have similar or greater impacts compared to the proposed project site. For example, the proposed project site is large in size and does not contain water resources or on-site trees which could provide wildlife habitat. A comparable off-site property could contain water resources, vegetation, or other habitat types, thereby resulting in potentially greater impacts to biological resources. In addition, while large, undeveloped land exists to the east of the project site, the land contains physical constraints to development. For example, the Keller County Landfill is located east of Bailey Road and the topography to the east of the landfill has more extreme elevation changes as compared to the proposed project site. In addition, a private airstrip is located to the east of the landfill and the recently-approved Montreux residential development is located to the east of the airstrip. The aforementioned characteristics could result in potentially greater impacts to certain resource areas as compared to the proposed project.

In addition, the CEQA Guidelines state that, by definition, an alternative should avoid or substantially lessen one or more of the environmental effects of the project. Alternative locations within the City Limits would generally contain characteristics similar to the proposed project site. Development of the project on another similar site would result in an equal area being graded and, therefore, similar physical environmental impacts would occur related to land disturbance activities. In addition, the development of the same number of residential units would result in traffic, air quality, and noise impacts that would likely be very similar, or even potentially worse than the proposed project, depending on site accessibility. The proposed project may not be consistent with the Pittsburg General Plan land use designation for another site, and land use and planning impacts could potentially be greater. Similarly, an Off-Site Alternative location could currently contain housing that would need to be removed, and displacement of housing or people could occur. Accordingly, potentially greater impacts related to population and housing could occur. Therefore, development of the project at an alternative location in the City of Pittsburg would be expected to result in the same impacts, or worse, when compared to the proposed project. As a result, an environmentally feasible off-site location that would meet the requirements of CEQA, as well as meet the basic objectives of the project, does not exist.

### Infill Alternative

Developing the proposed Master Plan Project as infill development, rather than on the project site was considered as a potential alternative to the proposed project. However, several impediments exist to developing the project as an infill development on sites other than the proposed project site.

Buildout of the Draft Master Plan area is anticipated to result in construction of a maximum of 1,500 units. Large infill lots that could accommodate 1,500 units do not necessarily occur within the City. The largest areas of undeveloped land within the City occur south of the State Route (SR) 4 corridor, as well as north of Willow Pass Road and east of Port Chicago Highway. However, the aforementioned areas are much smaller than the project site, and do not contain area sufficient to

accommodate 1,500 single-family units at the densities proposed in the Draft Master Plan. Moreover, such areas are currently designated for a variety of land uses including industrial, business commercial, mixed use, and high density residential. Therefore, relocating the project to such infill locations would result in land use incompatibility, and land use and planning impacts could potentially be greater.

While single, large infill lots sufficient to accommodate the proposed project do not exist within the City, the City may contain enough smaller, undeveloped lots to allow for infill of 1,500 units throughout the City. Infill over a large number of small undeveloped lots would not allow for the cohesive development sought through the Draft Master Plan. Rather, each site would be individually developed through separate planning and review processes. Such piecemeal development would not be consistent with the project objectives, could not be accomplished in a reasonable time, and is speculative at this time. Furthermore, the project applicant does not control any other large infill sites or enough small infill sites to develop 1,500 units elsewhere.

Overall, feasible infill locations that could accomplish the project objectives and be considered feasible are not considered available at this time.

## **6.5 ALTERNATIVES CONSIDERED IN THIS EIR**

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The following alternatives are considered and evaluated for the proposed project:

- No Project (No Build) Alternative;
- Mixed Use Alternative;
- Clustered Development Alternative; and
- Reduced Intensity Alternative.

CEQA requires the evaluation of the comparative impacts of the “No Project” alternative (CEQA Guidelines Section 15126.6[e]). Analysis of the No Project Alternative “... shall discuss [...] existing conditions [...] as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” (*Id.*, subd. [e][2]) “If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the ‘no project’ alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in the property’s existing state versus environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this ‘no project’ consequence should be discussed. In certain instances, the no project alternative means ‘no build,’ wherein the existing environmental setting is maintained. However, where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project’s non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.” (*Id.*, subd. [e][3][B]).

Per the requirements of the CEQA Guidelines, the City has decided to evaluate a No Project (No Build) Alternative. Under the No Project (No Build) Alternative, the project site would remain under current conditions.

In addition, the City has decided to evaluate three alternatives that would include development of the project site. The Mixed Use Alternative would involve development of the same 339.1 acre portion of the project site as is currently included in the proposed project. Rather than developing the project solely with residential type land uses, the Mixed Use Alternative would include commercial type developments as well as residential development. In addition, the city has evaluated two alternatives that would include reduced development intensities within the project site. The Clustered Development Alternative would involve development of 750 units within the approximately 606-acre project site. However, the 750-units would be clustered within a smaller portion of the project site, rather than spread throughout the entire 339.1 developable area portion of the project site. Finally, the Reduced Intensity Alternative would include development of 1,000 units on the approximately 606-acre project site, within the same areas of development as indicated in Figure 3-5, of the Project Description Chapter of this EIR. Overall, the Reduced Intensity Alternative would reduce the number of single-family units from 1,500 under the proposed project to 1,000 and increase the average lot size, but leave the area of development roughly the same.

The foregoing alternatives are intended to provide analysis of alternatives that would have the potential to reduce the significant and unavoidable impacts related to the proposed project. As discussed throughout this EIR, the proposed project would result in significant and unavoidable impacts related to Air Quality and Greenhouse Gas Emissions, Geology, Soils, and Seismicity, as well as Transportation, Traffic, and Circulation.

### **No Project (No Build) Alternative**

The No Project (No Build) Alternative is defined as the continuation of the existing conditions of the project site, which is currently occasionally grazed, mostly vacant land, with two existing residential structures. The No Project (No Build) Alternative would not meet any of the project objectives, nor would the alternative be consistent with the voter-approved Measure P. Because development of the site would not occur, land disturbance and any associated physical environmental impacts would not occur as a result of the No Project (No Build) Alternative. For example, transportation, traffic, and circulation in the project vicinity would not be modified under the No Project (No Build) Alternative; thus, all associated impacts such as increased vehicle traffic on area roadways, increases in mobile air pollutant emissions, and traffic-related noise increases would not occur. Therefore, impacts related to air quality and greenhouse gas (GHG) emissions, noise, and transportation, traffic, and circulation would be fewer than anticipated for the proposed project. In addition, because land disturbance would not occur under the No Project (No Build) Alternative, impacts to any potential on-site biological resources or potential destruction of previously unknown cultural resources would not occur, and, thus, would be fewer than that of the proposed project.

Because the site would not introduce any new structures or buildings on the site under the No Project (No Build) Alternative, modifications to the existing visual character or quality of the site or surroundings, creation of any new sources of light or glare, changes to views of or from scenic

vistas, or changes to scenic resources would not occur. Thus, aesthetic impacts would be less under the No Project (No Build) Alternative compared to the proposed project. Similarly, as structures or buildings would not be proposed for the site as part of the No Project (No Build) Alternative, impacts related to structures being affected by geology, soils, and seismicity would not occur, and future residents would not be exposed to any potential hazardous materials on-site.

The No Project Alternative would not alter the existing drainage pattern of the site or surrounding area and would not create or contribute an increase in runoff water that would exceed existing or planned stormwater drainage system capacity or violate water quality standards. Groundwater recharge would not be affected by the No Project Alternative. Therefore, impacts related to hydrology and water quality would be fewer than that of the proposed project.

The No Project Alternative would not involve the creation of housing and would not directly increase population or employment in the area. Accordingly, modifications to the population and/or housing in the area would not occur, and an associated increase in demand for public services and utilities would not occur. Considering that new housing would not be constructed on the project site under the No Project (No Build) Alternative, impacts related to the exposure of future residents to hazards related to wildland fires, hazardous materials or conditions, and geologic hazards would not occur. The No Project (No Build) Alternative would result in the ongoing vacancy on a site that is currently designated for urban uses. Under the No Project (No Build) Alternative, the site would not be annexed into the City and would remain within the County's jurisdiction. However, the site is within the Pittsburg voter-approved Urban Limit Line. In addition, the Contra Costa Local Agency Formation Commission (LAFCo) approved an extension of the Pittsburg Sphere of Influence (SOI) to include the project site. Thus, if the site continues to be vacant, compatibility with the surrounding land uses could potentially become an issue as the City continues to grow.

Because implementation of the No Project Alternative would result in the site remaining under current conditions, physical environmental impacts would not occur. Therefore, implementation of the No Project (No Build) Alternative would result in fewer overall impacts compared to that of the proposed project.

The following areas would result in no impact if the No Project (No Build) Alternative were selected:

- Aesthetics
- Agricultural Resources
- Air Quality and Greenhouse Gas Emissions;
- Biological Resources;
- Cultural and Tribal Cultural Resources;
- Geology, Soils, and Seismicity;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Noise;
- Public Services and Utilities; and

- Transportation, Traffic, and Circulation.

### **Mixed Use Alternative**

The Mixed Use Alternative would partially achieve the objectives of the proposed project, but would reduce potential impacts related to transportation, traffic, and circulation. The Mixed Use Alternative would include approximately 50,000 square feet (sf) of commercial building floor area on approximately 15 acres, which would include one grocery store and several smaller flexible commercial spaces. The project residential unit count would be reduced accordingly to allow up to 1,250 units. The development would generally be located in the same development areas as indicated in the Draft Master Plan, and shown in Figure 3-5 of the Project Description chapter of this EIR.

#### Aesthetics

Development of the Mixed Use Alternative would result in 339.1 acres of development consisting of up to 50,000 sf of commercial building floor area and up to 1,250 residential units. As a result, the Mixed Use Alternative would result in the similar impacts related to scenic vistas, scenic resources, including but not limited to trees, rocks, outcroppings, and historic buildings within a state scenic highway, and cumulative impacts. In addition, both the proposed project and Mixed Use Alternative would alter the existing visual character and quality of the site and the site's surroundings and introduce new sources of light and glare. Because the Mixed Use Alternative would modify the existing land uses on the site to commercial and residential uses, the same potential for degradation of visual character and quality of the site and surroundings, and potential effects of light and glare would occur.

#### Agricultural Resources

The Mixed Use Alternative would result in the development of 60 percent of the project site with commercial and residential uses. The project site is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, impacts related to agricultural resources would be similar under the Mixed Use Alternative to the proposed project.

#### Air Quality and GHG Emissions

The Mixed Use Alternative would reduce the total number of dwelling units constructed on the project site by 250 dwelling units while incorporating 50,000 sf of commercial land uses. Although the Mixed Use Alternative would include fewer dwelling units, the lot size of the remaining dwelling units would increase as compared to the proposed project, and combined with the estimated 50,000 sf of commercial area, the overall area of land disturbance would remain constant compared to the proposed project. Therefore, the overall construction phase is anticipated to result in air quality and GHG impacts similar to the proposed project.

Reducing the number of residential units included in the Mixed Use Alternative would result in fewer vehicle trips related to residential development within the project site. Additionally, the commercial uses associated with the Mixed Use Alternative would create internal trip capture,



further reducing project-generated vehicle trips. The CalEEMod software was used to estimate the Mixed Use Alternative's operational emissions. It should be noted that inherent defaults in CalEEMod, such as low volatile organic compound (VOC) cleaning supplies and only natural gas hearths, were applied for the alternative analysis, with the exception of the anticipated trip rates for the residential portion of the Mixed Use Alternative, which were calculated based on trip rate formulas provided for the proposed project in the Transportation Impact Study prepared for the proposed project by Kimley-Horn and Associates, Inc.

Operational emissions of criteria pollutants associated with the Mixed Use Alternative are summarized in Table 6-7 below. As shown in the table, ROG and NO<sub>x</sub> emissions would exceed the applicable thresholds of significance. Thus, mitigation would still be required. Mitigation Measure 4.4-2 of this EIR would reduce the operational emissions, but the daily emissions of ROG and NO<sub>x</sub> would likely still exceed the applicable threshold of significance. Similar to the conclusion for the proposed project, because the proposed project has been evaluated at a program-level and a guaranteed cannot be made that emissions from future development in the project area would not exceed the thresholds of significance, impacts would be expected to remain significant and unavoidable, similar to the proposed project.

<b>Table 6-1</b> <b>Mixed Use Alternative</b> <b>Operational Emissions of Criterial Pollutants (lbs/day)</b>					
<b>Pollutant</b>	<b>Proposed Project Emissions</b>	<b>Mixed Use Alternative Emissions</b>	<b>Threshold of Significance</b>	<b>Exceeds Threshold? (As Proposed)</b>	<b>Exceeds Threshold? (Alternative)</b>
ROG	89.15	78.71	54	<b>YES</b>	<b>YES</b>
NO <sub>x</sub>	102.12	97.51	54	<b>YES</b>	<b>YES</b>
PM <sub>10</sub> (exhaust)	3.65	3.17	82	<b>NO</b>	<b>NO</b>
PM <sub>10</sub> (fugitive)	61.60	59.33	None	<b>N/A</b>	<b>N/A</b>
PM <sub>2.5</sub> (exhaust)	3.61	3.14	54	<b>NO</b>	<b>NO</b>
PM <sub>2.5</sub> (fugitive)	16.48	15.87	None	<b>N/A</b>	<b>N/A</b>

Source: CalEEMod, March and November 2017 (see Appendix D).

Operational emissions of GHGs associated with the Mixed Use Alternative are summarized in Table 6-2. It should be noted that the BAAQMD considers both future residents and workers at a project when calculating emissions per service population. The commercial development included in the Mixed Use Alternative would contribute employees to the service population, while the residential portion would contribute residents. The commercial component is anticipated to generate approximately 130 employees during operations (50,000 sf / 383 sf per employee = 130 employees),<sup>1</sup> while the residential portion of the project is anticipated to have a future population of approximately 4,000 residents (1,250 units x 3.2 persons per household = 4,000 residents). Thus, the operational service population is assumed to equal 4,130. As shown in Table 6-2, the Mixed Use Alternative would result in a reduction in operational emissions of GHG as compared to the proposed project. However, because the service population would be reduced, the Mixed Use Alternative would result in an increase in annual GHG emissions per service population compared

<sup>1</sup> United States Green Building Council. *Building Area Per Employee By Business Type*. Available at: <https://www.usgbc.org/Docs/Archive/General/Docs4111.pdf>. Accessed November 2017.

to the proposed project. Nevertheless, operational GHG emissions from the Mixed Use Alternative would remain below the 4.6 MTCO<sub>2e</sub>/SP/yr threshold established by BAAQMD for compliance with AB 32. However, operational emissions from the Mixed Use Alternative in the year 2030 would be anticipated to exceed the SB 32 threshold determined by the City for use in this analysis of 2.76 MTCO<sub>2e</sub>/SP/yr. Considering the anticipated year 2030 operational emissions, the Mixed Use Alternative would conflict with SB 32, similar to the proposed project.

<b>Table 6-2 Mixed Use Alternative Operational GHG Emissions</b>		
	<b>Proposed Project Emissions</b>	<b>Mixed Use Alternative Emissions</b>
<b>Year 2023 Operations</b>		
<b>Operational Annual GHG Emissions</b>	16,973.33 MTCO <sub>2e</sub> /yr	15,440.61 MTCO <sub>2e</sub> /yr
<b>Operational Annual GHG Emissions Per Service Population</b>	3.54 MTCO <sub>2e</sub> /SP/yr	3.74 MTCO <sub>2e</sub> /SP/yr
<b>Threshold</b>	4.6 MTCO <sub>2e</sub> /SP/yr	4.6 MTCO <sub>2e</sub> /SP/yr
<b>Year 2030 Operations</b>		
<b>Operational Annual GHG Emissions</b>	14,643 MTCO <sub>2e</sub> /yr	13,312.37 MTCO <sub>2e</sub> /yr
<b>Operational Annual GHG Emissions Per Service Population</b>	3.05 MTCO <sub>2e</sub> /SP/yr	3.22 MTCO <sub>2e</sub> /SP/yr
<b>SB 32 Threshold</b>	2.76 MTCO <sub>2e</sub> /SP/yr	2.76 MTCO <sub>2e</sub> /SP/yr
Notes: Service populations calculated as follows: <ul style="list-style-type: none"> <li>Proposed project: 1,500 units x 3.2 persons per household = 4,800 persons</li> <li>Mixed Use Alternative: 4,000 residents + 130 employees = 4,130 persons</li> </ul> Source: CalEEMod, March and November 2017 (see Appendix D).		

Because the Mixed Use Alternative would result in fewer vehicle trips than the proposed project, the alternative would result in less traffic on area roadways and, thus, a reduced contribution to localized CO concentrations at surrounding intersections. As the Mixed Use Alternative would consist of buildout on the same site in the same location as the proposed project with the same land uses, the effects of the project, as well as on the project from nearby sources of TACs, would be similar to that of the proposed project.

Overall, the Mixed Use Alternative would result in slightly fewer impacts than the proposed project related to air quality emissions. However, the proposed project's significant and unavoidable impact associated with the generation of operational emissions of ROG and NO<sub>x</sub> in excess of thresholds would remain. In addition, the significant and unavoidable impact associated with operational GHG emissions would remain with implementation of the Mixed Use Alternative.

### Biological Resources

The Mixed Use Alternative would dedicate 267.2 acres of park/open space uses, similar to the proposed project. Therefore, the potential exists for effects on existing habitat, protected species, confliction with policies or ordinance protecting biological resources, and conflicts with provisions

of an adopted habitat conservation plan. As a result, impacts related to biological resources would be similar under the Mixed Use Alternative to the proposed project.

### Cultural and Tribal Resources

Development of the Mixed Use Alternative would result in 339.1 acres of site disturbance, which is equivalent to the proposed project. As discussed in further depth in Chapter 4.5, Cultural and Tribal Resources, of this EIR, the entire project site has been subject to field surveys for cultural resources. Prehistoric archaeological, tribal cultural, and/or significant historical have not been identified within the project site. Nevertheless, development of the Mixed Use Alternative would involve ground disturbing activity; ground disturbing activity would have the potential to disturb or degrade previously unknown cultural, historical, and/or tribal cultural resources. Consequently, the Mixed Use Alternative would require mitigation to reduce the potential disturbance or degradation of cultural, historical, and/or tribal cultural resources, and the Mixed Use Alternative would result in similar impacts related to cultural and tribal cultural resources as the proposed project.

### Geology, Soils, and Seismicity

Development of the Mixed Use Alternative would result in 339.1 acres of site disturbance, similar to the proposed project. Therefore, the potential for the buildings of the Mixed Use Alternative to be subjected to geologic effects such as seismic activity, including ground shaking and ground failure, would be similar to the proposed project. Furthermore, because the Mixed Use Alternative would be developed on the same portions of the project site as would be developed under the proposed project, the Mixed Use Alternative would be subject to a similar risk from landslides. As a result, impacts associated with geology, soils, and seismicity would be similar under the Mixed Use Alternative to the proposed project.

### Hazards and Hazardous Materials

Similar to the proposed project, the Mixed Use Alternative would involve 339.1 acres of site disturbance. Therefore, the same potential for impacts related to exposure to any existing on-site hazards or hazardous materials and wildland fires would occur under the Mixed Use Alternative as the proposed project. The Mixed Use Alternative, unlike the proposed project, would consist of 50,000 sf of commercial uses; thus, impacts related to the creation of hazards to the public or the environment related to the routine transport, use, or disposal of hazardous materials could be slightly greater to that of the proposed project. Overall, the Mixed Use Alternative would result in greater impacts associated with hazards and hazardous materials as the proposed project.

### Hydrology and Water Quality

Similar to the proposed project, land disturbance would occur during construction activities associated with the Mixed Use Alternative. The Mixed Use Alternative would alter the existing drainage pattern of the site and would result in the same impacts as the proposed project related to potential water quality and erosion issues. Therefore, development of the Mixed Use Alternative would result in similar impacts related to the effects on the existing stormwater drainage pattern

and system capacity, contaminated runoff, groundwater recharge, and impacts related to placement of structures or housing within a floodplain.

### Land Use and Planning

The Mixed Use Alternative would, like the proposed project, require annexation to the City of Pittsburg and approval of the rezoning. Should the Pittsburg City Council approve the requested entitlements, the project would be consistent with the land use and zoning designations for the site. Neither the proposed project nor the Mixed Use Alternative would displace a substantial amount of existing housing or people, and both would create housing on the site. The Mixed Use Alternative would reduce the total number of dwelling units built on the project site from 1,500 to 1,250. Therefore, the Mixed Use Alternative would induce less of a population growth in the area than the proposed project. In addition, the Mixed Use Alternative would require a General Plan Amendment to allow commercial development. However, the proposed project already includes a General Plan Amendment.

The Mixed Use Alternative would involve development of the project site over the same 339.1 acre area as would occur under the proposed project. As such, development of the Mixed Use Alternative may include development above 900 feet in areas with slopes exceeding 30 percent. Such development would conflict with Policy 10-P-2, and mitigation would continue to be required to ensure consistency of the Mixed Use Alternative with the City's General Plan. In conclusion, impacts related to land use and planning would be similar to that of the proposed project.

### Noise

Similar to the proposed project, land disturbance would occur during construction activities associated with the Mixed Use Alternative, thereby similar construction-related noise and vibration impacts would occur. However, because the Mixed Use Alternative would include 250 fewer dwelling units than the proposed project, resulting in fewer future residents, noise levels associated with an increase in project-generated vehicle trips would be fewer than that of the proposed project. In addition, the commercial uses associated with the Mixed Use Alternative would create internal trip capture, further reducing project-generated vehicle trips. Because fewer vehicle trips would be generated by the Mixed Use Alternative, fewer noise-related impacts would result than that of the proposed project.

### Public Services and Utilities

Although the Mixed Use Alternative would include 250 fewer units than the proposed project, the inclusion of 50,000 sf of commercial uses would be anticipated to result in similar demands for public services and utilities including, but not limited to, water supply and delivery; wastewater collection and treatment, solid waste disposal, law enforcement, and fire protection as compared to that of the proposed project. Furthermore, because the project site is not currently within the Contra Costa Water District (CCWD) and the sanitation district Delta Diablo (DDSD), potentially significant impacts could result from the Mixed Use Alternative, similar to the proposed project. The reduction in units associated with the Mixed Use Alternative would reduce the demand for

park acres in comparison to the proposed project; thus, the Mixed Use Alternative would result in fewer impacts than the proposed project related to parks and recreation. Under the Mixed Use Alternative, the project site would remain outside of the City's 1.5-mile response time radius of the nearest fire station. As such, the Mixed Use Alternative would continue to result in a significant and unavoidable impact related to fire protection services. Overall, development of the Mixed Use Alternative would result in similar impacts related to public services and utilities as compared to the proposed project.

### Transportation, Traffic, and Circulation

Development of the Mixed Use Alternative would result in the buildout of 50,000 sf of commercial uses and 250 fewer dwelling units than the proposed project, which would subsequently result in fewer project-generated vehicle trips. In addition, the commercial uses associated with the Mixed Use Alternative would create internal trip capture, further reducing project-generated vehicle trips. Because fewer vehicle trips would be generated by the Mixed Use Alternative, the intensity of traffic-related impacts would be reduced, as compared to the proposed project. It should be noted, however, that the Mixed Use Alternative would still increase traffic on surrounding intersections and roadways. Where such intersections and roadways are projected to operate at unacceptable levels with or without the proposed project, similar impacts would be expected under the Mixed Use Alternative. Furthermore, the Mixed Use Alternative would also require mitigation measures, such as installation of bus turnouts or a multi-use path, in order to reduce the potential impacts to alternative transportation to acceptable levels. Overall, the Mixed Use Alternative would result in slightly fewer transportation, traffic, and circulation impacts to that of the proposed project.

### **Clustered Development Alternative**

The Clustered Development Alternative would achieve all of the proposed project's objectives. The Clustered Development Alternative would include the construction of 750 single-family; however, the units would be clustered such that the area of development is reduced to approximately 300 acres focused in the low-lying areas of the site. The additional open space provided would allow development to shift away from locations where geologic instability poses a significant and unavoidable risk to potential development.

### Aesthetics

Development of proposed project or the Clustered Development Alternative would result in development of 750 residential units in the lower lying developable areas of the project site. Such development would disturb less land area, and would be less visible from outside of the project site; consequently, the Clustered Development Alternative would result in the slightly reduced impacts related to scenic vistas, scenic resources, including but not limited to trees, rocks, outcroppings, and historic buildings within a state scenic highway, and cumulative impacts. Furthermore, the Clustered Development Alternative would result in the development of 750 fewer dwelling units, which would likely decrease the potential effects of light and glare. Both the proposed project and Clustered Development Alternative would alter the existing visual character and quality of the site and the site's surroundings and introduce new sources of light and glare. However, because the Clustered Development Alternative would result in development of smaller

portion of the site for residential uses, the Clustered Development Alternative would have a reduced potential to degrade the visual character and quality of the site and surroundings as compared with the proposed project. In addition, the Alternative would not require General Plan text amendments to alter or remove existing goals and policies related to hillside development. Nevertheless, the development of 750 residences within the project site would be anticipated to result in the degradation of the visual character or quality of the site, and the Clustered Development alternative would not be anticipated to reduce the significant and unavoidable impact identified for the proposed project to less than significant levels. Therefore, development of the Clustered Development Alternative would result in slightly fewer impacts, as compared to the proposed project.

### Agricultural Resources

Similar to the proposed project, the Clustered Development Alternative would result in the development of the development area depicted in Figure 3-5 of the Project Description chapter of this EIR. The project site is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, impacts related to agricultural resources would be similar under the Clustered Development Alternative to the proposed project.

### Air Quality and GHG Emissions

The Clustered Development Alternative would reduce the total number of dwelling units constructed on the project site by 750 dwelling units. Site disturbance area would be reduced from 339.1 acres under the proposed project to 300 acres under the Clustered Development Alternative. As such, the duration of the overall construction phase may be slightly reduced and the area of land disturbed during construction would be reduced by 39.1 acres. The reduction in construction phase length and area disturbed would result in a reduction in construction-related air quality and GHG emissions, and, thus, impacts would be reduced compared to the proposed project.

Moreover, because the Clustered Development Alternative would involve fewer homes and future residents, operational emissions associated with vehicle trips, as well as area and energy sources, would be fewer than that of the proposed project. The California Emissions Estimator Model (CalEEMod) version 2016.3.1 software was used to estimate the Clustered Development Alternative's operational emissions. It should be noted that inherent defaults in CalEEMod, such as low VOC cleaning supplies and only natural gas hearths, were applied for the alternative analysis, with the exception of the anticipated trip rates, which were calculated based on trip rate formulas provided in the Transportation Impact Study prepared for the proposed project by Kimley-Horn and Associates, Inc.

Operational emissions of criteria pollutants associated with the Clustered Development Alternative are summarized in Table 6-3 below. As shown in the table, emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, would be below the applicable threshold of significance, and the proposed project's significant and unavoidable impact associated with the generation of operational emissions of ROG and NO<sub>x</sub> in excess of thresholds would be avoided.

Operational emissions of GHGs associated with the Clustered Development Alternative are summarized in Table 6-4 below.

<b>Table 6-3</b> <b>Clustered Development Alternative</b> <b>Operational Emissions of Criterial Pollutants (lbs/day)</b>					
<b>Pollutant</b>	<b>Proposed Project Emissions</b>	<b>Clustered Development Alternative Emissions</b>	<b>Threshold of Significance</b>	<b>Exceeds Threshold? (As Proposed)</b>	<b>Exceeds Threshold? (Alternative)</b>
ROG	89.15	45.09	54	<b>YES</b>	<b>NO</b>
NO <sub>x</sub>	102.12	53.09	54	<b>YES</b>	<b>NO</b>
PM <sub>10</sub> (exhaust)	3.65	1.84	82	<b>NO</b>	<b>NO</b>
PM <sub>10</sub> (fugitive)	61.60	32.57	None	<b>N/A</b>	<b>N/A</b>
PM <sub>2.5</sub> (exhaust)	3.61	1.82	54	<b>NO</b>	<b>NO</b>
PM <sub>2.5</sub> (fugitive)	16.48	8.71	None	<b>N/A</b>	<b>N/A</b>
<i>Source: CalEEMod, October 2017 (see Appendix D).</i>					

<b>Table 6-4</b> <b>Clustered Development Alternative Operational GHG Emissions</b>		
	<b>Proposed Project Emissions</b>	<b>Clustered Development Alternative Emissions</b>
<b>Year 2023 Operations</b>		
<b>Operational Annual GHG Emissions</b>	16,973.33 MTCO <sub>2</sub> e/yr	8,804.78 MTCO <sub>2</sub> e/yr
<b>Operational Annual GHG Emissions Per Service Population</b>	3.54 MTCO <sub>2</sub> e/SP/yr	3.67 MTCO <sub>2</sub> e/SP/yr
<b>BAAQMD AB 32 Threshold</b>	4.6 MTCO <sub>2</sub> e/SP/yr	4.6 MTCO <sub>2</sub> e/SP/yr
<b>Year 2030 Operations</b>		
<b>Operational Annual GHG Emissions</b>	14,643 MTCO <sub>2</sub> e/yr	7,588.93 MTCO <sub>2</sub> e/yr
<b>Operational Annual GHG Emissions Per Service Population</b>	3.05 MTCO <sub>2</sub> e/SP/yr	3.16 MTCO <sub>2</sub> e/SP/yr
<b>SB 32 Threshold</b>	2.76 MTCO <sub>2</sub> e/SP/yr	2.76 MTCO <sub>2</sub> e/SP/yr
Notes: Service populations calculated as follows: <ul style="list-style-type: none"> <li>Proposed project: 1,500 units x 3.2 persons per household = 4,800 persons</li> <li>Clustered Development Alternative: 750 units x 3.2 persons per household = 2,400 persons</li> </ul>		
<i>Source: CalEEMod, March and October 2017 (see Appendix D).</i>		

As shown in Table 6-4, the Clustered Development Alternative would result in fewer operational GHG emissions as compared to the proposed project. However, because the service population would be reduced, the Clustered Development Alternative would result in an increase in the annual GHG emissions per service population compared to the proposed project. Nevertheless, operational GHG emissions from the Clustered Development Alternative would remain below the 4.6 MTCO<sub>2</sub>e/SP/yr threshold established by BAAQMD for compliance with AB 32. However, operational emissions from the Clustered Development Alternative in the year 2030 would be anticipated to exceed the applicable SB 32 threshold determined by the City for use in this analysis

of 2.76 MTCO<sub>2e</sub>/SP/yr. Considering the anticipated year 2030 operational emissions, the Clustered Development Alternative would, similar to the proposed project, conflict with SB 32.

Because the Clustered Development Alternative would result in fewer vehicle trips than the proposed project, the alternative would result in less traffic on area roadways and, thus, a reduced contribution to localized CO concentrations at surrounding intersections. As the Clustered Development Alternative would consist of buildout on the same site in the same location as the proposed project with the same land uses, the effects of the project, as well as on the project from nearby sources of TACs, would be similar to that of the proposed project.

Overall, the Clustered Development Alternative would result in fewer impacts than the proposed project related to air quality emissions, and the proposed project's significant and unavoidable impact associated with the generation of operational emissions of ROG and NO<sub>x</sub> in excess of thresholds would be avoided. However, significant and unavoidable impacts associated with operational GHG emissions would remain with implementation of the Clustered Development Alternative.

### Biological Resources

The Clustered Development Alternative would dedicate a greater area to residential uses as compared to the proposed project. Furthermore, some of the increased open space areas would be located in the southern, upland portions of the project site. Such areas of the site would be in closer proximity to the California Tiger Salamander (CTS) breeding grounds in the nearby Concord Naval Weapons Station. As such, the Clustered Development Alternative would protect a greater amount of potential CTS upland habitat than the proposed project. Clustering the development would further reduce the potential for site development to interfere with native or migratory wildlife species or corridors, as a smaller portion of the site would be developed, allowing for greater habitat connectivity. The potential protection of larger areas of CTS upland habitat, as well as the protection of greater portions of the site as open space would reduce the potential for the Clustered Development Alternative to conflict with policies or ordinances protecting biological resources, and/or conflict with provisions of an adopted habitat conservation plan. Therefore, impacts related to biological resources would be slightly fewer under the Clustered Development Alternative as compared to the proposed project.

### Cultural and Tribal Resources

Development of the Clustered Development Alternative would result in 300 acres of site disturbance, which is 39.1 acres less than the disturbance that would occur under the proposed project. As discussed in further depth in Chapter 4.5, Cultural and Tribal Resources, of this EIR, the entire project site has been subject to field surveys for cultural resources. Prehistoric archaeological, tribal cultural, and/or significant historical have not been identified within the project site. Nevertheless, development of the Clustered Development Alternative would involve ground disturbing activity; ground disturbing activity would have the potential to disturb or degrade previously unknown cultural, historical, and/or tribal cultural resources. Consequently, the Clustered Development Alternative would require mitigation to reduce the potential disturbance or degradation of cultural, historical, and/or tribal cultural resources. Although the



Clustered Development Alternative would require mitigation regarding the protection of cultural and tribal cultural resources, because the Clustered Development Alternative would develop a smaller portion of the project site, the Clustered Development Alternative would have a lower likelihood of encountering previously unknown resources as compared to the proposed project. As such, The Clustered Development Alternative would result in slightly fewer impacts than the proposed project.

#### Geology, Soils, and Seismicity

Development of the Clustered Development Alternative would result in a reduction in development area from 339.1 acres to 300 acres. Developable areas would be clustered within the lower lying portions of the project site and away from areas of suspected geological instability. Additionally, the Clustered Development Alternative would consist of buildout of 750 fewer residential units, which would place fewer residents and structures within the project site. Accordingly, the Clustered Development Alternative would disturb less site area, which would reduce the potential for the Clustered Development Alternative to result in erosion and loss of topsoil, as compared to the project. However, because the liquefaction potential and expansivity of soil within the project site is unknown, the Clustered Development Alternative would result in similar potential impacts related to liquefaction and soil expansion. The Clustered Development Alternative would be designed to avoid areas of soil instability and areas particularly susceptible to land sliding. Considering that the Clustered Development Alternative would involve fewer residential units, and the Clustered Development Alternative would be designed to avoid disturbance of unstable areas of the site, fewer homes and future residents would be exposed to the aforementioned potential geological hazards, including the significant and unavoidable hazard related to landslides. Therefore, the Clustered Development Alternative would be anticipated to result in fewer impacts associated with geology, soils, and seismicity compared to the proposed project.

#### Hazards and Hazardous Materials

The Clustered Development Alternative would reduce the area of disturbance as compared to the proposed project. Therefore, impacts related to exposure to any existing on-site hazards or hazardous materials would be slightly reduced. However, because development within the Clustered Development Alternative would continue to be surrounded by wildlands, the future residents would be subject to a similar risk from wildland fires as would be experienced under the proposed project. As the Clustered Development Alternative, like the proposed project, would consist of residential uses, impacts related to the creation of hazards to the public or the environment related to the routine transport, use, or disposal of hazardous materials would be similar to that of the proposed project. Nonetheless, because the Clustered Development Alternative would involve fewer residential units, fewer homes and future residents would be exposed to hazards related to wildland fires. Therefore, the Clustered Development Alternative would result in slightly fewer impacts associated with hazards and hazardous materials compared to the proposed project.

## Hydrology and Water Quality

Similar to the proposed project, land disturbance would occur during construction activities associated with the Clustered Development Alternative. The Clustered Development Alternative would alter the existing drainage pattern of the site, but because less area would be disturbed during construction of the Clustered Development Alternative, the Clustered Development Alternative would result in slightly fewer impacts compared to the proposed project related to potential water quality and erosion issues. The Clustered Development Alternative would involve construction of 750 fewer residential units over 39.1 fewer acres as compared to the proposed project. The reduction in residential units and development area would result in a reduction of the overall impervious surface cover of the project site. Considering the reduction in impervious surface cover, the Clustered Development Alternative would be anticipated to result in fewer impacts related to the existing stormwater drainage system capacity, contaminated runoff, and groundwater recharge.

As the site is not located within a floodplain, the same impacts related to placement of structures or housing within a floodplain and associated flooding risks would occur under the Clustered Development Alternative as the proposed project. Overall, the Clustered Development Alternative would result in fewer hydrology and water quality related impacts, as compared to the proposed project.

## Land Use and Planning

The Clustered Development Alternative would, like the proposed project, require annexation to the City of Pittsburg and approval of rezoning. Should the Pittsburg City Council approve the requested entitlements, the project would be consistent with the land use and zoning designations for the site. Neither the proposed project nor the Reduced Intensity Alternative would displace a substantial amount of existing housing or people, and both would create housing on the site. The Clustered Development Alternative would reduce the total number of dwelling units built on the project site from 1,500 to 750. Based on the average persons per household rate of 3.2, according to City of Pittsburg's 2015 – 2023 Housing Element,<sup>2</sup> the Clustered Development Alternative would result in a buildout population of approximately 2,400 residents, as opposed to the proposed project's estimated population of 4,800 residents. Therefore, the Clustered Development Alternative would result in less population growth in the area than the proposed project.

Under the Clustered Development Alternative, development would be focused within the lower lying portions of the project site as well as areas within the site with less severe slopes and lower likelihood of geologic instability. Because the Clustered Development Alternative would involve development on lower lying portions of the project site, away from areas of geologic instability, the Clustered Development Alternative would not be anticipated to include development in excess of 900 feet or significant development in areas with slopes in excess of 30 percent. As a result of the exclusion of development areas in excess of 900 feet, the Clustered Development Alternative would be consistent with the City's General Plan goals and policies, including Policy 10-P-2 and impacts related to land use and planning would be fewer than of proposed project.

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<sup>2</sup> City of Pittsburg. 2015 – 2023 Housing Element. May 04, 2015.

## Noise

Development of the Clustered Development Alternative would include the development of 750 fewer dwelling units. A reduction in the total number of dwelling units could also reduce the amount of construction time, thereby reducing construction-related noise and vibration impacts. Furthermore, because the Clustered Development Alternative would involve fewer future residents and resident related vehicle trips, noise levels associated with an increase in project-generated vehicle trips would be less than that of the proposed project. Therefore, the Clustered Development Alternative would result in fewer noise-related impacts than that of the proposed project.

## Public Services and Utilities

Because the Clustered Development Alternative would consist of buildout of 750 fewer residential units, the increase in demand for public services and utilities including, but not limited to, water supply and delivery; wastewater collection and treatment, solid waste disposal, law enforcement, and fire protection would be less than that of the proposed project. Because the project site is not currently within the CCWD and the DDSO annexation to the CCWD and DDSO and amendment of service boundaries would require approval by LAFCo in conjunction with the CCWD and DDSO, similar to the proposed project. The reduction in units associated with the Clustered Development Alternative would reduce the demand for park acres in comparison to the proposed project; thus, the Clustered Development Alternative would result in fewer impacts than the proposed project related to parks and recreation. Although the Clustered Development Alternative would reduce demand from the built-out project site on fire protection services, the project site would remain outside of the City's 1.5-mile response time radius of the nearest fire station. As such, the Clustered Development alternative would continue to result in a significant and unavoidable impact related to fire protection services. Notwithstanding the significant and unavoidable impact related to fire protection services, because development of the Clustered Development Alternative would reduce the number of residential units at build out of the project site by 750, the Clustered Development Alternative would result in fewer impacts related to public services and utilities compared to that of the proposed project.

## Transportation, Traffic, and Circulation

Development of the Clustered Development Alternative would result in the buildout of 750 fewer dwelling units than the proposed project, which would subsequently result in fewer project-generated vehicle trips. Using the trip generation rates presented in Table 4.12-11 of Chapter 4.12, Transportation, Traffic, and Circulation, of this EIR, the trip generation for the Clustered Development Alternative was estimated and is presented in comparison to the proposed project's trip generation in Table 6-5 below.

As shown in Table 6-5, the Clustered Development Alternative would result in 6,637 daily trips or approximately 5,923 fewer vehicle trips from the project site per day. The vehicle trips that would occur during operation of the Clustered Development Alternative would be anticipated to experience a similar trip distribution as is anticipated for the proposed project, and discussed in Chapter 4.12, of this EIR. Considering that the Clustered Development Alternative would result in a reduced number of daily and peak hour vehicle trips, and such trips would continue to be

distributed throughout the circulation network as discussed in Chapter 4.12, the number of vehicles passing through study intersections during peak hours would be proportionally reduced to the same degree as shown in Table 6-5.

<b>Table 6-5</b>			
<b>Proposed Project vs. Clustered Development Alternative Trip Generation</b>			
<b>Duration</b>	<b>Proposed Project Trips</b>	<b>Clustered Development Alternative Trips</b>	<b>Percent Trip Reduction</b>
Daily	12,560	6,637	47.2
AM Peak Hour	1,060	535	49.5
PM Peak Hour	1,202	644	46.4
<i>Source: Fehr &amp; Peers, April 2017.</i>			

As discussed in Chapter 4.12, a significant impact would occur under either of the following scenarios for a proposed project:

- If the intersection operates at an acceptable LOS without the project and degrades to an unacceptable LOS with the project; or
- If the intersection operates at an unacceptable LOS without the project and experiences an increase in delay, and the project contributes more than one percent of the volume to the intersection.

The significant and unavoidable impacts discussed in Chapter 4.12 occur at intersections that operate at an unacceptable LOS without traffic related to the proposed project; therefore, the second threshold presented above was used to analyze potential impacts resulting from traffic related to the proposed project. Because the Clustered Development Alternative would generate approximately half as many vehicle trips as the proposed project, the intersection traffic volume increases at intersections operating under unacceptable condition would be proportionally reduced. Table 6-6 below, presents the anticipated traffic volume under the proposed project and the Clustered Development Alternative.

<b>Table 6-6</b>		
<b>Proposed Project vs. Clustered Development Alternative Intersection Volumes</b>		
<b>Intersection</b>	<b>Intersection Volume due to Proposed Project (%)<sup>1</sup></b>	<b>Intersection Volume due to Clustered Development Alternative (%)</b>
6. W. Leland Road/San Marco Boulevard	16	8
35. Concord Boulevard/Bailey Road	21.5	10.75
36. Bailey Road/Myrtle Drive	22.5	11.25
39. Clayton Road/Treat Boulevard	9	4.5
44. Treat Boulevard/Oak Grove Road	7	3.5
<sup>1</sup> Intersection volumes from proposed project are based on the traffic condition in which significant and unavoidable impact at given intersection would occur (i.e. Existing Plus Project Condition or Long-Term Plus Project Condition).		
<i>Source: Kimley-Horn and Associates, Inc., April 2017.</i>		

As shown in Table 6-6, the Clustered Development Alternative would increase intersection volumes to a lesser degree than the proposed project. However, the Clustered Development Alternative would continue to increase intersection volumes beyond the one percent threshold used for intersections operating at unacceptable LOS. Consequently, similar to the proposed project the Clustered Development Alternative would be anticipated to result in significant and unavoidable impacts, but the severity of such impacts may be reduced as the Clustered Development Alternative would contribute less vehicle traffic to impacts intersections.

Considering the above, the Clustered Development Alternative would not eliminate any significant and unavoidable impacts that are anticipated to result due to implementation of the proposed project, but the Clustered Development Alternative would be anticipated to reduce the severity of such impacts. Thus, the Clustered Development Alternative would result in slightly fewer impacts transportation, traffic, and circulation as compared to the proposed project.

### **Reduced Intensity Alternative**

The Reduced Intensity Alternative would achieve all of the proposed project's objectives. The Reduced Intensity Alternative would include the construction of 1,000 single-family in the same development areas as indicated in the Draft Master Plan and shown in Figure 3-5 of the Project Description chapter of this EIR.

#### Aesthetics

Development of proposed project or the Reduced Density Alternative would result in development of 1,000 residential units in the developable areas of the project site. Consequently, the Reduced Density Alternative would result in the similar impacts related to scenic vistas, scenic resources, including but not limited to trees, rocks, outcroppings, and historic buildings within a State scenic highway, and cumulative impacts. Both the proposed project and Reduced Density Alternative would alter the existing visual character and quality of the site, as well as the site's surroundings, and introduce new sources of light and glare. Because the Reduced Density Alternative would result in development of the site for residential uses, the same potential for degradation of visual character and quality of the site and surroundings would occur as with the proposed project. However, the Reduced Density Alternative would result in the development of 500 fewer dwelling units, which would likely decrease the potential effects of light and glare. Therefore, development of the Reduced Density Alternative would result in slightly fewer impacts as compared to the proposed project.

#### Agricultural Resources

Similar to the proposed project, the Reduced Density Alternative would result in buildout of the development area depicted in Figure 3-5 of the Project Description chapter of this EIR. The project site is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, impacts related to agricultural resources would be similar under the Reduced Density Alternative compared to the proposed project.

## Air Quality and GHG Emissions

The Reduced Intensity Alternative would reduce the total number of dwelling units constructed on the project site by 500 dwelling units. Site disturbance area would remain constant compared to the proposed project. As such, lot size would increase under the Reduced Intensity Alternative. Therefore, while the duration of the overall construction phase may be slightly reduced, construction-related air quality and GHG impacts would be similar compared to the proposed project.

Nonetheless, because the Reduced Intensity Alternative would involve fewer homes and future residents, operational emissions associated with vehicle trips, as well as area and energy sources, would be fewer than that of the proposed project. The CalEEMod version 2016.3.1 software was used to estimate the Reduced Intensity Alternative's operational emissions. It should be noted that inherent defaults in CalEEMod, such as low VOC cleaning supplies and only natural gas hearths, were applied for the alternative analysis, with the exception of the anticipated trip rates, which were calculated based on trip rate formulas provided in the Transportation Impact Study prepared for the proposed project by Kimley-Horn and Associates, Inc.

Operational emissions of criteria pollutants associated with the Reduced Intensity Alternative are summarized in Table 6-7 below. As shown in the table, ROG and NO<sub>x</sub> emissions would exceed the applicable thresholds of significance. Thus, mitigation would still be required. Mitigation Measure 4.4-2 of this EIR would reduce the operational emissions, but the daily emissions of ROG and NO<sub>x</sub> would likely still exceed the applicable threshold of significance. Similar to the conclusion for the proposed project, because the proposed project has been evaluated at a program-level and a guaranteed cannot be made that emissions from future development in the project area would not exceed the thresholds of significance, impacts would be expected to remain significant and unavoidable, similar to the proposed project.

<b>Table 6-7</b> <b>Reduced Intensity Alternative</b> <b>Operational Emissions of Criterial Pollutants (lbs/day)</b>					
<b>Pollutant</b>	<b>Proposed Project Emissions</b>	<b>Reduced Intensity Alternative Emissions</b>	<b>Threshold of Significance</b>	<b>Exceeds Threshold? (As Proposed)</b>	<b>Exceeds Threshold? (Alternative)</b>
ROG	89.15	59.84	54	<b>YES</b>	<b>YES</b>
NO <sub>x</sub>	102.12	69.66	54	<b>YES</b>	<b>YES</b>
PM <sub>10</sub> (exhaust)	3.65	2.44	82	<b>NO</b>	<b>NO</b>
PM <sub>10</sub> (fugitive)	61.60	42.44	None	<b>N/A</b>	<b>N/A</b>
PM <sub>2.5</sub> (exhaust)	3.61	2.41	54	<b>NO</b>	<b>NO</b>
PM <sub>2.5</sub> (fugitive)	16.48	11.35	None	<b>N/A</b>	<b>N/A</b>
<i>Source: CalEEMod, March and October 2017 (see Appendix D).</i>					

Operational emissions of GHGs associated with the Reduced Intensity Alternative are summarized in Table 6-8 below. As shown in Table 6-8, the Reduced Intensity Alternative would result in a reduction in operational emissions of GHG as compared to the proposed project. However, because the service population would be reduced, the Reduced Intensity Alternative would result in an

increase in annual GHG emissions per service population compared to the proposed project. Nevertheless, operational GHG emissions from the Reduced Intensity Alternative would remain below the 4.6 MTCO<sub>2</sub>e/SP/yr threshold established by BAAQMD for compliance with AB 32. However, operational emissions from the Reduced Intensity Alternative in the year 2030 would be anticipated to exceed the SB 32 threshold determined by the City for use in this analysis of 2.76 MTCO<sub>2</sub>e/SP/yr. Considering the anticipated year 2030 operational emissions, the Reduced Intensity Alternative would, similar to the proposed project conflict with SB 32.

<b>Table 6-8 Reduced Intensity Alternative Operational GHG Emissions</b>		
	<b>Proposed Project Emissions</b>	<b>Reduced Intensity Alternative Emissions</b>
<b>Year 2023 Operations</b>		
<b>Operational Annual GHG Emissions</b>	16,973.33 MTCO <sub>2</sub> e/yr	11,562.97 MTCO <sub>2</sub> e/yr
<b>Operational Annual GHG Emissions Per Service Population</b>	3.54 MTCO <sub>2</sub> e/SP/yr	3.61 MTCO <sub>2</sub> e/SP/yr
<b>Threshold</b>	4.6 MTCO <sub>2</sub> e/SP/yr	4.6 MTCO <sub>2</sub> e/SP/yr
<b>Year 2030 Operations</b>		
<b>Operational Annual GHG Emissions</b>	14,643 MTCO <sub>2</sub> e/yr	10,118.57 MTCO <sub>2</sub> e/yr
<b>Operational Annual GHG Emissions Per Service Population</b>	3.05 MTCO <sub>2</sub> e/SP/yr	3.16 MTCO <sub>2</sub> e/SP/yr
<b>SB 32 Threshold</b>	2.76 MTCO <sub>2</sub> e/SP/yr	2.76 MTCO <sub>2</sub> e/SP/yr
Notes: Service populations calculated as follows: <ul style="list-style-type: none"> <li>Proposed project: 1,500 units x 3.2 persons per household = 4,800 persons</li> <li>Reduced Intensity Alternative: 1,000 units x 3.2 persons per household = 3,200 persons</li> </ul>		
<i>Source: CalEEMod, March and October 2017 (see Appendix D).</i>		

Because the Reduced Intensity Alternative would result in fewer vehicle trips than the proposed project, the alternative would result in less traffic on area roadways and, thus, a reduced contribution to localized CO concentrations at surrounding intersections. As the Reduced Intensity Alternative would consist of buildout on the same site in the same location as the proposed project with the same land uses, the effects of the project, as well as on the project from nearby sources of TACs, would be similar to that of the proposed project.

Overall, the Reduced Intensity Alternative would result in slightly fewer impacts than the proposed project related to air quality emissions. However, the proposed project's significant and unavoidable impact associated with the generation of operational emissions of ROG and NO<sub>x</sub> in excess of thresholds would remain. In addition, the significant and unavoidable impact associated with operational GHG emissions would remain with implementation of the Reduced Intensity Alternative.

### Biological Resources

The Reduced Intensity Alternative would dedicate a similar area to residential uses as compared to the proposed project. As such, the same potential exists for effects on existing habitat,

interference with native or migratory wildlife species or corridors, confliction with policies or ordinance protecting biological resources, and confliction with provisions of an adopted habitat conservation plan. Therefore, impacts related to biological resources would be similar under the Reduced Intensity Alternative to the proposed project.

### Cultural and Tribal Resources

Development of the Reduced Intensity Alternative would result in 339.1 acres of site disturbance, which is equivalent to the proposed project. As discussed in further depth in Chapter 4.5, Cultural and Tribal Resources, of this EIR, the entire project site has been subject to field surveys for cultural resources. Prehistoric archaeological, tribal cultural, and/or significant historical have not been identified within the project site. Nevertheless, development of the Reduced Intensity Alternative would involve ground disturbing activity; ground disturbing activity would have the potential to disturb or degrade previously unknown cultural, historical, and/or tribal cultural resources. Consequently, the Reduced Intensity Alternative would require mitigation to reduce the potential disturbance or degradation of cultural, historical, and/or tribal cultural resources, and the Reduced Intensity Alternative would result in similar impacts related to cultural and tribal cultural resources as the proposed project.

### Geology, Soils, and Seismicity

Development of the Reduced Intensity Alternative would result in the same site disturbance as the proposed project, but would consist of buildout of 500 fewer residential units. Accordingly, the same potential for on-site hazards related to geology, soils, and seismicity, such as earthquakes, soil erosion, soil stability, and expansive soil, would occur under the Reduced Intensity Alternative. However, because the Reduced Intensity Alternative (would involve fewer residential units, fewer homes and future residents would be exposed to the aforementioned potential geological hazards. Although the Reduced Intensity Alternative would involve fewer residents and structures at the project site, the Reduced Intensity Alternative would involve development over the entire 339.1 acre development area portion of the project site. As such, the units included in the Reduced Intensity Alternative would continue to be subject to the significant and unavoidable impact related to landslides within the project site. Therefore, the Reduced Intensity Alternative would result in similar impacts associated with geology, soils, and seismicity compared to the proposed project.

### Hazards and Hazardous Materials

The Reduced Intensity Alternative would involve the same site disturbance as the proposed project. Therefore, impacts related to exposure to any existing on-site hazards or hazardous materials and wildland fires would be similar under the Reduced Intensity Alternative to the proposed project. As the Reduced Intensity Alternative, like the proposed project, would consist of residential uses, impacts related to the creation of hazards to the public or the environment related to the routine transport, use, or disposal of hazardous materials would be similar to that of the proposed project. However, because the Reduced Intensity Alternative would involve fewer residential units, fewer homes and future residents would be exposed to hazards related to wildland



fires. Therefore, the Reduced Intensity Alternative would result in slightly fewer impacts associated with hazards and hazardous materials compared to the proposed project.

### Hydrology and Water Quality

Similar to the proposed project, land disturbance would occur during construction activities associated with the Reduced Intensity Alternative. The Reduced Intensity Alternative would alter the existing drainage pattern of the site and would result in the same impacts as the proposed project related to potential water quality and erosion issues. Although the Reduced Intensity Alternative would involve the construction of 500 fewer residential units than the proposed project, the increase in average lot size would likely result in negligible reductions to overall impervious surface cover of the project site. As such, the amount of impervious surfaces under the Reduced Intensity Alternative would be expected to be similar to that of the proposed project. Therefore, development of the Reduced Intensity Alternative would result in impacts similar to the proposed project related to the effects on the existing stormwater drainage system capacity, contaminated runoff, and groundwater recharge.

As the site is not located within a floodplain, the same impacts related to placement of structures or housing within a floodplain and associated flooding risks would occur under the Reduced Intensity Alternative as the proposed project. Overall, the Reduced Intensity Alternative would result in similar impacts related to hydrology and water quality, as compared to the proposed project.

### Land Use and Planning

The Reduced Intensity Alternative would, like the proposed project, require annexation to the City of Pittsburg and approval of the requested change in rezoning. Should the Pittsburg City Council approve the requested entitlements, the project would be consistent with the land use and zoning designations for the site. Neither the proposed project nor the Reduced Intensity Alternative would displace a substantial amount of existing housing or people, and both would create housing on the site. The Reduced Intensity Alternative would reduce the total number of dwelling units built on the project site from 1,500 to 1,000. Based on the average persons per household rate of 3.2, according to City of Pittsburg's 2015 – 2023 Housing Element,<sup>3</sup> the Reduced Intensity Alternative would result in a buildout population of approximately 3,200 residents., as opposed to the proposed project's estimated population of 4,800 residents. Therefore, the Reduced Intensity Alternative would result in less population growth in the area than the proposed project.

The Reduced Intensity Alternative would involve development of the project site over the same 339.1 acre area as would occur under the proposed project. As such, development of the Reduced Intensity Alternative may include development above 900 feet in areas with slopes exceeding 30 percent. Such development would conflict with Policy 10-P-2, and mitigation would continue to be required to ensure consistency of the Reduced Intensity Alternative with the City's General Plan. In conclusion, impacts related to land use and planning would be similar to that of the proposed project.

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<sup>3</sup> City of Pittsburg. 2015 – 2023 *Housing Element*. May 04, 2015.

## Noise

Development of the Reduced Intensity Alternative would include the development of 500 fewer dwelling units. A reduction in the total number of dwelling units could also reduce the amount of construction time, thereby reducing construction-related noise and vibration impacts. Furthermore, because the Reduced Intensity Alternative would involve fewer future residents and resident related vehicle trips, noise levels associated with an increase in project-generated vehicle trips would be less than that of the proposed project. Therefore, the Reduced Intensity Alternative would result in fewer noise-related impacts than that of the proposed project.

## Public Services and Utilities

Because the Reduced Intensity Alternative would consist of buildout of 500 fewer residential units, the increase in demand for public services and utilities including, but not limited to, water supply and delivery; wastewater collection and treatment, solid waste disposal, law enforcement, and fire protection would be less than that of the proposed project. Because the project site is not currently within the CCWD and DDSO, annexation to the CCWD and DDSO and amendment of service boundaries would require approval by LAFCo in conjunction with the CCWD and DDSO, similar to the proposed project. The reduction in units associated with the Reduced Intensity Alternative would reduce the demand for park acres in comparison to the proposed project; thus, the Reduced Intensity Alternative would result in fewer impacts than the proposed project related to parks and recreation. Although the Reduced Intensity Alternative would reduce demand from the built-out project site on fire protection services, the project site would remain outside of the City's 1.5-mile response time radius of the nearest fire station. As such, the Reduced Intensity alternative would continue to result in a significant and unavoidable impact related to fire protection services. Notwithstanding the significant and unavoidable impact related to fire protection services, because development of the Reduced Intensity Alternative would reduce the number of residential units at build out by 500, the Reduced Intensity Alternative would result in fewer impacts related to public services and utilities compared to that of the proposed project.

## Transportation, Traffic, and Circulation

Development of the Reduced Intensity Alternative would result in the buildout of 500 fewer dwelling units than the proposed project, which would subsequently result in fewer project-generated vehicle trips. Using the trip generation rates presented in Table 4.12-11 of Chapter 4.12, Transportation, Traffic, and Circulation, of this EIR, the trip generation for the Reduced Intensity Alternative was estimated and is presented in comparison to the proposed project's trip generation in Table 6-9 below.

As shown in Table 6-9, the Reduced Intensity Alternative would result in 8,648 daily trips or approximately 3,912 fewer vehicle trips from the project site per day. The vehicle trips that would occur during operation of the Reduced Intensity Alternative would be anticipated to experience a similar trip distribution as is anticipated for the proposed project, and discussed in Chapter 4.12, of this EIR.

<b>Table 6-9 Proposed Project vs. Reduced Intensity Alternative Trip Generation</b>			
<b>Duration</b>	<b>Proposed Project Trips</b>	<b>Reduced Intensity Alternative Trips</b>	<b>Percent Trip Reduction</b>
Daily	12,560	8,648	31.15
AM Peak Hour	1,060	710	33.02
PM Peak Hour	1,202	835	30.53
<i>Source: Kimley-Horn and Associates, Inc., April 2017.</i>			

Considering that the Reduced Intensity Alternative would result in a reduced number of daily and peak hour vehicle trips, and such trips would continue to be distributed throughout the circulation network as discussed in Chapter 4.12, the number of vehicles passing through study intersections during peak hours would be proportionally reduced to the same degree as shown in Table 6-9.

As discussed in Chapter 4.12, a significant impact would occur under either of the following scenarios for a proposed project:

- If the intersection operates at an acceptable LOS without the project and degrades to an unacceptable LOS with the project; or
- If the intersection operates at an unacceptable LOS without the project and experiences an increase in delay, and the project contributes more than one percent of the volume to the intersection.

The significant and unavoidable impacts discussed in Chapter 4.12 occur at intersections that operate at an unacceptable LOS without traffic related to the proposed project; therefore, the second threshold presented above was used to analyze potential impacts resulting from traffic related to the proposed project. Because the Reduced Intensity Alternative would generate approximately 30 percent fewer vehicle trips as the proposed project, the intersection traffic volume increases at intersections operating under unacceptable condition would be proportionally reduced. Table 6-10 below, presents the anticipated traffic volume under the proposed project and the Reduced Intensity Alternative.

<b>Table 6-10 Proposed Project vs. Reduced Intensity Alternative Intersection Volumes</b>			
<b>Intersection</b>		<b>Intersection Volume due to Proposed Project (%)<sup>1</sup></b>	<b>Intersection Volume due to Reduce Intensity Alternative (%)</b>
6.	W. Leland Road/San Marco Boulevard	16	11.2
35.	Concord Boulevard/Bailey Road	21.5	15.05
36.	Bailey Road/Myrtle Drive	22.5	15.75
39.	Clayton Road/Treat Boulevard	9	6.3
44.	Treat Boulevard/Oak Grove Road	7	4.9
<sup>1</sup> Intersection volumes from proposed project are based on the traffic condition in which significant and unavoidable impact at given intersection would occur (i.e. Existing Plus Project Condition or Long-Term Plus Project Condition).			
<i>Source: Kimley-Horn and Associates, Inc., April 2017.</i>			

As shown in Table 6-10, the Reduced Intensity Alternative would increase intersection volumes to a lesser degree than the proposed project. However, the Reduced Intensity Alternative would continue to increase intersection volumes beyond the one percent threshold used for intersections operating at unacceptable LOS. Consequently, similar to the proposed project the Reduced Intensity Alternative would be anticipated to result in significant and unavoidable impacts, but the severity of such impacts may be reduced as the Reduced Intensity Alternative would contribute less vehicle traffic to impacts intersections.

Considering the above, the Reduced Intensity Alternative would not eliminate any significant and unavoidable impacts that are anticipated to result due to implementation of the proposed project, but the Reduced Intensity Alternative would be anticipated to reduce the severity of such impacts. Thus, the Reduced Intensity Alternative would result in slightly fewer impacts to transportation, traffic, and circulation as compared to the proposed project.

## **6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

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An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126(e)(2) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states, “If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”

Designating a superior alternative depends in large part on what environmental effects one considers most important. This EIR does not presume to make this determination; rather, the determinations of which impacts are more important are left to the reader and the decision makers. Generally, the environmentally superior alternative is the one that would result in the fewest environmental impacts as a result of project implementation. However, it should be noted that the environmental considerations are one portion of the factors that must be considered by the public and the decisionmakers in deliberations on the proposed project and the alternatives. Other factors of importance include urban design, economics, social factors, and fiscal considerations. In addition, the superior alternative would, ideally, still provide opportunities to achieve the project objectives.

A comparison of the proposed project to the three alternatives discussed in detail above is illustrated in Table 6-11 below. Aside from the No Project Alternatives, all other alternatives considered in-depth within this chapter would meet the proposed project’s objectives.

As shown in the table, the Clustered Development Alternative would result in fewer impacts than the proposed project in eleven resource areas, and similar impacts in one resource area. Although the Clustered Development Alternative would be anticipated to result in significant and unavoidable impacts related to Aesthetics, Air Quality and GHG Emissions, as well as Transportation, Traffic, and Circulation, the Clustered Development Alternative would be anticipated to reduce the significant and unavoidable impact related to Geology, Soils, and Seismicity to a less-than-significant level. Considering that the Clustered Development Alternative would reduce a significant and unavoidable impact of the proposed project and result in fewer

impacts than the Mixed Use or Reduced Intensity project alternatives, the Clustered Development Alternative would be considered the environmentally superior alternative.

Table 6-11 Alternative Environmental Comparison					
Resource Area	Proposed Project	No Project (No Build) Alternative	Mixed Use Alternative	Clustered Development Alternative	Reduced Intensity Alternative
Aesthetics	Significant and Unavoidable	None	Fewer*	Fewer*	Fewer*
Agricultural Resources	Less-Than-Significant	None	Similar	Similar	Similar
Air Quality and GHG Emissions	Significant and Unavoidable	None	Fewer*	Fewer*	Fewer*
Biological Resources	Less-Than-Significant with Mitigation	None	Similar	Fewer	Similar
Cultural and Tribal Cultural Resources	Less-Than-Significant with Mitigation	None	Similar	Fewer	Similar
Geology, Soils, and Seismicity	Less-Than-Significant with Mitigation	None	Fewer	Fewer	Similar
Hazards and Hazardous Materials	Less-Than-Significant with Mitigation	None	Greater	Fewer	Fewer
Hydrology and Water Quality	Less-Than-Significant with Mitigation	None	Similar	Fewer	Similar
Land Use and Planning	Less-Than-Significant with Mitigation	Greater	Similar	Fewer	Similar
Noise	Less-Than-Significant with Mitigation	None	Fewer	Fewer	Fewer
Public Services and Utilities	Significant and Unavoidable	None	Similar*	Fewer*	Fewer*
Transportation, Traffic, and Circulation	Significant and Unavoidable	None	Fewer*	Fewer*	Fewer*
Notes: No Impact = "None" Less than Proposed Project = "Fewer" Less than Proposed Project, but Mitigation Similar to Proposed Project = "Similar" Greater than Proposed Project = "Greater" *Significant and Unavoidable impact(s) determined for the proposed project would still be expected to occur under the Alternative.					

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## 7. REFERENCES

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## 8. EIR AUTHORS AND PERSONS CONSULTED

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# 8

## EIR AUTHORS AND PERSONS CONSULTED

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Senior Principal Professional  
Senior Project Manager

**WEST YOST ASSOCIATES**

James P. Connell

Project Engineer

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## APPENDIX A

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# **Faria Property Master Plan**

## **For Faria/Southwest Hills Reclassification from HPD and OS Rezoning Districts, to RS-4-P and OS-P Rezoning Overlay Districts**

### **Background**

In November 2005, the voters of the City of Pittsburg approved a ballot initiative entitled “Measure P (City of Pittsburg Voter Approved Urban Limit Line and Rezoning Act)”, which established a new Urban Limit Line (ULL) for the City and rezoned certain properties. Included in these properties was the entire 607-acre Faria project site. On May 3, 2006, the City entered into a Memorandum of Understanding (MOU) which called for the City to conduct a ‘General Plan Study’ in order to, among other things, establish guidelines for the development of a permanent greenbelt buffer along the ridges of the Concord/Pittsburg border. The City Council, on January 16, 2007, adopted Resolution No. 07-10700, which included a new General Plan policy, 2-P-91, to ensure that a greenbelt buffer would be established in accordance with the terms of Measure P and the May 3<sup>rd</sup> MOU.

On July 8, 2009, the Contra Costa Local Agency Formation Commission (LAFCo) approved an extension of the Pittsburg Sphere of Influence (SOI) to include the Faria property. As part of that action, the SOIs for Delta Diablo and the Contra Costa Water District (CCWD) were also expanded to include the Faria property. On September 24, 2010, the property owner submitted an application requesting the City begin processing a request for annexation of the site to bring the property into the City of Pittsburg City Limits. In addition to the request for annexation to the City, the application also included requests for the project area to be annexed to the Delta Diablo and CCWD service areas.

In August 2016, the property owner modified their application materials to include a master plan overlay district. The purpose of this Master Plan is to conceptually define and guide the potential future development of the 607-acre Faria property as part of the request for annexation and rezoning amendment for the property.

This Master Plan document is organized in the following manner:

- Section 1 describes the intent of the Master Plan Overlay District, and the area which it would govern.
- Section 2 includes a Land Use Map and defines the permitted uses, density and property development regulations.
- Section 3 summarizes the General Plan policies that govern the master plan area and subsequent development applications.

- Section 4 defines Design Review Guidelines that will govern the master plan area and subsequent development activities.
- Section 5 outlines the project phasing and subsequent entitlements.

### **Section 1. Purpose, Location and Boundaries.**

In accordance with Pittsburg Municipal Code (PMC), Chapter 18.72, the purpose of this master plan overlay district is to:

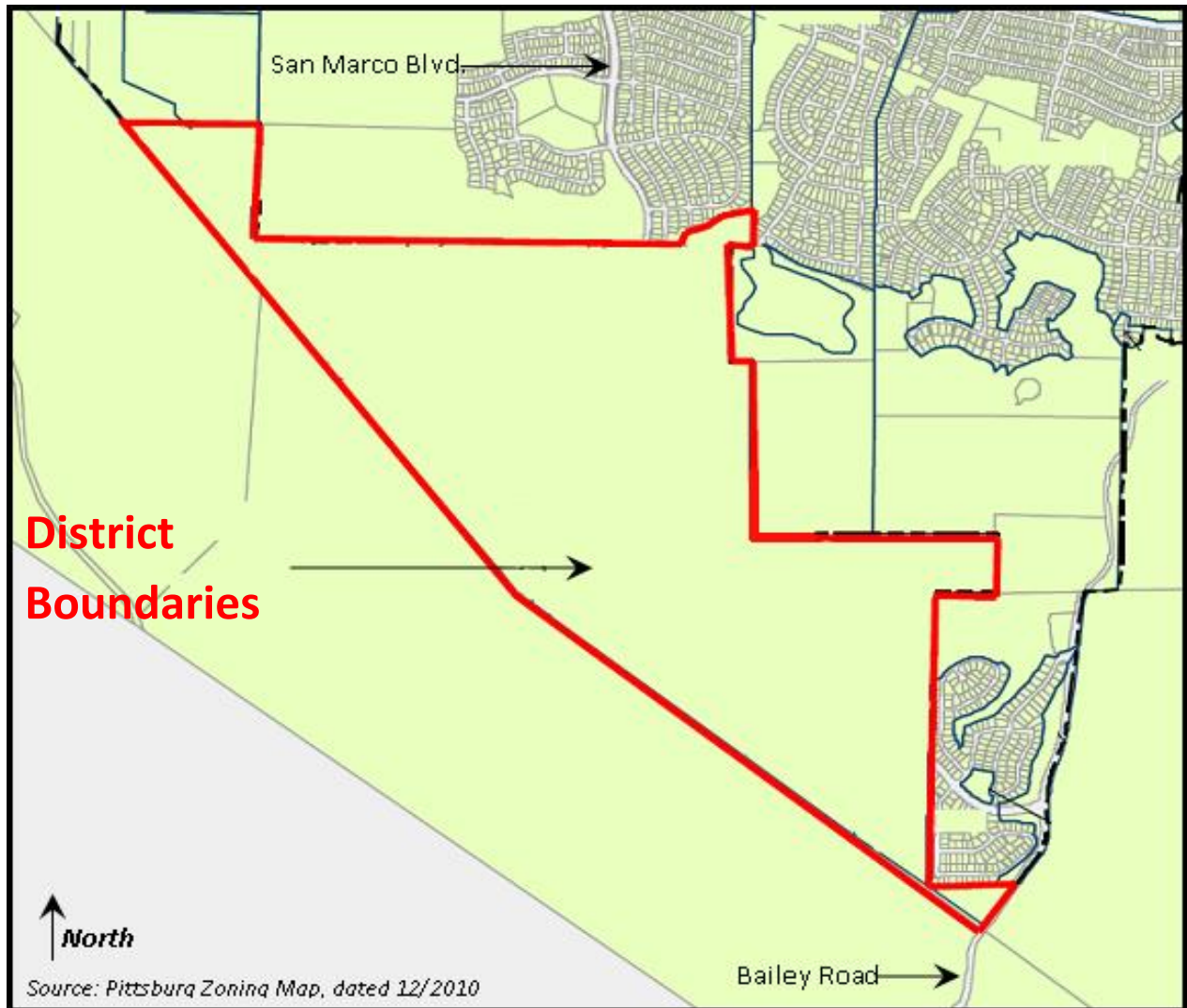
- a) ensure orderly planning for the development of a large, unsubdivided area in the city's sphere of influence consistent with the general plan;
- b) maintain an environmental equilibrium consistent with existing vegetation, soils, geology, topography, and drainage patterns;
- c) avoid premature or inappropriate development that would result in incompatible uses or create public service demands exceeding the capacity of existing or planned facilities; and
- d) encourage sensitive site planning and design.

The master plan overlay district is located in the southwest hills and encompasses approximately 607 acres of land (see Figure 1). The district is generally bounded by Bailey Road and the approved but not yet constructed, "Bailey Estates" subdivision to the east; the Concord City Limits and recently closed Concord Naval Weapons Station (CNWS) property to the south and west; and the San Marco and Vista Del Mar residential subdivisions (substantially developed) along the northern boundary and other open space areas along the northeastern boundary.

Upon City approval of this master plan, a request to annex the Faria property into the City limits would be filed with the Contra Costa Local Agency Formation Commission (LAFCo). Following annexation, entitlement applications would be submitted to the City for review and approval. It is anticipated that the initial entitlement process would include review of a subdivision map and design review for new construction. This process is expected to take two or more years due to the City's discretionary review requirements and the California Environmental Quality Act (CEQA) processing requirements. Once the entitlement process is completed, the tentative subdivision map and construction documentation would be finalized for City review and approval. This process could take an additional six to twelve months. Once the construction documents are approved construction would commence. The entire process from entitlement to completion of initial construction could take approximately four years.



Single family homes at San Marco (immediately north of the site) are anticipated to be fully completed by the year 2020, leaving the Faria property as the next logical place for development to occur in the Pittsburgh Southwest Hills area.



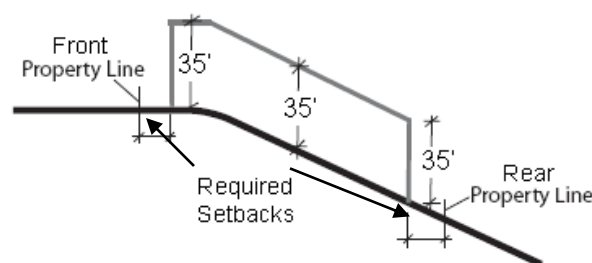
**Fig 1. District Boundaries**

## **Section 2. Land Use & Development Regulations**

Proposed development and preservation areas are shown in Exhibit A, Faria SW Hills Master Plan, dated January 2017. The master plan includes a total of 373 acres for residential development and 233 acres of preservation as open space. The master plan would permit development on the 607-acre project site as follows:

### **A. Residential Development**

1. Allowable Uses. The land use regulations within each of the residential neighborhoods shall be the same as RS-4 District, PMC section 18.50.010. Neighborhood serving commercial land uses, as identified in PMC 18.50.010, shall be allowable within the master plan area with a use permit.
2. Residential Density. The project site is divided into two residential areas: (1) *249.6 acres at a density of 3-5 dwelling units per gross acre*, and (2) *146.9 acres at a density of 1-3 dwelling units per gross acre*; however, in no event shall the total number of dwelling units within the master plan area exceed 1,500 units, as dictated by General Plan policy 2-P-96.
3. Property Development Regulations. Property Development Regulations set forth in PMC Schedule 18.50.105 shall apply to all residential development permitted by this master plan, except where specified below.
  - a) Height and form of main structures on sloped lots. For terraced structures built on sloped lots, a maximum height of thirty-five feet (35') is permitted. Building height is measured from any point along the finished grade (Fig. 2).



**Fig. 2**

- b) Deck sizes and heights for structures on sloped lots. Where decks are provided as a primary private outdoor space, they shall be a minimum of six feet (6') in length (measured parallel to the adjacent wall of the structure) to provide adequate usable area and to effectively break-up the mass of large

structures. The support posts or columns for any deck that extend out over a downslope shall not exceed a vertical height of twelve feet (12'), as measured from the bottom of the deck to the finished grade.

- c) Flag lots. Flag lots are allowed in order to reduce environmental impacts, minimize roadway cut-and-fill, and create a better view protection. Flag lot driveways shall be designed to break up the long expanse of concrete paving with different materials, textures, and/or colors. Determination of flag lot widths and front lot lines shall be conducted in accordance with PMC 18.80.015.

4. Landscaping. In addition to the requirements of Section 18.84.300, subdivision landscaping shall comply with the following standards:

- a) Slopes adjacent to collector or arterial streets shall be landscaped and irrigated.
- b) Street trees shall be planted at a minimum of one tree every forty feet (40') along all streets. Street trees shall not be less than six feet (6') in height, as measured from the ground surface after planting.
- c) Fire resistant landscaping shall be provided and maintained within one hundred feet (100') of an exposed elevation of a structure. An exposed elevation is one or two sides of a structure that have direct exposure to unimproved open space areas, natural grasslands or agricultural lands.
- d) Codes, covenants and restrictions shall be filed and recorded with the Contra Costa County Recorder prior to the sale of any residence requiring maintenance of any fire resistant landscaping on private property.

5. Viewshed Analysis. A viewshed analysis shall be required in conjunction with any request for development to ensure impacts from nearby public vantage points, as well as neighboring properties, are minimized to the maximum extent practicable.

B. Open Space/Green Belt/Resource Conservation Area:

1. Allowable Uses.

- a) Pittsburg-Concord Greenbelt Buffer. No development shall be permitted within the green belt area, as required by General Plan policy 2-P-91.
  - b) Open Space/Resource Conservation Areas. The land use regulations for open space areas not in a state of permanent preservation shall be the same as OS District, PMC section 18.58.020. Water storage tanks, trails and/or vehicular access roadways deemed necessary to provide adequate water supply and access to residential development areas shall be permitted.
2. Property Development Regulations. Property Development Regulations set forth in PMC 18.58.030 shall apply to all open space areas.

C. Site Development Standards Applicable to All Areas:

- 1. Trails. Subdivisions shall be designed to incorporate a pedestrian trail system to interconnect neighborhoods and provide safe routes to schools, parks, and public open space within a one-mile radius of the subdivision. All trails must have public access.
- 2. Fences and walls. In addition to the requirements of Section 18.84.205-235, fences and walls shall comply with the following:
  - a) Safety fences. Where barbed wire fences are used around the perimeter of designated open space areas within a project, a second fence shall be constructed on the developed side of the barbed wire to minimize potential injury to people.
  - b) Chain link. Chain link fences are prohibited on residential lots.
  - c) Retaining walls. All retaining walls shall be engineered and constructed of reinforced concrete or masonry, or interlocking modular block.
  - d) Entrance gates. Gates to residential neighborhoods that are intended to be opened only by residents and other designated users are prohibited.
  - e) Single lot security gates. Where security gates are utilized for single estate lots, materials shall be visually permeable.

### 3. Outdoor lighting.

- a) Residential private lighting. All lights attached to buildings shall provide a soft “wash” of light against the wall and shall not spill onto adjacent properties. Other exterior lighting shall be designed and installed in such a manner that the light source is shielded from view off the site.
- b) Street lighting. All street lighting shall use “full cutoff” luminaires which allow no direct light emissions above a horizontal plane through the luminaires’ lowest light –emitting part (See Fig.2). Light poles and fixtures shall be of an ornamental type and low-level street lighting shall be used where feasible.

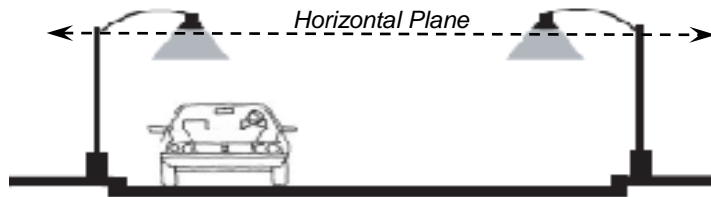


Fig. 3

- 4. Other Development Regulations. All other development regulations not covered by this master plan, shall be as prescribed in PMC Title 18, where appropriate.

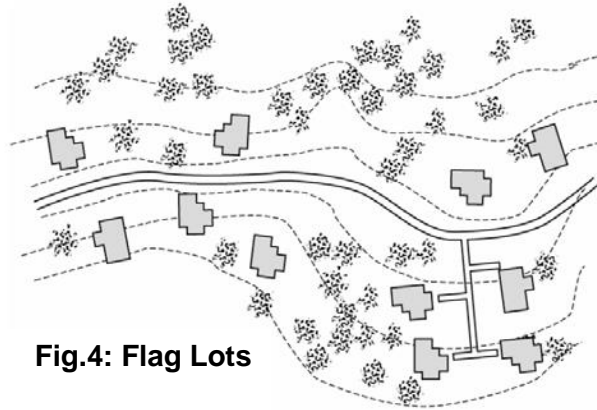
### **Section 3. Design Review Guidelines**

The Design Review Guidelines provided below are generally derived from existing General Plan policies and they are grouped into six main categories for ease of reference (with the applicable policies referenced in parentheses at the end of each guideline). The policies are intended to provide guidance for future plan review and development within the master plan area.

- A. Neighborhood and Subdivision Design
- B. Circulation
- C. Grading Design
- D. Fence and Wall Design
- E. Site Design, Architectural & Building Materials
- F. Landscaping

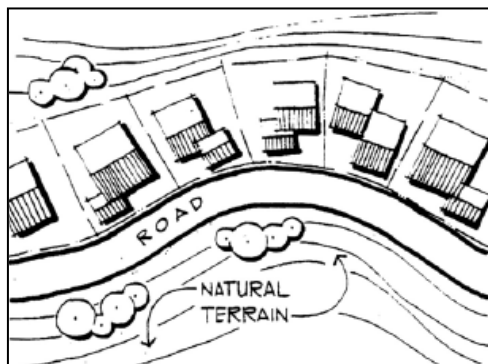
## A. Neighborhood and Subdivision Design

1. Encourage hillside 'estate' development along the outer edges of the master plan area. 2-G-5
2. Encourage the use of flag lots with common driveways in sloped areas as a means of encourage terracing of buildings and minimizing roadway cut-and-fill (Fig.4). 4-P-16
3. Provide park and recreation facilities within reasonable walking distance of all homes. 8-P-2
4. Design the layout of new park facilities in accordance with the natural features of the land. Where possible, preserve such natural features as creeks and drainage ponds, rock outcroppings, and significant topographic features. 8-P-9
5. Design diverse and distinctive neighborhoods that build on the patterns of the natural landscape and provide a sense of connection with surrounding uses. 4-G-17
6. Avoid placement of lots that allow the rear of homes to be viewed from public vantage points, such as parks, trails, roadways or open space areas. Where backyards may be visible from public view, provide additional screening by using natural slopes, berms and additional vegetation.
7. Vary building setbacks/orientations for new residential developments to reflect the natural contours of the hillside (Fig.5).
8. Development along the outer edges of the master plan should face outwards towards the rural landscape (preventing a solid wall of residential backyard fences). 4-P-7, 4-P-19
9. Encourage green building designs and techniques. Houses should be sited so that portions of the roofs would be suitable for solar collectors (roof should face within 15 degrees of true south).
10. Provide open space amenities such as a green belt, park and/or trails alongside ridges, creeks and/or storm drainage.

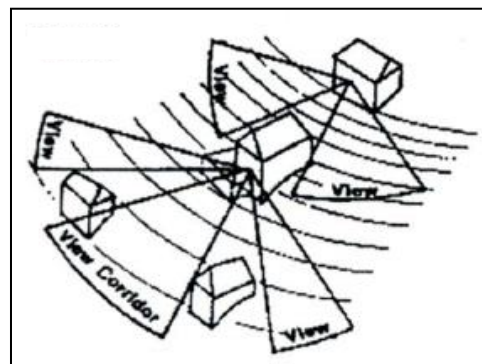


**Fig.4: Flag Lots**

11. Utilize creeks and/or storm drainage as a shared natural community resource by incorporating them into the subdivision design and maximizing public access.
12. Protect unique environmental features, such as large rock outcroppings, mature trees, creeks and ridgelines, and incorporate them into the subdivision design. 4-G-4
13. Enhance views from individual residences by staggering lots (Fig.6).
14. Any large parcels with lot sizes greater than 10,000 square feet should be planned for those areas near ridges and in view sheds. Such lots should be designed with exclusive estate style homes that are placed to minimize grading while also providing some usable exterior living space around the house.
15. In terms of neighborhood design, reserve sites near ridges and in view sheds for unique, estate-style homes, with special effort given to provide unique design.



**Fig. 5**



**Fig. 6**

## **B. Circulation**

1. Prioritize pedestrian circulation. Develop linear parks, public trails and/or trailheads to connect pedestrians to schools, commercial centers, parks, other neighborhoods and local and regional open space areas, including those planned within the Concord Naval Weapons Station Reuse area. 8-G-3, 8-P-21, 2-P-90, 4-P-30
2. Ensure San Marco Boulevard is extended through the master plan area and through the future Bailey Estates Subdivision, to connect up to Bailey Road.
3. Maximize access for fire and emergency response personnel by providing through-roads and multiple connection points between neighborhoods. 2-P-27, 4-P-83

4. Provide on-street parking along hillside roads in parking bays where topography allows. 4-P-31
5. Allow streets with sidewalks on only one side in hillside areas where topography may be challenging. 4-P-85

### **C. Grading Design**

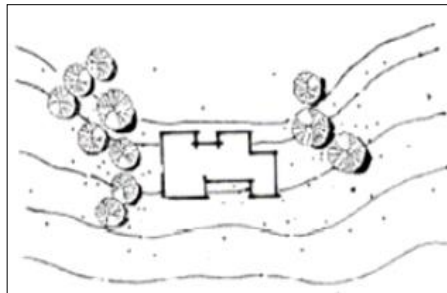
1. Utilize geological hazard abatement districts (GHADs) in hillside areas to ensure that geotechnical mitigation measures are maintained over the long-term, and that financial risks are equitably shared among owners and not borne by the City. 10-P-11
2. Design new development on unstable slopes (as designated in General Plan Figure 10) to avoid potential soil creep and debris flow hazards. Avoid concentrating runoff within swales and gullies, particularly where cut-and-fill has occurred. 10-P-8
3. Limit grading of hillside areas over 30 percent slope (see General Plan Figure 10-1), to elevations less than 900 feet. 4-P-11
4. Design 'cut and fill' slopes visible to the general public to be contour rounded in order to replicate an un-graded natural terrain. Limit all engineered slopes to 3:1, unless an engineering geologist can establish that a steeper slope can perform satisfactorily over the long term. 10-P-3
5. Replant 'cut and fill' slopes with native, non-invasive species. 9-P-9, 10-P-3
6. Place manufactured slopes behind buildings where they will not be visible to the general public.
7. Design lots so that lot lines are at the top of slopes with adequate property line setback from the slope to provide for required vertical slope rounding.
8. Ensure driveways are constructed to be at least 20 feet long. For courtyard style developments without standard driveways, garage access aprons should be no longer than three feet. 4-P-16
9. Design concrete storm drainage ditches to blend with the surrounding environment by reflecting the predominant colors and textures of the surrounding environment (examples include providing colored concrete or lining ditches with rocks or other natural materials). Screen ditches from lower elevations by building up the adjoining bench, to a slope of at least 5%.



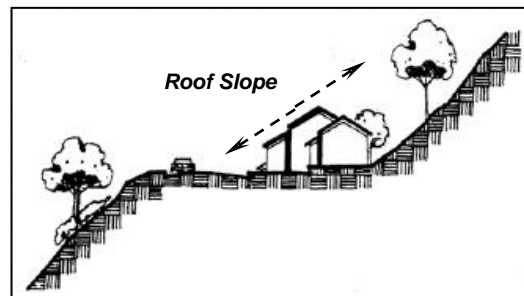
10. Design slopes at the boundary of project areas to match the elevation of the approved grade of the adjoining property, outside of a project boundary. Where no approved map exists for an adjoining property, design projects to match the existing elevation of the adjoining property, outside the project boundary.

#### **D. Site Design, Architectural & Building Materials**

1. Permit second units (accessory dwellings) in single-family residential developments in accordance with State law. 2-P-17
2. When sloped lots are utilized, site structures so that the long axis of the building runs parallel with hillside contours (Fig.7) and the slope of roof lines and gables run parallel with the hillside slope (Fig.8).



**Fig. 7**



**Fig. 8**

3. Design driveways serving multiple parcels (flag lots or courtyards) to break up the long expanse of concrete with different materials, textures, or colors. Encourage the use of permeable materials such as grasscrete, grass, stone, stamped concrete pavers or decomposed granite for driveways (Fig.9)

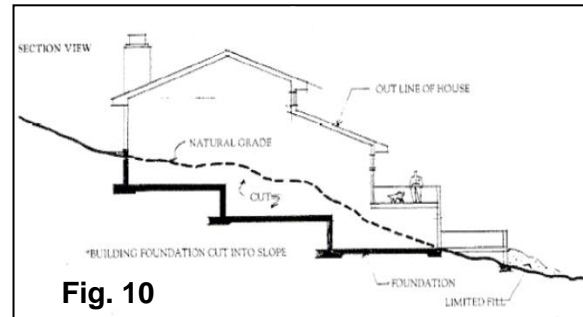


**Fig. 9**

4. Design buildings with natural looking materials that reflect the predominant colors and textures of the surrounding landscape.
5. Use darker earth tones for roofing colors to ensure they are less visible to adjacent or up-slope properties.

6. Encourage terrain-neutral colors for structures that are visible from major roadways or open space areas. White or light exterior colors with a reflection factor of more than sixty percent (60%) should not be used except as trim that constitutes no more than ten percent (10%) of the building surface. Codes, covenants and restrictions should be filed prior to the sale of any residence restricting future colors of structures to those in the approved color palette.
7. Avoid large expanse of flat, blank walls, especially on the downhill side of a downhill lot; this is also meant for side elevations, particularly on corner lots.
8. Break building massing and rooflines into smaller components. 4-P-3
9. 'Step' building forms to conform to site topography where appropriate. (Fig. 10)

10. Screen decks that extend out from a building with natural landscaping between the building wall and the outer skirt of the deck.



11. Provide a variety of home styles with a minimum of three exterior styles available for each model within each development phase. This is to be implemented by use of different architectural details and by varying building materials, roof slopes, window and trim treatments.
12. Large estate-style homes should include unique designs with 360-degree architecture, providing special attention to architectural details, materials and beautifying elements applied to all sides of the house, not just the front façade. Special design consideration should also be given to homes, as they could also be viewed from below and above.

## E. Fence & Wall Design

1. Use natural looking building materials for fences and retaining walls in order to reflect the predominant colors and textures of the surrounding environment and to promote a rural feeling (Fig.11).

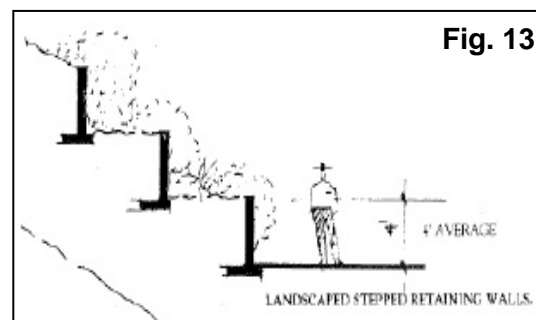


**Fig. 11**

2. Design fences/walls that abut designated rural open space areas to be visually permeable. Chain link fencing is discouraged. 4-P-7
3. Design fences and walls adjacent to arterials and collector streets to incorporate visual interest through variation in placement, use of planters, differing materials, use of natural materials, and modulation of the wall plane.
4. Break up retaining walls (e.g. undulating sections or landscaped screening), rather than one continuous blank wall (Fig. 12).
5. Build single retaining walls no taller than four feet (4') in height, where located within ten feet (10') of a public right-of-way. If additional height is necessary, build multiple walls (with landscaping in between) no taller than three feet (3') in height with minimum horizontal step-backs of three feet (3') between each wall segment (Fig. 13).



**Fig. 12**



**Fig. 13**

## **F. Vegetation**

1. Use irregular planting to achieve a natural and 'rural' appearance in landscape areas. 4-P-6
2. Plant native, non-invasive and fire resistant street trees, complimentary shrubbery and other vegetation along collector and arterial roadways consistent with the landscape ordinance. Street trees should be planted adjacent to the curb to provide a buffer between pedestrian sidewalks and vehicular streets. 4-P-85
3. Plant trees and other shrubbery to be individually spaced to allow for maintenance that would not form a means of transmitting fire from native growth to nearby structures. Limit the use of plants that develop large volumes of foliage and branches, deciduous bark, or dry undergrowth.

## **Section 4. Project Phasing & Subsequent Entitlements**

After the project is annexed by the City of Pittsburgh, based on the zoning and density proposed as part of this Master Plan, the applicant would submit a Tentative Subdivision Map and detailed plans for Design Review approval to the City of Pittsburgh. It is also anticipated that a Development Agreement would be completed with the City of Pittsburgh.

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## APPENDIX B

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**PUBLIC COMMENT LETTERS RECIEVED ON  
THE NOTICE OF PREPARATION**







## City of Pittsburg

Development Services - Planning Department  
Civic Center - 65 Civic Avenue, Pittsburg, California 94565

Telephone: (925) 252-4920 • FAX: (925) 252-4814

### NOTICE OF PREPARATION

To: State Clearinghouse  
1400 Tenth Street  
Sacramento, California 95814

From: City of Pittsburg, Planning Department  
65 Civic Avenue  
Pittsburg, California 94565

To: Interested Parties; Responsible &  
Trustee Agencies

**Subject: Notice of Preparation of a Draft Environmental Impact Report for the Proposed Faria/Southwest Hills Annexation Project**

The City of Pittsburg is the lead agency for the preparation of an Environmental Impact Report (EIR) for the project identified below. The scope of the EIR has been proposed based upon a determination by the City. The City has directed the preparation of this EIR in compliance with the California Environmental Quality Act (CEQA).

Once a decision is made to prepare an EIR, the lead agency must prepare a Notice of Preparation (NOP) to inform all responsible and trustee agencies that an EIR will be prepared (CEQA Guidelines Section 15082). The purpose of the NOP is to provide agencies with sufficient information describing both the proposed project and the potential environmental effects to enable the agencies to make a meaningful response as to the scope and content of the information to be included in the EIR. The City is also soliciting comments on the scope of the EIR from interested persons.

**Project Title:** Faria/Southwest Hills Annexation Project

**Project Applicant:** Discovery Builders, Inc. on behalf of Faria Land Investors, LLC

Date \_\_\_\_\_

Signature \_\_\_\_\_

Title Senior Planner

Telephone (925) 252-6941

*Reference: California Code of Regulations, Title 14, (California Environmental Quality Act Guidelines) Sections 15082(a), 15103, 15375.*

## PUBLIC SCOPING MEETING AND COMMENT SUBMITTAL

A scoping meeting open to the public will be held to receive public comments and suggestions on the project. At this meeting, staff will give a brief presentation of the EIR process and will take public comment on the proposed EIR. The scoping meeting will be open to the public and held at the following location:

**Date:** Tuesday, April 4, 2017  
**Time:** 5:30 PM  
**Location:** Pittsburg City Hall Council Chambers, 3<sup>rd</sup> floor, 65 Civic Avenue,  
Pittsburg, California 94565

The purpose of the EIR is to provide information about potential significant physical environmental impacts of the Faria/Southwest Hills Annexation Project (proposed project), to identify possible ways to minimize those significant impacts, and to describe and analyze possible alternatives to the proposed project if potential significant impacts are identified. Preparation of an NOP or EIR does not indicate a decision by the City to approve or disapprove the project. However, prior to making any such decision, the City Council must review and consider the information contained in the EIR.

Written comments on the scope of the proposed project and the associated EIR are welcome. **Please submit comments by 5:00 PM on April 7, 2017.** Written comments should be sent to Hector Rojas, Senior Planner, at 65 Civic Avenue, Pittsburg, California 94565, or via email at [hrojas@ci.pittsburg.ca.us](mailto:hrojas@ci.pittsburg.ca.us), or via fax at (925) 252-4814.

Questions concerning the environmental review of the proposed project should be directed to Hector Rojas at (925) 252-4043; however, please note that comments on the Draft EIR cannot be accepted over the phone. To be considered during preparation of the EIR, comments must be received in writing by the deadline identified above.

### PROJECT LOCATION:

The proposed project site is located in Contra Costa County, southwest of the municipal boundary of the City of Pittsburg, within the Southwest Hills planning subarea of the Pittsburg General Plan. (see Figure 1, Regional Location Map). The project site includes approximately 606 acres and is identified as Assessor's Parcel Numbers (APNs) 097-180-006, 097-200-002, 097-230-006, 097-240-002, and a portion of 097-190-002 (see Figure 2, Project Location Map). The northeast portion of the site is bordered by existing residential development (San Marco and Vista Del Mar subdivisions), while the remainder of the site is bordered primarily by undeveloped areas. The western boundary of the site is directly adjacent to the City of Concord city limits. Bailey Road is located to the east of the site, and the recently closed Concord Naval Weapons Station (CNWS) is located to the south. Highway 4 is situated to the north of the site.

With the exception of two isolated single-family residences and a small agricultural operation, the proposed project site consists of vacant rolling hills. The City's General Plan designates the site as Low Density Residential and Open Space.

Figure 1  
Regional Location Map

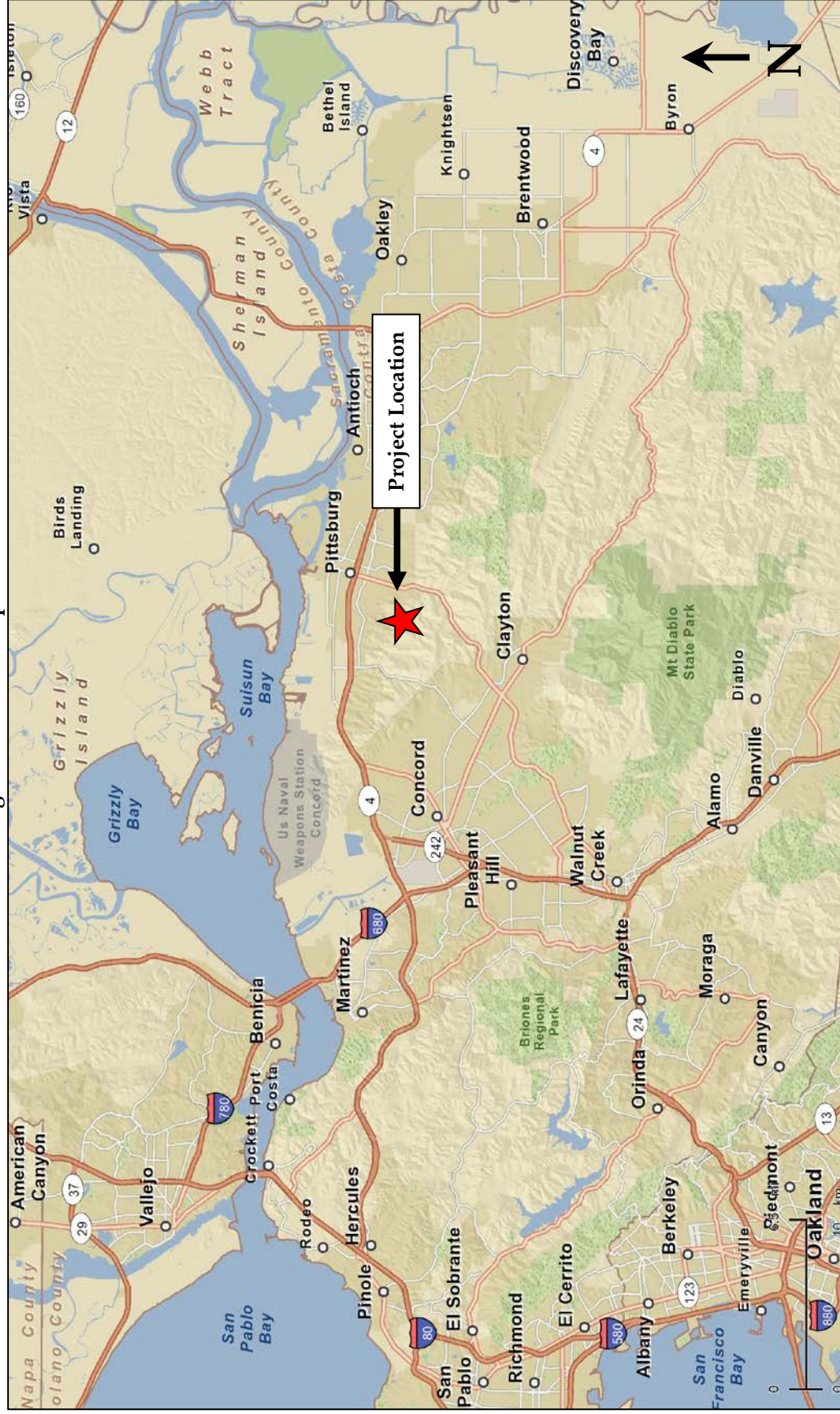
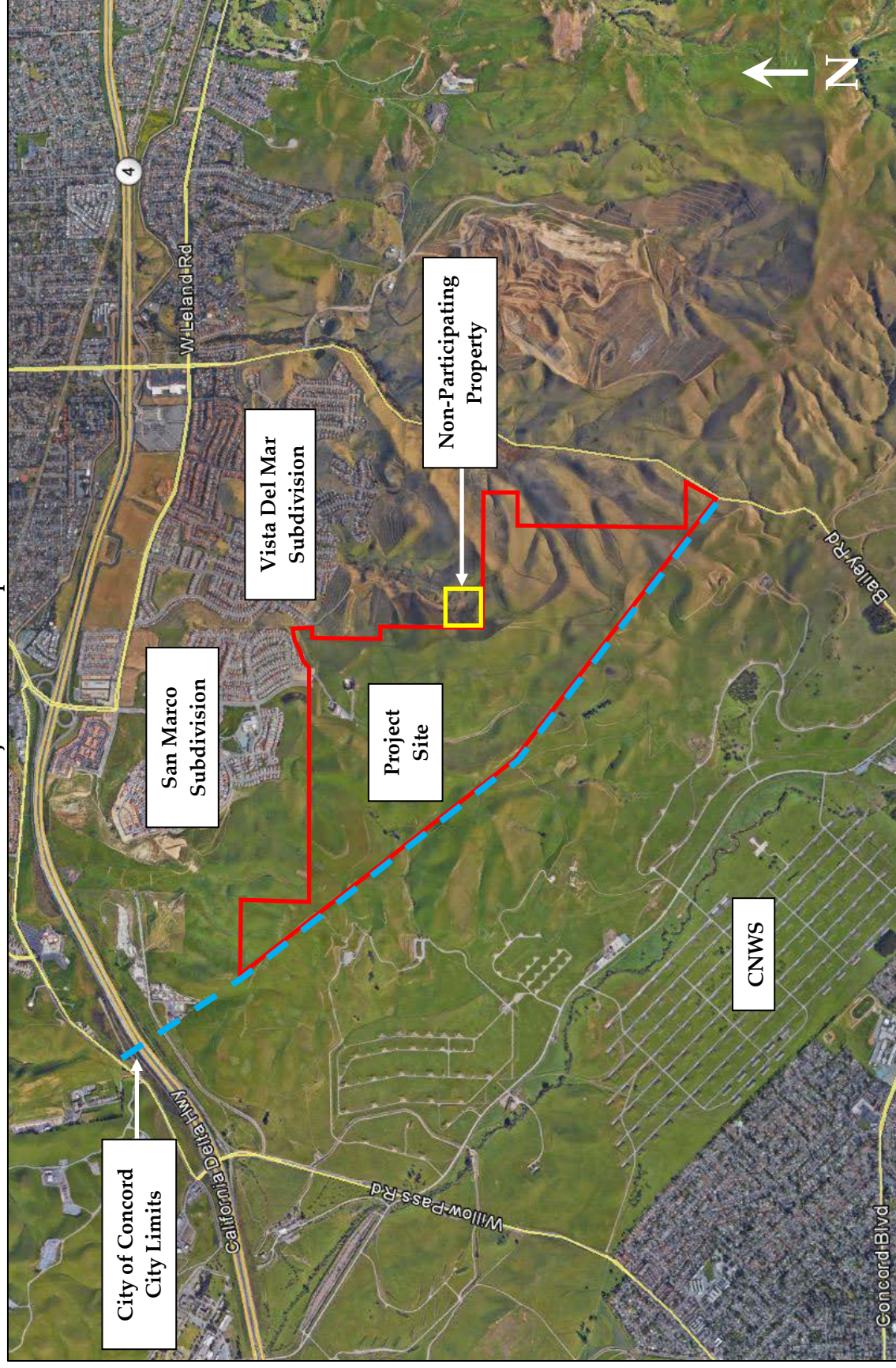




Figure 2  
Project Location Map



## **BACKGROUND**

In November 2005, the voters of the City of Pittsburg approved a ballot initiative entitled “Measure P (City of Pittsburg Voter Approved Urban Limit Line and Rezoning Act)”, which established a new Urban Limit Line (ULL) for the City and rezoned certain properties. Included in these properties was the entire 606-acre project site. On May 3, 2006, the City entered into a Memorandum of Understanding (MOU) which called for the City to conduct a General Plan Study in order to, among other things, establish guidelines for the development of a permanent greenbelt buffer along the inner edges of the voter approved ULL. The City Council, on January 16, 2007, adopted Resolution No. 07-10700, which included a new General Plan policy, 2-P-91, to ensure that a greenbelt buffer would be established on the project site in accordance with the terms of Measure P and the May 3<sup>rd</sup> MOU.

On July 8, 2009, the Contra Costa Local Agency Formation Commission (LAFCo) approved an extension of the Pittsburg Sphere of Influence (SOI) to include the proposed project site. As part of that action, the SOI’s for the Delta Diablo Sanitation District (DDSD) and the Contra Costa Water District (CCWD) were also expanded to include the project site. On September 24, 2010, the property owner submitted an application requesting the City begin processing a request for annexation of the site to bring the property into the City of Pittsburg City Limits. In addition to the request for annexation to the City, the application also included requests for the project site to be annexed to the DDSD and CCWD service areas.

In 2010, an Initial Study was prepared for the proposed project and released for public review. Extensive comments were received by the City, requesting further analysis in an EIR. In response, the City determined that preparation of an EIR was necessary. The City of Pittsburg prepared a subsequent Initial Study to focus the EIR, which was released with the Notice of Preparation (NOP) on March 10, 2014 for a 30-day review. During the NOP review period, a public Scoping Meeting was held on April 3, 2014 to receive verbal comments on the scope of the EIR.

Following the initial Scoping Meeting and in response to comments received, refinements were made to the project that altered the scope of the EIR. Such refinements included the preparation of a Draft Master Plan and an associated Land Use Map. Consequently, the City has determined that the release of a new NOP is necessary in order to address changes made to the project, and how such changes would be reflected in the EIR.

## **PROJECT COMPONENTS**

The proposed project includes a Draft Faria/Southwest Hills Master Plan (Draft Master Plan). The purpose of the Draft Master Plan is to define the potential development of the 606 acre project site as part of the request for annexation and rezoning of the site. The various components of the Draft Master Plan, as well as the entitlements required for the proposed project, are discussed below.

It should be noted that annexation component of the proposed project would include a non-participating property that is outside of the City of Pittsburg City limits (see Figure 2). The non-participating property would not be subject to the provisions of the Draft Master Plan.

## **Draft Master Plan**

The Draft Master Plan includes a Master Plan Overlay District, a Land Use Map, development regulations, design review guidelines, and a definition of the proposed circulation system.

### Master Plan Overlay District

The Draft Master Plan would include the creation of a Master Plan Overlay District for the entire 606-acre project site. In accordance with Pittsburg Municipal Code (PMC), Chapter 18.72, the purpose of the Master Plan Overlay District is to accomplish the following:

- Ensure orderly planning for the development of a large, unsubdivided area of the City consistent with the City's General Plan;
- Maintain an environmental equilibrium consistent with existing vegetation, soils, geology, topography, and drainage patterns;
- Avoid premature or inappropriate development that would result in incompatible uses or create public service demands exceeding the capacity of existing or planned facilities; and
- Encourage sensitive site planning and design.

### Land Use

The Draft Master Plan includes a Land Use Map to govern development of the 606-acre project site (see Figure 3). The Land Use Map allocates a total of 373 acres for residential development and preserves 233 acres of land as open space. The 373 acres allocated for residential development would be divided into two areas. The first area would be located in the northern portion of the site, and would comprise 236 acres, while the second area would be located in the southern portion of the site, and would comprise 137 acres. The proposed land use pattern would allow for higher densities of development in areas closer to the existing San Marco and Vista Del Mar subdivisions, while the low-density land use in the southern area would allow for greater compatibility with the steep, hilly landscape found in areas to the south of the City. The proposed open space areas would include hilltops and ridgelines within the project site, reflecting the City's desire to maintain the natural aesthetic value of such areas.

### Development Regulations

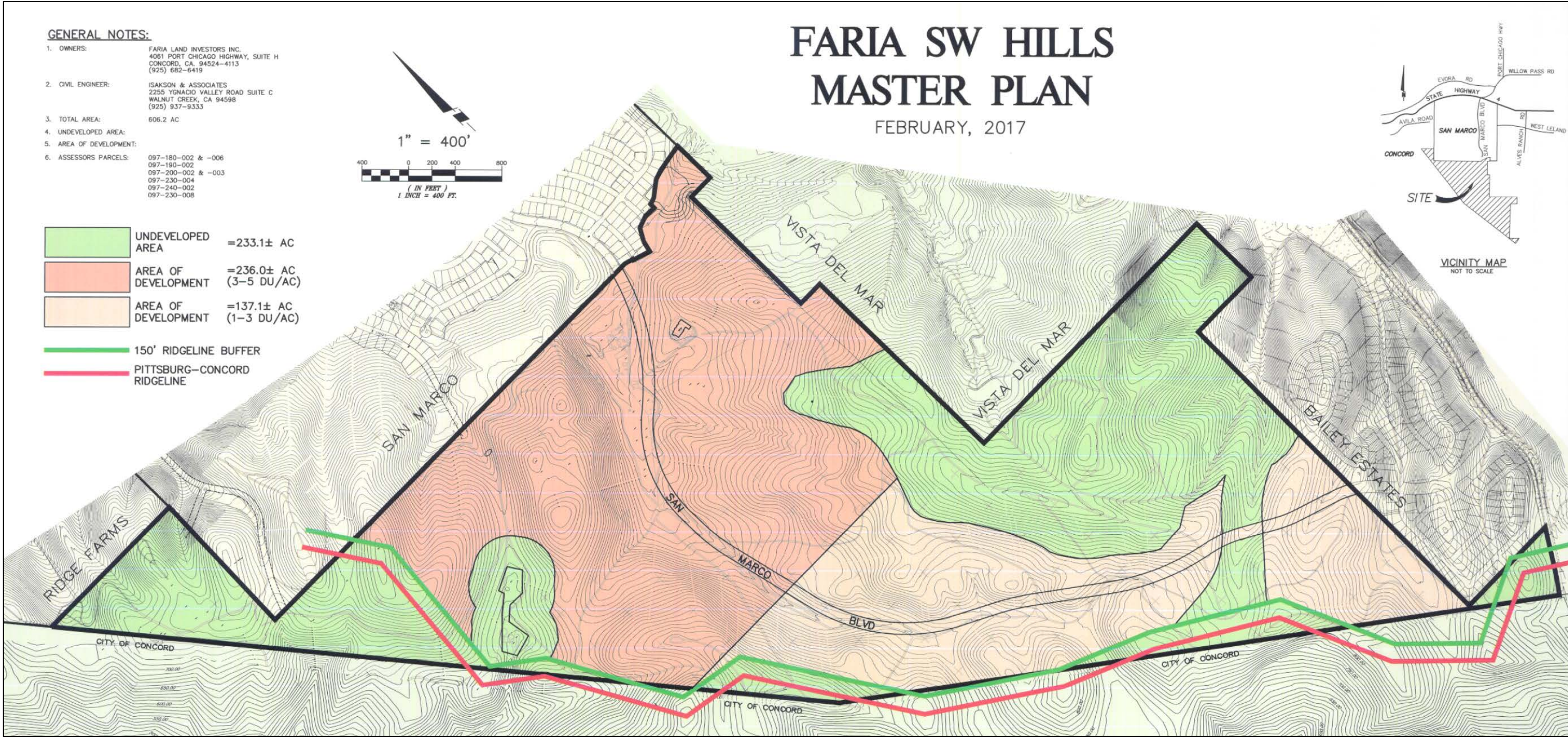
Development within the project site would be subject to various development regulations specified in the Draft Master Plan, including, but not limited to, density requirements, building setbacks, landscaping requirements, and pedestrian access. In addition, the Draft Master Plan specifies that the total number of dwelling units within the project site would not be permitted to exceed 1,500, consistent with Policy 2-P-96 in the City's General Plan. As such, maximum buildout of the proposed project site is assumed to include 1,500 residential units for purposes of this CEQA analysis.

### Design Review Guidelines

The Draft Master Plan provides Design Review Guidelines for the proposed project. The Guidelines are derived from existing General Plan Policies, and are organized into five main categories: Neighborhood Layout and Site Design, Fence and Wall Design, Architectural Design and Building Materials, Landscaping, and Grading Design. The Guidelines are intended to provide a framework for the design of future development within the project site.



Figure 3  
Proposed Land Use Map









## **Entitlements**

The proposed project would require the following entitlements from the City of Pittsburg City Council:

- Annexation into the City of Pittsburg City Limits, the Contra Costa Water District (CCWD) service area and the Delta Diablo Sanitation District (DDSD) service area;
- Reclassification of site from HPD (Hillside Planned Development) and OS (Open Space) prezoning districts to RS-4P and OS-P prezoning overlay districts;
- Approval of a General Plan Amendment;
- Approval of the Draft Master Plan;
- Development Agreement; and
- Affordable Housing Agreement.

## **DISCUSSION OF POTENTIAL IMPACTS**

The environmental analysis for the proposed project will focus on the following areas: Aesthetics; Agricultural Resources; Air Quality and Greenhouse Gas Emissions; Biological Resources; Geology, Soils, and Seismicity; Hazards and Hazardous Materials; Hydrology/Water Quality; Land Use and Planning; Noise; Public Services and Utilities; and Transportation and Circulation; Growth Inducing Impacts; Cumulative Impacts; and Significant Unavoidable Impacts. In addition, project alternatives and statutorily required sections will be included. Some refinement to the aforementioned issues may be required based on comments received during the NOP scoping process. The following section describes each of the technical Chapters of the EIR in further detail.

Information will be drawn from the City of Pittsburg General Plan and General Plan EIR, technical studies prepared, and any other information pertinent to the project area. Consistent with CEQA and the requirements of the City of Pittsburg, each environmental chapter will include an introduction, existing environmental setting, regulatory context, and impacts and mitigation measures.

### **Aesthetics**

The Aesthetics chapter of the EIR will summarize existing regional and project site aesthetics and the visual setting. The chapter will describe project-specific aesthetic issues regarding buildout of the project site such as scenic vistas, trees, historic buildings, existing visual character or quality of the site, as well as light and glare. The EIR will rely on information from the City of Pittsburg General Plan, including the Urban Design Element and policies related to hillside development, as well as information from the General Plan EIR and the development standards and design review guidelines included in the Draft Master Plan. In addition, applicable City of Concord plans and policies related to hillside development within the project vicinity, such as the CNWS Reuse Plan, will be reviewed and used as appropriate.

### **Agricultural Resources**

The Agricultural Resources chapter of the EIR will summarize the status of the existing agricultural resources within the project boundaries, using the current State model and data, including identification of any prime/unique farmland or farmland of statewide importance within the project boundaries. Any conflicts with existing zoning for agricultural use or right-to-farm ordinances applicable to the proposed project will also be identified. Following the setting discussion, the chapter will identify thresholds of

significance applicable to the proposed project. The impacts will be measured against the thresholds of significance, and appropriate mitigation measures and monitoring strategies will be identified consistent with the policies of the City of Pittsburg. In addition, the chapter will address the project's consistency with LAFCo policies and standards related to conversion of agriculture, including the new Agriculture and Open Space Preservation Policy adopted on December 14, 2016.

### **Air Quality and Greenhouse Gas Emissions**

The Air Quality chapter of the EIR will summarize the regional air quality setting, including climate and topography, existing ambient air quality, regulatory setting, and presence of any sensitive receptors near the project site. The air quality impact analysis will include a quantitative assessment of short-term (i.e., construction) and long-term (i.e., operational) increases of criteria air pollutant emissions of primary concern (i.e., ROG, NO<sub>x</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>). The air quality chapter will be based upon technical analyses prepared for the project.

The GHG analysis will include a discussion of the existing regulatory setting and context related to GHG Emissions, including Assembly Bill (AB) 32 and Senate Bill (SB) 32, and an impacts and mitigation section with quantitative data showing the project's contribution to the generation of GHG during the operational phase of the project.

### **Biological Resources**

The Biological Resources chapter will include a description of the potential effects to plant communities, wildlife, and wetlands including adverse effects on rare, endangered, candidate, sensitive, and special-status species from implementation of the proposed project. The analysis will include potential impacts to special-status plants and animal species designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and other resource agencies, including, but not limited to, the California Native Plant Society (CNPS). In addition, this chapter will evaluate biological resources identified as "waters of the United States" and regulated by the U.S. Army Corps of Engineers as well as "waters of the State" regulated by the California Regional Water Quality Control Board and CDFW. The chapter will be based upon a biological resources report to ensure that all CEQA issues have been adequately and accurately addressed. In addition, information contained in the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) and the Special Status Plant Survey for the nearby San Marco Meadows project will be reviewed and incorporated into the EIR as appropriate. The proposed Master Plan Overlay District requires approval of an In-Lieu Fee Agreement by CDFW and USFWS. The EIR will ensure that the Draft Master Plan has incorporated associated policies to ensure compliance with the HCP/NCCP.

### **Geology, Soils & Seismicity**

The Geology, Soils & Seismicity chapter of the EIR will summarize the setting and describe the potential effects from earthquakes, liquefaction, and expansive soils, as well as identify any unique geological features within the project site. The EIR will include a discussion of the City's new Geological Hazard Abatement District (GHAD), which identifies a portion of the project site as a landslide area. The EIR will rely on a Geology and Soils report prepared for the proposed project, General Plan Policies included in the Draft Master Plan, the Health and Safety Element of the City's General Plan, and the General Plan EIR to ensure that all CEQA issues have been adequately and accurately addressed.

## **Hazards & Hazardous Materials**

The Hazards & Hazardous Materials chapter of the EIR will summarize the setting and describe any potential existing hazards or hazardous materials within the project site due to pesticides or the nearby Naval Weapons Station, as well as any potential hazards or hazardous materials as a result of the proposed project. The EIR will rely on information from an existing Phase I Environmental Site Assessment as well as information from the Pittsburg General Plan and General Plan EIR.

## **Hydrology / Water Quality**

This chapter will summarize setting information and identify potential impacts on storm water drainage, flooding, groundwater, and water quality. The chapter will be based upon a Hydrology and Water Quality report and information from the City of Pittsburg General Plan, including the Resource Conservation Element, the General Plan EIR, the NPDES Clean Water Program, and any ordinances related to water quality.

## **Land Use and Planning**

The Land Use and Planning chapter will evaluate the consistency of the proposed project with the City of Pittsburg's adopted plans and policies, as well as any applicable Contra Costa County policies. As noted previously, the proposed project would include a General Plan Amendment. The EIR will analyze the consistency of the proposed Land Use Map with the City's General Plan and Zoning Ordinance, LAFCo policies and standards, the Urban Limit Line as approved by City of Pittsburg voters, and any other relevant planning documents. The chapter will further assess the compatibility of the proposed project with the surrounding land uses, both existing and proposed. The chapter will identify any land use impacts and will discuss any potential incompatibilities with adopted plans and policies related to land use. The impacts will be measured against the thresholds of significance and appropriate mitigation measures, and monitoring strategies that are consistent with City of Pittsburg policy will be identified.

## **Noise**

The Noise chapter of the EIR will be based on a report that includes analysis and evaluation of the existing noise level environment, traffic noise impacts associated with the proposed project site, and short-term construction noise and vibration levels. As part of the report, the existing ambient noise environment of the site was established by conducting background noise level measurements on the project site and the surrounding vicinity on February 5, 2014. The measurements included 24-hour noise level measurements along Bailey Road and at the northern boundary of the project site. Peak-hour traffic levels have been determined based upon the 24-hour noise level measurements. The analysis of traffic noise impacts on the project site have been evaluated utilizing the Federal Highway Administration (FHWA RD77-108) traffic noise prediction model to provide generalized noise contours associated with traffic and typical noise setbacks. In addition, potential construction noise and vibration levels have been assessed for the project site and adjacent uses. The EIR will compare the project's exterior noise levels for compliance with the exterior and interior noise level criteria contained within the City of Pittsburg General Plan Noise Element and Noise Ordinance, as well as to existing levels. Feasible mitigation measures and monitoring strategies will be developed, as appropriate.

## **Public Services and Utilities**

This chapter will summarize setting information and identify potential new demand for public services, including water, sewer, energy, fire, police, and schools. The EIR will rely on a Hydrology and Water Quality Report as well as on information contained in the Public Facilities and Resource Conservation Elements of the Pittsburg General Plan, the General Plan EIR and Municipal Service Review (MSR). The Contra Costa Water District (CCWD), the Delta Diablo Sanitation District (DDSD), and the Fire Protection District will be consulted, in order to address public services and obtain the most recent information.

### **Transportation, Traffic, and Circulation**

The Transportation, Traffic, and Circulation chapter of the EIR will be based on a report that will consider the impacts of the project on intersections and roadway system elements within the project vicinity. The chapter will include analysis of the existing conditions, existing plus project traffic conditions, cumulative conditions without the project, and cumulative conditions plus project traffic scenarios. The Traffic Impact Study will analyze existing traffic conditions utilizing current AM and PM peak hour traffic counts and freeway and ramp volumes to establish baseline conditions. Project trip generation, distribution, and assignment will be developed utilizing trip generation rates contained in the 9th Edition of the ITE Trip Generation manual and the CCTA 2035 forecast model. The existing plus project traffic volumes will be evaluated to determine levels of service at study intersections, freeway segments, and ramp merge/diverge areas. Cumulative (without project) AM and PM peak hour traffic conditions will be generated from CCTA data using a Furness process according to standard industry practice and analyzed. In addition, cumulative Plus Project conditions will also be analyzed to determine the increase in traffic volumes within the study area due to the proposed project. The following study intersections, freeway segments, and ramp merge/diverge areas will be included in the analysis:

#### Study Intersections

1. Avila Road/Willow Pass Road
2. EB SR-4 Ramps/Willow Pass Road
3. WB SR-4 Ramps/Willow Pass Road
4. Rio Verde Circle/San Marco Boulevard
5. Santa Teresa Drive/San Marco Boulevard
6. W. Leland Road/San Marco Boulevard
7. EB SR-4 Ramps/San Marco Boulevard
8. WB SR-4 Ramp/San Marco Boulevard
9. Willow Pass Road/Port Chicago Highway
10. Willow Pass Road/Bailey Road
11. Willow Pass Road/Loftus Road
12. EB Willow Pass Road/Range Road
13. WB Willow Pass Road/Range Road
14. Willow Pass Road/Railroad Avenue
15. W. Leland Road/Alves Ranch Road
16. W. Leland Road/Woodhill Drive
17. W. Leland Road/Southwood Drive
18. W. Leland Road/Bailey Road
19. Maylard Street/Bailey Road
20. EB SR-4 Ramps/Bailey Road
21. WB SR-4 Ramp/Bailey Road
22. Canal Road/Bailey Road

23. W. Leland Road/Chestnut Drive
24. W. Leland Road/Jacqueline Drive
25. W. Leland Road/Montevideo Drive
26. W. Leland Road/Range Road
27. W. Leland Road/Dover Way
28. W. Leland Road/Burton Avenue
29. W. Leland Road/Crestview Drive
30. W. Leland Road/Railroad Avenue
31. EB SR-4 Ramps/Railroad Avenue
32. WB SR-4 Ramp/Railroad Avenue
33. Willow Pass Road/Olivera Road
34. Concord Boulevard/Farm Bureau Road
35. Concord Boulevard/Bailey Road
36. Bailey Road/Myrtle Drive
37. Clayton Road/Babel Lane
38. Clayton Road/Farm Bureau Road
39. Clayton Road/Treat Boulevard
40. Clayton Road/Bailey Road
41. Cowell Road/Treat Boulevard
42. W. Leland Road/Santa Teresa Drive (future intersection)
43. Bailey Road/Project Entrance (future intersection with project)

#### Freeway Sections

1. NB and SB SR-242 between I-680 and Clayton Road
2. NB and SB SR-242 between Clayton Road and Concord Avenue
3. NB and SB SR-242 between Concord Avenue and Grant Street
4. NB and SB SR-242 between Grant Street and Olivera Road
5. NB and SB SR-242 between Olivera Road and SR-4
6. EB and WB SR-4 between SR-242 and Solano Way
7. EB and WB SR-4 between Solano Way and SR-242
8. EB and WB SR-4 between SR-242 and Port Chicago Highway
9. EB and WB SR-4 between Port Chicago Highway and Willow Pass Road
10. EB and WB SR-4 between Willow Pass Road and San Marco Boulevard
11. EB and WB SR-4 between San Marco Boulevard and Bailey Road
12. EB and WB SR-4 between Bailey Road and Railroad Avenue

In addition, Multimodal Traffic Service Objectives (MTSOs) and Multimodal evaluations will be included in the traffic analysis. Emergency access, transit, pedestrian, and bicycle facilities will also be discussed.

#### **Statutorily Required Sections**

The Statutorily Required Sections chapter of the EIR will summarize potentially significant, unavoidable, significant irreversible, growth-inducing, and cumulative impacts. The chapter will summarize the cumulative impacts that will be contained in each technical section and will be qualitative in nature. In addition, the chapter will include a discussion of energy demand associated with the project.

## **Alternatives to the Proposed Project**

In accordance with Section 15126.6(a) of the CEQA Guidelines, the EIR will include an Alternatives analysis. The alternatives chapter will evaluate, at a minimum, three alternatives, including the No Project Alternative. Alternatives will be selected when more information related to project impacts is available so the alternatives can be designed to reduce significant project impacts. Any additional alternatives shall be developed during preparation of the EIR to respond to identified significant impacts. The Alternatives chapter will describe the alternatives and identify the environmentally superior alternative. The alternatives will be analyzed at a level of detail less than that of the proposed project; however, the analyses will include sufficient detail to allow a meaningful comparison of the impacts. The Alternatives chapter will also include a section of alternatives considered but dismissed. A matrix comparing the impacts of the proposed project to the three alternatives will also be included.

**PUBLIC COMMENT LETTERS RECIEVED ON  
THE NOTICE OF PREPARATION**







## CALIFORNIA NATIVE PLANT SOCIETY

East Bay Chapter, [www.ebcnps.org](http://www.ebcnps.org)  
PO Box 5597, Elmwood Station, Berkeley, CA 94705

April 7, 2017

Attn: Hector Rojas, Senior Planner  
Pittsburg City Hall  
65 Civic Avenue  
Pittsburg, CA, 94565

*Submitted by email to: [hrojas@ci.pittsburg.ca.us](mailto:hrojas@ci.pittsburg.ca.us)*

**RE: Notice of Preparation of a Draft Environmental Impact Report for the Proposed  
Faria/ Southwest Hills Annexation Project, AP-10-717 (ANNEX)**

Dear Mr. Rojas,

The following are comments of the East Bay California Native Plant Society (EBCNPS) on the Notice of Preparation of Draft EIR for the City of Pittsburg's proposed annexation and development of property near Concord Naval Weapons Station.

The California Native Plant Society (CNPS) is a non-profit organization of more than 10,000 laypersons and professional botanists organized into 34 chapters throughout California. Our local East Bay chapter (EBCNPS) covers Alameda and Contra Costa Counties, representing around 1,000 local members. The mission of CNPS is to increase the understanding and appreciation of California's native plants and to preserve them in their natural habitat through scientific activities, education, and conservation. Pursuant to the mission of protecting California's native flora and vegetation, EBCNPS submits the following comments:

### SUMMARY

This project appears substantially similar to other proposed projects covering this same footprint, and therefore the project DEIR needs to address the previously raised issues. EBCNPS is interested in preserving native plant diversity in the corridor stretching from Suisun bay to Mount Diablo. Botanical surveys following an approved specific protocol are necessary so the public may properly evaluate the merits of the proposed project.

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The State of California, Department of Fish and Wildlife (CDFW) provides a helpful document which explains how to best perform complete botanical surveys. The *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009) says:

“Conduct field surveys in a manner which maximizes the likelihood of locating special status plant species or special status natural communities that may be present. Surveys should be **floristic in nature**, meaning that every plant taxon that occurs on site is identified to the taxonomic level necessary to determine rarity and listing status... Include a list of plants and natural communities detected on the site for each botanical survey conducted.”

## SPECIFIC CONCERNS

### **Address Impacts to Concord Naval Weapons Station/ Concord Hills Regional Park**

In 2010, EBCNPS published a list of important botanical areas throughout Alameda and Contra Costa Counties. *A Guidebook to Botanical Priority Protection Areas of the East Bay*, (Bartosh, et al., 2010) is utilized by land managers and policy-makers throughout the East Bay as a resource analysis supplement. Each of the fifteen BPPAs represents a potential area of high botanical diversity and includes a short list of sensitive botanical resources with special status. The proposed Faria/ Southwest Hills annexation project is adjacent to the Concord Naval Weapons Station Botanical Priority Protection Area (BPPA). And, the Concord Naval Weapons Station BPPA area almost completely overlaps with newly established East Bay Regional Park District's Concord Hills Regional Park.

Sensitive natural features that exist in the BPPA and Concord Hills Regional Park should be surveyed for, within the proposed project area. Assessments for direct and indirect impacts to the rare plant species and plant communities in the adjacent park land and BPPA are also necessary to project analysis. From the published BPPA description:

“...The least surveyed habitat on this site may be the vernal pools and swales that dot the landscape. These features are spread throughout the site and provide potential habitat for some of the most fleeting of our East Bay plants. The drier upland areas also have some interesting flora... When the soil gets even thinner, barren and rocky areas can be found with blazing stars, that are found few other places in the East Bay... Its position in the landscape seems to hint at this area being an extension of Lime Ridge, where a number of rare Pincushion plants and *Eriastrums* are found...”

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Within this adjacent BPPA, there are eleven locally rare plant occurrences, ten special status plant occurrences, and five special status community occurrences. (See the California Natural Diversity Database, CNDDB, an inventory of the status and locations of rare plants and animals in California. For a definition of special status, see the CDFW protocols previously referenced.)

Rare and unusual plant species in this area include: Suisun marsh aster (*Symphotrichum lentum*); Soft bird's-beak (*Cordylanthus mollis* ssp. *mollis*); Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*); Mason's lilaeopsis (*Lilaeopsis masonii*); and, an historic occurrence of Snake's head (*Malacothrix coulterii*), which may be the northernmost occurrence of this species with a normal range in the Mojave.

The Pittsburg hills may be repositories for some other rare species including: big tarplant (*Blepharizonia plumosa*), round-leaved filaree (*California macrophyllum*), adobe navarretia (*Navarretia nigelliformis* ssp. *nigelliformis*), and even Diablo helianthella (*Helianthella castanea*) and Mt. Diablo buckwheat (*Eriogonum truncatum*).

Sensitive natural communities in this area that also should be surveyed for include: northern coastal salt marsh; grasslands (various varieties); oak savanna (including valley oaks); streams; and vernal pools and swales.

These species and communities represent an incomplete list of what may occur on the project site; other special status plant species and special status natural communities may exist. These species and communities should be included in survey efforts.

Two more helpful resources for compiling plant and community lists, are: the *California Native Plant Society's East Bay Chapter's Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties*, an online database of historic and current locally unusual native plant occurrence records (Lake, 2016); and, *A Manual of California Vegetation* (Sawyer, 2016) which provides a systematic approach to classifying and describing vegetation alliances, used by many state and federal agencies, and also available online.

### **Address impacts to local watershed, sensitive natural communities, due to erosion from steep slopes**

Soil maps from USDA Natural Resource Conservation Service (NRCS), available online to the public, show that the majority of this project area is comprised of exceedingly steep slopes. Nearly three quarters of the proposed project area is Altamont- Fontana complex (AcF, AcG) with slope gradients between 30-75%, and nearly half of this is 50-75% slopes. These soil types are also classified as either "severe" or "very severe" erosion hazards by the USDA.

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Specifications detailing density of development as related to actual slope gradients on the proposed project site will provide vital knowledge from which members of the public can make an informed decision on the project. These details will also prove important for evaluating proposed mitigation measures for erosion.

### **Proposed development should avoid natural resources, and EIR should describe specific and enforceable mitigation measures**

The Biological Resources checklist from the 2014 NOP and Initial Study for Faria/ Southwest Hills Annexation marked “potentially significant impact” for all six measurement categories. Even with so little known about the area’s resources or the proposed project at hand, all the potential impacts to biological resources were ranked at the highest level of significance provided by this checklist. And in the 2014 NOP, discussion of mitigation measures was completely deferred. This was for a project proposal where “development (was) not currently proposed for the project site at this time,” but laid groundwork for a program-level environmental analysis of 1,500 houses. Many public comments were received at the time, and almost all were against the project.

Now, in 2017, the applicant is proposing a development project substantially similar to what was briefly described in 2014. The applicant needs to specifically describe all biological resources and how significant impacts to most valuable biological resources will be avoided, minimized, or mitigated.

Avoidance measures for streams, drainages, and wetlands should also be described as related to the proposed project. (See: Clean Water Act Section 404; California Department of Fish and Wildlife.)

### **Provide Draft Master Plan; consider extending public comment period**

The NOP references a Draft Master Plan document for the proposed project. However, this document is not currently available to the public and was not available at the public scoping meeting on April 4, 2017. No availability timeline for this document was offered by staff, but staff acknowledged that it should be a part of public review. This document may significantly affect the public’s understanding of scope of the proposed project. It also may describe further the potential impacts of this project. Therefore, the Draft Master Plan should be released as soon as possible to allow for public comment.

Additionally, the approximate timeline provided by staff at the scoping meeting showed July 2017 as Draft EIR release date, followed by an August 2017 Final EIR release date. Assuming a 45 day comment period for the Draft EIR, this time frame would not allow staff sufficient time to

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process and incorporate comments received into the Final EIR. Please adjust the timeline accordingly.

### **Account for recognized, additional land conservation values for project site**

The Bay Area Open Space Council maintains a database called the Conservation Lands Network (available publicly online). This organization denotes the proposed project area as having “high conservation suitability,” where “larger, intact regions are considered to be of higher ecological integrity” and received this highest ranking. Additionally, the project area overlaps with “areas essential to conservation goals” and “important to conservation goals,” as well as with mapped “areas for further consideration.” The EIR needs to show how impacts to the ecological integrity of the site are avoided.

The NOP for this project mentions placement of green buffer around the edge of the Urban Limit Line (ULL). The EIR needs to show alternatives that achieve the intent of the green buffer around the edge of the Urban Limit Line.

### **CONCLUSION**

Future environmental analysis documents must describe significant impacts to biological resources. We recommend complete botanical surveys as part of the biological resources EIR analysis. Where valuable natural resources are found, we recommend avoidance measures and minimizing impacts first, and enforceable mitigation measures second.

In conclusion, thank you for the opportunity to participate in this important proceeding. We look forward to being active participants in upcoming review processes on this project. If you have any questions, please contact me at [conservation@ebcnps.org](mailto:conservation@ebcnps.org) or 510-734-0335.

Sincerely,



Karen Whitestone  
Conservation Analyst  
East Bay California Native Plant Society

Enclosed: References

*Protecting California's native flora since 1965*

## REFERENCES

- “Surveying and Monitoring Protocols and Guidelines.” California Department of Fish and Wildlife. <<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>>.
- “A Guidebook to the Botanical Priority Protection Areas in the East Bay.” East Bay Chapter of the California Native Plant Society. 2010. Bartosh et al. <<http://ebcnps.org/publications/guidebook-to-botanical-priority-protection-areas/>>.
- “Rare, unusual and significant plants of Alameda and Contra Costa Counties.” East Bay Chapter of the California Native Plant Society. 2016. Lake. <<http://ebcnps.org/native-plants/database-of-rare-unusual-and-significant-plants-of-alameda-and-contra-costa-counties/>>.
- “Manual of California Vegetation, 2<sup>nd</sup> ed.” California Native Plant Society. 2009. Sawyer et al. <<http://vegetation.cnps.org/>>.
- “Annotated Checklist of the East Bay Flora, 2<sup>nd</sup> ed.” East Bay Chapter of the California Native Plant Society. 2013. Ertter et al.

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ENGINEERING (925) 363-7433

6000 HERITAGE TRAIL • CLAYTON, CALIFORNIA 94517-1250  
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*City Council*  
JIM DIAZ, MAYOR  
KEITH HAYDON, VICE MAYOR  
TUIJA CATALANO, COUNCILMEMBER  
JULIE K. PIERCE, COUNCILMEMBER  
DAVID T. SHUEY, COUNCILMEMBER

April 3, 2017

City of Pittsburg  
Ms. Kristin Pollot, Project Planner  
65 Civic Avenue  
Pittsburg, CA 94565

Dear Ms. Pollot:

KRISTIN

The City of Clayton has reviewed the Notice of Preparation for the Draft Environmental Impact Report (DEIR) for the proposed Faria/Southwest Hills Annexation Project. The proposed project encompasses the reorganization of 607 acres to the City of Pittsburg, the Contra Costa Water District, and the Delta Diablo Sanitation District as well as amending the pre-zoning designations of the site from HPD (Hillside Planned Development) and OS (Open Space) to HPD-S (Hillside Planned Development, with an Interim Study District overlay) and OS-S (Open Space, with an Interim Study District overlay). The total proposed buildout could result in the construction of 1,500 single-family homes.

Given the large scale and total projected buildout of this proposed project, the City of Clayton has concerns regarding project-associated traffic impacts at its two key intersections: 1. Kirker Pass Road and Oakhurst Drive/Concord Boulevard; and 2. Ygnacio Valley Road and Clayton Road. While these intersections are located within the City of Concord, they are the primary means of ingress and egress for the city of Clayton, therefore an integral and important component to our community. It is noted these two intersections are impacted largely due to non-Clayton commuter and cross-town traffic.

The Notice of Preparation for the proposed Faria/Southwest Hills Annexation Project identified 35 intersections to be studied as part of the Transportation, Traffic, and Circulation Chapter of the DEIR; however the list did not include the aforementioned intersections. Given that these two intersections already have low Level of Service (LOS) ratings and experience long queue lengths during both a.m. and p.m. peak hours, and considering Ygnacio Valley Road is at or approaching capacity, the City of Clayton strongly recommends these two intersections be included as additional intersections to be studied as part of the DEIR to determine if the subject project will have a significant effect on these intersections.

If you have any questions or wish discuss this mater in more detail, please contact me at (925) 673-7343 or [mgentry@ci.clayton.ca.us](mailto:mgentry@ci.clayton.ca.us).

Sincerely,

Mindy Gentry  
Community Development Director

cc: Rick Angrisani, City Engineer  
Ray Kuzbari, City of Concord





April 10, 2017

Hector Rojas, Senior Planner  
City of Pittsburg  
65 Civic Avenue  
Pittsburg, CA 94565

(Original Correspondence sent via Email on 4/7/2017)

**Subject: City of Concord's Comments on the Scope of a Draft EIR for the Proposed Faria/Southwest Hills Annexation Project**

Dear Mr. Rojas,

Thank you for the opportunity to review and comment on the Notice of Preparation of a Draft EIR for the proposed Faria/Southwest Hills Annexation Project located within the City of Pittsburg General Plan Planning Area. The City of Concord respectfully requests your consideration of these comments on the NOP:

- 1) We appreciate the list of study intersections proposed to be included in the analysis of the Transportation, Traffic, and Circulation chapter of the EIR. Furthermore, we suggest that you consider adding the following intersections to the list to capture more fully potential traffic impacts to the City of Concord's street network serving project trips to/from I-680 and SR-242 during peak commute periods.
  - Concord Boulevard/Port Chicago Highway
  - Treat Boulevard/Oak Grove Road
  - Willow Pass Road/Diamond Boulevard
  - Willow Pass Road/Galindo Street
  - Willow Pass Road/Market Street
- 2) Highway Segment No. 47 should probably read as follows: "EB and WB SR-4 between I-680 and Solano Way".
- 3) The City of Concord should be consulted in advance regarding the configurations of a potential future extension of Avila Road to W Leland Road.
- 4) The traffic study should recognize the ongoing CCTA project development process pertaining to the "SR-4 Operational Improvements: I-680 to Bailey Road" project to improve traffic operations along SR-4 between I-680 and Bailey Road in both the eastbound and westbound directions during peak commute periods. Ultimately, future development on the proposed site should contribute a fair share of the cost to implement SR-4 improvements soon to be identified from the CCTA project development process, which should serve to mitigate project traffic impacts on SR-4.



**Subject: City of Concord's Comments on the Scope of a Draft EIR for the Proposed Faria/Southwest Hills Annexation Project**

- 5) The traffic study should recognize the TRANSPAC Subregional Transportation Mitigation Program (STMP) process which provides a guideline for requiring an inter-jurisdictional agreement to mitigate project traffic impacts on downstream jurisdictions located within Central County, including the City of Concord. For example, in 2006, the cities of Concord and Pittsburg negotiated fee agreements for the Vista Del Mar and Bailey Estates developments that resulted in the developers paying fair-share traffic mitigation to the City of Concord in addition to paying the standard East County local and regional fees.
- 6) MTSO evaluations should be based on MTSO criteria listed in the Draft Central County Action Plan for Routes of Regional Significance, dated March 2014.
- 7) The Notice of Preparation indicates that the Aesthetics chapter of the EIR will summarize existing regional and project site aesthetics and the visual setting. The chapter will describe project-specific aesthetic issues regarding buildout of the project site such as scenic vistas, trees, historic buildings, existing visual character or quality of the site, as well as light and glare.

The City of Concord requests that in order to assist in determining any potential aesthetic impacts related to the Faria/Southwest Hills development, the City of Pittsburg provide within its EIR a number of visual simulations to confirm that the 150 foot buffer is adequate along all areas of the southwest hills to reduce any visual impacts, as viewed from the City of Concord.

The City requests visual simulations from the following locations:

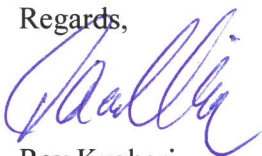
- Willow Pass Road –from bridge on the Concord Naval Weapons Station (CNWS), looking toward Southwest Hills
- Bailey Road, east of Myrtle Road, near gate shack, where hills are visible
- Newhall Park looking out toward hills
- Naval Weapons Station site ( hills east of Port Chicago BART and Bunker City area)

When the time comes, your consultant can contact Pamela Laperchia, Executive Assistant, Reuse Project Office at (925) 671-3001 to arrange access to the CNWS.

Again, we appreciate the City of Pittsburg working cooperatively with its regional partners, including the City of Concord.

If you have any questions regarding these comments, please feel free to contact me at (925) 671-3129 or via email at [ray.kuzbari@cityofconcord.org](mailto:ray.kuzbari@cityofconcord.org).

Regards,



Ray Kuzbari  
Transportation Manager

Enclosure: Copy of Email



Contra Costa County  
**Flood Control**  
& Water Conservation District

Julia R. Bueren,  
ex officio Chief Engineer  
Mike Carlson,  
Deputy Chief Engineer

April 5, 2017

Hector Rojas  
City of Pittsburg  
Development Services—Planning Department  
65 Civic Avenue  
Pittsburg, CA 94565

RE: NOP of Faria/Southwest Hills Annexation Project DEIR  
Our File: 3048B-06 097-180-006; 097-200-002,-003; 097-230-006; 097-240-002  
X-ref: City of Pittsburg 060-08

Dear Mr. Rojas:

We received the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Southwest Hills/Faria Annexation located southwest of the Pittsburg City limits in the Southwest Hills Subarea of the Pittsburg General Plan. We previously provided comments to an NOP in a letter dated March 26, 2014, a copy of which is enclosed. We received the notice on March 10, 2017, and submit the following comments:

1. The proposed annexation, while not directly developing the project area, will remove a barrier to development and, therefore, encourage development. This annexation is located within three distinct drainage areas: formed Drainage Area 48B (DA 48B), which drains primarily north into a culvert known as Line "A" that is located under State Route 4; unformed Drainage Area 99 (DA 99), which drains generally to the northeast; and Drainage Area 123 (DA 123), which drains to the west toward the redeveloping Concord Naval Weapons Base. The DEIR should discuss drainage into these areas in detail.
2. The majority of the site should drain to DA 48B Line "A" per the DA 48B Drainage Plan. We understand from past correspondence that the developer proposes to construct detention basins in order to reduce the flow rates from the new development down to pre-project levels.
3. A portion of the site drains toward the Mount Diablo Creek watershed (DA 123) and to the Bailey Estates toward the Lawlor Ravine in DA 99. The Contra Costa County Flood Control and Water Conservation District (FC District) has not developed master plans for these unformed drainage areas. The DEIR should discuss how these drainage areas will be impacted by the development and propose mitigation measures.

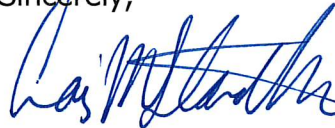


4. The original DA 48B plan assumed this area would remain open space and outside the Urban Limit Line. DA 48B Line "A" is not adequate to accommodate additional runoff from future development within the proposed annexation area. These capacity limitations of the downstream drainage facilities should be discussed in the DEIR. The DEIR should discuss the adverse impacts of the runoff from the project site to the existing drainage facilities and drainage problems in the downstream areas, including those areas outside of the City of Pittsburgh (City).
5. We recommend the following mitigation measures be included in the DEIR to address the drainage concerns:
  - a. Future development within the annexation area will be required to construct improvements to mitigate drainage impacts and identify a perpetual funding source for maintenance of the new drainage facilities. New facilities may include upsizing of Line A and/or detention basin facilities.
  - b. The City will develop a Drainage Master Plan for this specific area. This plan should be approved by the City and the FC District prior to allowing development within the Southwest Hills/Faria Annexation Area. The Drainage Master Plan should include detailed hydrologic modeling of the watershed that considers land use, existing facilities, soil, and topographic data. The Drainage Master Plan should also result in a plan with descriptions of proposed flood control facilities (which typically include basins, channels, and storm drains), compliance with discharge and water-quality requirements, cost estimates, and schedules.
  - c. A portion of the project is located within DA 48B for which a drainage fee is due in accordance with Flood Control Ordinance Number 2002-28. By ordinance, all building permits or subdivision maps filed in this area are subject to the provisions of the drainage fee ordinance. The current fee for this project (calendar year 2017) is based on \$0.54 per square foot of newly created impervious surface area. The fee pays for drainage improvements in the DA 48B Plan that help mitigate the increased runoff generated by new development. The City will need to ensure that this fee has been paid to the FC District during the development process, prior to recording the Final Map and/or issuing a building permit.
6. We recommend that the DEIR include a map of the project area and show all parcels involved in the annexation.

7. We request that the DEIR provide a map of the watersheds where the project is located, including watershed boundaries.
8. In the Hydrology Section, please identify and show all existing watercourses, tributaries, and man-made drainage facilities within the project site that could be impacted by this project. As a mitigation measure for the drainage impacts, the future developments within the annexation area should be required to perform an analysis of the capacity of the existing watercourses to prove their adequacy or recommend improvements to make them adequate for the flows that they will receive as a result of the development.
9. We recommend that the DEIR address the design and construction of storm drain facilities to adequately collect and convey stormwater entering or originating within the development to the nearest adequate man-made drainage facility or natural watercourse, without diversion of the watershed, per Title 9 of the County Ordinance Code.
10. The DEIR should discuss how future development within the annexation area will be required to comply with the current NPDES (National Pollutant Discharge Elimination System) requirements under the City's Stormwater Management and Discharge Control Ordinances and the C.3 Guidebook.

We appreciate the opportunity to review projects that involve drainage matters and welcome continued coordination. If you have any questions, please contact me via e-mail at [craig.standafer@pw.cccounty.us](mailto:craig.standafer@pw.cccounty.us) or by phone at (925) 313-2018.

Sincerely,



Craig M. Standafer  
Civil Engineer  
Contra Costa County Flood Control  
& Water Conservation District

CS:cw  
G:\fdct\CurDev\CITIES\Pittsburg\3048B-06\Southwest Hills-Faria Annexation\NOP of DEIR-April 2017 Comments.docx  
Enclosure

c: Mike Carlson, Flood Control  
Tim Jensen, Flood Control  
Teri E. Rie, Flood Control  
c/enc: Louis Parsons, Discovery Builders  
4061 Port Chicago, Suite H  
Concord, CA 94520



# Contra Costa County Public Works Department

Julia R. Bueren, Director

Deputy Directors  
Brian M. Balbas, Chief  
Mike Carlson  
Stephen Kowalewski  
Carrie Ricci  
Joe Yee

April 6, 2017

Hector Rojas, Senior Planner  
City of Pittsburg  
65 Civic Avenue  
Pittsburg, CA 94565

RE: Notice of Preparation of a Draft EIR for the proposed  
Faria/Southwest Hills Annexation Project

Dear Mr. Rojas:

The Transportation Engineering Division of the Contra Costa County Public Works Department has the following comments on the Notice of Preparation (NOP) of the Draft Environmental Impact Report (EIR) for the proposed Faria/Southwest Hills Annexation Project:

1. We submitted comments on the previous NOP for this project and appreciate that you have incorporated them into the reissued NOP.
2. According to the NOP, the upcoming Draft EIR will include a transportation and circulation section. The traffic impact analysis should look at potential safety improvements at the intersection of Bailey Road and Myrtle Drive to address the collision history at this site. Appropriate mitigation measures should be identified to mitigate the impacts and include County review and approval within the CEQA and building permit process.
3. During construction, haul routes should be identified and if any County roads are to be used, we request mitigation measures that would require the applicant to document the current road condition and mitigate any wear and tear on the roads due to heavy truck traffic from the project.
4. Please keep the Transportation Engineering Division notified regarding progress on this EIR, as we are interested in how this project will impact the County's road network.

Thank you for the opportunity to comment. We look forward to reviewing and commenting on the EIR. Should you have any questions, please contact me at (925) 313-2395.

Sincerely,

Ed Turner  
Engineering Technician  
Transportation Engineering

ET:nn

\\pw-data\grpdata\transeng\EIR\Pittsburg\Faria-Southwest Hills Annexation\2017 Faria NOP comments.docx

c: Hector Rojas, [hrojas@ci.pittsburg.ca.us](mailto:hrojas@ci.pittsburg.ca.us)  
Jerry Fahy, TE  
Mary Halle, TE  
Monish Sen, TE





CONTRA COSTA LOCAL AGENCY FORMATION COMMISSION

651 Pine Street, Sixth Floor • Martinez, CA 94553-1229

e-mail: LouAnn.Teixeira@lafco.cccounty.us

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Lou Ann Teixeira  
Executive Officer

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Tom Butt  
City Member

Stanley Caldwell  
Special District Member

March 31, 2017

City of Pittsburg Planning Department  
c/o Hector Rojas, Senior Planner  
65 Civic Avenue  
Pittsburg, California 94565

Sent via U.S. Mail and email to:  
[hrojas@ci.pittsburg.ca.us](mailto:hrojas@ci.pittsburg.ca.us)

**SUBJECT: *LAFCO Comment Letter - Notice of Preparation of a Draft Environmental Impact Report for the Proposed Faria/Southwest Hills Annexation Project***

Dear Mr. Rojas:

Thank you for including the Contra Costa Local Agency Formation Commission (LAFCO) in the environmental review process for the above project. As a Responsible Agency, as defined in the California Environmental Quality Act (CEQA), LAFCO will need to rely on the City's CEQA document in connection with the proposed annexations.

We previously commented on the proposed project in several prior letters dated November 16, 2006, September 16, 2010, January 27, 2011 and April 8, 2014. Over the past 10 years, these letters have provided the City with extensive comments regarding the conditions under which an environmental document prepared for the project would be considered adequate for LAFCO to rely upon in its consideration of the proposed annexations of the project site to the City of Pittsburg, the Contra Costa Water District (CCWD) and Delta Diablo (DD).

One of the more significant concerns expressed in our previous comment letters was that the proposed annexation did not include a master plan or anything resembling a detailed development plan; and for that reason, annexation of the project site was premature.

We understand that the current proposal includes a *Draft Faria/Southwest Hills Master Plan* that provides a level of detail missing from prior iterations, including such things as proposed land uses, open space set-asides, residential densities, roadway alignments, topographic changes resulting from the proposed mass grading, quantitative levels of demand for public utilities and services including water, wastewater, storm water, police and fire. Providing this detailed information will better facilitate LAFCO's review.

The Notice of Preparation (NOP) indicates that the Environmental Impact Report (EIR) will include an assessment of impacts on agricultural resources - and not only in relation to criteria used in CEQA, but also in relation to Contra Costa LAFCO's recently adopted *Agricultural & Open Space Preservation Policy (AOSPP)*. We appreciate that the City's CEQA document will assess the impacts of the project on prime agricultural, agricultural and open space lands in accordance with LAFCO's AOSPP, and in accordance with the definitions contained in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 ["CKH", California Government Code §56000 et seq.], as the CKH is the basis of LAFCO's AOSPP.

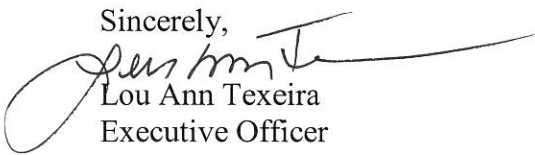
Other issues of interest to LAFCO include the following:

- *Public Services and Utilities* (e.g., fire, police, sewer and water) and including: (1) an enumeration and description of the services to be extended to the project area; (2) level and range of services; (3) indication of when those services can feasibly be extended to the project area; (4) description of any improvements or upgrading of structures, roads, sewer or water facilities, or other conditions the City would impose in conjunction with the project; and (5) information with respect to how services will be financed.
- *Greenhouse Gas Emissions* - consistency of the proposal with the regional transportation and other regional plans affecting the Bay Area (e.g., Plan Bay Area).
- *Regional Housing Needs* - the extent to which the proposal will assist the City in achieving its fair share of the regional housing needs.
- *Properties Proposed for Annexation* - the NOP notes that the proposed annexation includes a non-participating property that is outside of the Pittsburg City limits and not included within the Master Development Plan. LAFCO will rely on the City's EIR to provide information about this property (e.g., reason for including the property in the annexation, current and future land uses, need for municipal services, etc.).
- *Cultural Resources* - the NOP does not include Cultural Resources in the discussion of environmental impacts. We ask that the City include all environmental resource factors in its EIR to ensure a complete CEQA document upon which the City and LAFCO can rely.

Thank you for consideration of our comments; we hope you find them helpful. We look forward to receiving a copy of the Draft EIR and providing the City with additional comments at that time.

Please contact the LAFCO office if you have questions or need additional information.

Sincerely,



Lou Ann Texeira  
Executive Officer

c: LAFCO Planner



1331 Concord Avenue  
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Concord, CA 94524  
(925) 688-8000 FAX (925) 688-8122  
[www.ccwater.com](http://www.ccwater.com)

April 8, 2014

*Sent Via Electronic Mail: [kpollot@ci.pittsburg.ca.us](mailto:kpollot@ci.pittsburg.ca.us)*

*Hard copy to follow*

**Directors**

Joseph L. Campbell  
*President*

Karl L. Wandry  
*Vice President*

Bette Boatman  
Lisa M. Borba  
John A. Burgh

Jerry Brown  
*General Manager*

Kristin Pollot, Associate Planner  
City of Pittsburg, Planning Department  
65 Civic Avenue  
Pittsburg, CA 94565

**Subject: Faria/Southwest Hills Annexation, Comments on Notice of Preparation (NOP) for the Draft EIR**

Dear Ms. Pollot:

The purpose of this correspondence is for the Contra Costa Water District (CCWD) to provide comments to the City of Pittsburg regarding the NOP for Draft EIR on the Faria/Southwest Hills Annexation. The proposed Faria/Southwest Hills Annexation consists of up to 1500 new residences with associated roads, infrastructure and detention basins on an approximate 607 acre site. The project site is proposed for annexation to the City of Pittsburg, CCWD and the Delta Diablo Sanitation District (DDSD). The project site is located within the Spheres of Influence (SOI) of the City of Pittsburg, DDSD, and CCWD, and is within the Pittsburg Voter-Approved Urban Limit Line (ULL). To obtain access to water entitlements from CCWD requires that the site be included by the U.S. Dept of the Interior, Bureau of Reclamation (Reclamation) into the Central Valley Project (CVP).

CCWD provided comments on the project Mitigated Negative Declaration (MND) on February 1, 2011 (attached) and on the annexation proposal on October 6, 2010 and September 17, 2010 (also attached). CCWD's comments have been and continue to be directed towards the issue of water supply for the proposed project. At this time the proposed site has no entitlements for water service from CCWD.

The future Draft EIR on the project will be a key support document for future water entitlement reviews. CCWD highly recommends that the Draft EIR include the analysis that is necessary for Reclamation, who controls access to CVP water, to be able to make decisions towards allowing water service to be available for the project site. CCWD is recommending that the City of Pittsburg conduct the needed environmental analysis pertinent to Reclamation concerns concurrent with the preparation of the Draft EIR to provide greater certainty that Reclamation will be able to complete its CVP inclusion review on a timely basis.



One of the key issues for establishment of water service is the requirement that Reclamation authorize CCWD to include the proposed site for the use of CVP water. CVP Inclusion will require National Environmental Policy Act (NEPA) review by Reclamation. Before NEPA can be completed, Reclamation will require Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (Section 106) compliance. An assessment of cumulative impacts from the project under NEPA, particularly with respect to water supply, will also be required.

Since water is an essential resource for residential development, and no water entitlements now exist at the subject site, it is recommended that the project applicant commence the Annexation and CVP Inclusion review as soon as possible. This will ensure that when the developer is ready to commence construction of the Faria/SW Hills site, that water service is available and not subject to costly delays associated with a second round of report preparation and approval. Ideally the CVP Inclusion Review can be completed as close in time as is possible after LAFCO approves the annexation of the Faria/SW Hills site to CCWD.

The following are specific items that should be completed at the time the Draft EIR on the annexation is prepared.

1. Completion of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) Planning Survey Reports for the Faria/SW Hills Annexation. The Planning Survey Reports will be provided to Reclamation staff as part of the CCWD CVP Inclusion Review. Reclamation will submit these reports to the US Fish & Wildlife Service (USFWS) for confirmation that they satisfy the HCP/NCCP requirements.
2. Submission of Section 106 Historic Property Assessments for the Faria/SW Hills Annexation project. The Section 106 report will allow Reclamation staff to provide its analysis of impacts to Historic Resources. Without Section 106 compliance the CVP Inclusion Review will not be approved by Reclamation. Section 106 compliance can be very time consuming. Waiting for a project level Draft EIR to address the issue of cultural resources evaluation in a Cultural and Historical Resources Survey does not address this concern.
3. An analysis of the cumulative impacts associated with the Faria/SW Hills Annexation project. The Initial Study assesses cumulative impacts of the annexation project as potentially significant. The Draft EIR should thoroughly discuss potential biological cumulative effects for the annexation project. To confirm that the cumulative effects from this project can be mitigated, it is necessary that a Planning Survey Report be provided for the site. The Draft EIR should also address potential cumulative Cultural and Water Supply impacts from the development of the project.

Kristin Pollot, Associate Planner  
NOP for Draft EIR Faria/SW Hills Annexation  
April 8, 2014

In closing, CCWD recommends that the City of Pittsburg require comprehensive environmental documentation in the Draft EIR as a mechanism to provide greater certainty of water supply for the Faria/SW Hills project. A key stakeholder for access to CVP water is Reclamation who requires NEPA level environmental documentation before considering whether to grant access to its water supplies. This requires that the necessary technical review be conducted during the preparation of the Draft EIR including in particular completion of HCP/NCCP Planning Survey Report and Historic Property Report for compliance with Section 106. The applicant should also request water service from CCWD. With this approach CVP Inclusion review could be completed as close in time as possible to approval by LAFCO for CCWD annexation. Absent this approach there is greater risk the CVP Inclusion review process will not be completed on a timely basis relative to the point in time that the developer desires to commence housing construction.

The need for joint federal-state preparation of a document to satisfy both the CEQA and NEPA components of the project is underscored in CEQA Guidelines Section 15222 Preparation of Joint Documents. Preparation of the Draft EIR on the annexation that includes draft material in satisfaction of NEPA biological resources analysis in the HCP/NCCP Planning Survey Report and Historic Property Survey report in satisfaction of Section 106 will satisfy this requirement.

Should there be any questions on this matter please do not hesitate to contact me. I can be reached at 925 688-8119.

Sincerely,



Mark A. Seedall  
Principal Planner

MS/jmt:mlc

Attachment

cc: Cathy James (Reclamation)  
Chuck Siek (Reclamation)  
Laurie Perry (Reclamation)  
Lou Ann Texeira (LAFCO)  
Stephanie Jentsch (USFWS)  
Scott Wilson (CFWS)  
Dana Hoggatt Ayers- City of Pittsburg Planning Manager  
Keith Halvorson- City of Pittsburg Engineer



CONTRA COSTA  
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John A. Burgh

Jerry Brown  
General Manager

**REVISED**

February 1, 2011

**VIA FACSIMILE (925)252-4814**  
**Hard Copy to Follow**

Ms. Kristin Vahl  
Planning & Building Department  
City of Pittsburg  
65 Civic Avenue  
Pittsburg, CA 94565-3814

**Subject: Request for Comments on the Proposed Southwest Hills/Faria  
Mitigated Negative Declaration (State Clearinghouse #2011012003)**

Dear Ms. Vahl:

Contra Costa Water District (CCWD) appreciates the opportunity to comment on the Southwest Hills/Faria Negative Declaration. The proposed project consists of a rezone and annexation to the City of Pittsburg. The annexation request does not include water or sewer service. CCWD has previously commented on the Southwest Hills/Faria project and our comment letters from October 6 and September 17, 2010 are attached. CCWD is concerned that the approach may not deal with all issues in one document as the California Environmental Quality Act (CEQA) requires:

*Piece-mealing is a practice by which projects are analyzed incrementally in parts to make the environmental impacts appear smaller to the overseeing agency. CEQA plaintiffs succeeded on one such claim in June 2009, concerning an expansion of the Chevron Richmond Refinery, the largest employer in Richmond, California. The judge ruled that Chevron erred by defining the project inconsistently, and the city of Richmond erred in letting Chevron piece-meal its project, allowing Chevron to develop a mitigation plan after project approval. The judge consequently ruled the EIR to be insufficient to meet CEQA's requirements, ordering the preparation of a new EIR covering the whole, accurately defined project before the refinery's expansion could proceed.<sup>1</sup>*

The Southwest Hills/Faria Mitigated Negative Declaration (MND) creates conditions to implement CCWD's requirements for annexation and Department of the Interior, United States Bureau of Reclamation (Reclamation) CVP inclusion review; nevertheless no specific information such as a master plan on the proposed project is provided. The MND may be inadequate under CEQA for the following reasons:

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<sup>1</sup> Communities for a Better Environment v City of Richmond, 2010.

1. The Governor's Office of Planning and Research advises on mitigation measures for Mitigated Negative Declarations: "Avoid deferred mitigation and mitigation measures consisting of monitoring and future studies not tied to performance standards and contingency plans (*Sundstrom v. Mendocino County*, supra)."

Separating project approvals into two steps (annexation first and "project" approval second) does not appear to be appropriate under CEQA Section 15165 Multiple and Phased Projects. "Where individual projects are, or a phased project is, to be undertaken and where the total undertaking comprises a project with significant environmental effect, the Lead Agency shall prepare a single program EIR for the ultimate project as described in Section 15168. Where an individual project is a necessary precedent for action on a larger project, or commits the Lead Agency to a larger project, with significant environmental effect, an EIR must address itself to the scope of the larger project." **Note:** Authority cited: Section 21083, Public Resources Code; Reference: Sections 21061, 21100, and 21151, Public Resources Code; *Whitman v. Board of Supervisors*, (1979) 88 Cal. App. 3d 397.

2. MND mitigation measures 17-1a, 1b, and 1c as well as mitigation measure 17-2 allude to the need in the future for the applicant: to submit an annexation application to CCWD to be included in the CVP; demonstrate that the project will not create an adverse cumulative impact; submit to CCWD detailed information on the number of homes and businesses and estimated amount of construction water; and prepare a SB 610 Water Supply Assessment.

These mitigation measures refer to future documentation to mitigate the impacts of the Southwest Hills/Faria project (post-annexation) to the City of Pittsburg. It is this documentation that is needed now for CCWD to understand if its regulations and requirements will allow water service to be provided in this area. Absent the above information within the environmental documentation CCWD cannot satisfy its regulations and requirements to consider providing water service in this area.

3. The MND appears to rely upon the East Contra Costa County Habitat Conservation Plan to determine that certain impacts are "less than significant". The MND then references a future "in lieu" fee agreement under the East Contra Costa County HCP that will be a condition of the land use agreement. For CCWD to provide water service through its Central Valley Project water service contract, Endangered Species Act (ESA) compliance is required. In the September 22, 2010 Department of Fish and Game letter to the City, it is clearly stated that "Currently, development of the Project site is not considered a covered activity under the HCP/NCCP and is not eligible for permit coverage under this Plan." The letter further states that "If an in-lieu fee agreement is not executed (on the Project), the Southwest Hills/Faria properties proposed annexation are not eligible for ESA or CESA coverage through the HCP/NCCP. Dept. of Fish & Game (DFG) recommends that the City consult with USFWS, DFG, and the

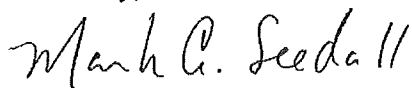
Ms. Kristin Vahl  
Planning & Building Department  
City of Pittsburg  
February 1, 2011  
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Nature Conservancy prior to granting approval of the Project and any subsequent development proposals at the Project site." Absent the details of the habitat values within the annexation area and some agreement with the Resource Agencies on the approach that will be used to determine those values Reclamation and US Fish and Wildlife Service cannot determine that the project is in compliance with ESA and CVP water supply inclusion review cannot be completed.

4. CCWD anticipates that it could be many years before any ESA reports and information are made available by the applicant. For example, the same developer (Louis Parsons, on behalf of Discovery Builders) has yet to prepare or provide any Endangered Species Act documentation via the HCP or independent biological assessment for the nearby Sky Ranch II development. The MND should recognize that absent this information, CCWD regulations and requirements for water service cannot be satisfied.

CCWD remains concerned that the MND may be inadequate for the reasons stated above and urges the City of Pittsburg to seriously consider requiring the applicant to submit all necessary environmental documentation on the proposed annexation as part of this action in order to avoid problems and potential fatal flaws later. Please contact me at (925) 688-8119 should you have further questions.

Sincerely,



Mark A. Seedall  
Principal Planner

MAS/jmt/rlr

Attachments

cc: Lou Ann Texeira, LAFCO  
Shiela Larsen, USFWS  
Troy Bristol, Save Mt. Diablo  
Randi Adair, DFG



**CONTRA COSTA  
WATER DISTRICT**

1331 Concord Avenue  
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October 6, 2010

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Planning & Building Dept.  
City of Pittsburg  
65 Civic Avenue  
Pittsburg, CA 94565-3814

**VIA FACSIMILE (925)252-4814**  
**Hard Copy to Follow**

**Subject: Request for Comments on the Proposed Southwest Hills/Faria  
Annexation (AP-10-717)**

Dear Ms. Vahl:

Further to your October 5, 2010 inquiry about a Contra Costa Water District (CCWD) "will serve" letter for the proposed Southwest Hills/Faria Annexation (AP-10-717), CCWD wishes to advise the City that, in addition to the requirements for CCWD water service stated in our September 17, 2010 letter to you (copy attached), the proposed annexation is outside the Los Vaqueros Project (LVP) service area.

CCWD regulations (5.04.120) states that: *Water service from LVP facilities will not be provided to lands outside the LVP Service Area by the District or its wholesale municipal customers. The District will not provide service from LVP facilities unless the District determines that:*

*a. The requested wholesale or retail service can only be provided from District facilities, which cannot feasibly be separated from LVP facilities;*

-The City of Pittsburg should confirm in writing that it has no alternative water supplies that can serve these properties.

*b. The impact of the requested wholesale or retail water service on the LVP is de minimis;*

-CCWD will need to make this assessment once it receives a water demand assessment from the City of Pittsburg for the Southwest Hills/Faria Annexation Area. CCWD's *de minimis* determination can be made if the cumulative increase in demand from the

Kristin Vahl  
City of Pittsburg  
October 6, 2010  
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subject annexation and all other past and pending annexations are less than 5 percent of the demands presented in the LVP EIR/EIS (Draft Stage 2 EIR/EIS for the Los Vaqueros Project, February 1992, as summarized in Attachment A).

Before CCWD can consider whether it can make a *de minimis* determination, water demand estimates are needed from the City of Pittsburg. Given the number of units on this proposed annexation area are expected to exceed 500 the water demand estimates should recognize that the City of Pittsburg will need to prepare a SB 610 water supply assessment for the project. As well, SB 7 requires that the state would be required to achieve a 20% reduction in urban per capita water use by December 31, 2020 and a 10% reduction by 2015. CCWD will want to confirm that the City of Pittsburg has considered the above requirements when estimating water demands for the Southwest Hills/Faria Annexation.

*c. All necessary environmental documentation for the expansion of the LVP Service Area to include the land proposed for annexation to the District has been provided by the proponent of the annexation or the applicant for water service and approved by the appropriate regulatory agency.*

-The City of Pittsburg should explain how the applicant intends to satisfy Federal and State endangered species act requirements. Water service may not be provided without these requirements being satisfied.

CCWD regulations require that fees be paid for processing an annexation and inclusion application at the time the request has been made to LAFCO. Please contact me at (925) 688-8119 should you have further questions.

Sincerely,



Mark A. Seedall  
Principal Planner

MAS/jmt/crp

Attachment

cc: Lou Ann Texaria, LAFCO  
Troy Bristol, Save Mt. Diablo

Shiela Larson USFWS  
Randi Adair, DFG



CONTRA COSTA  
WATER DISTRICT

1331 Concord Avenue  
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September 17, 2010

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Jerry Brown  
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Manager

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Planning & Building Dept.  
City of Pittsburg  
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Pittsburg, CA 94565-3814

VIA FACSIMILE (925)252-4814  
Hard Copy to Follow

Subject: Request for Comments on the Proposed Southwest Hills/Faria  
Annexation (AP-10-717)

Dear Ms. Vahl:

The Contra Costa Water District (CCWD) is in receipt of a request for comments on the proposed 607-acre Southwest Hills/Faria annexation in an unincorporated area of Contra Costa County west of Bailey Road near the southwestern limits of the City of Pittsburg.

CCWD manages and maintains water facilities that are owned and operated by the United States Bureau of Reclamation (Reclamation). This includes the Contra Costa Canal as well as a number of untreated water laterals. CCWD provides wholesale water service to the City of Pittsburg who in turn provides retail water service. At this time, no water service is provided to the area where the project is proposed.

CCWD would request that the environmental document on the project consider the following:

1. The proposed project is outside of the City of Pittsburg and is outside of the Contra Costa Water District. This area has no entitlements to allow for the provision of water service on either a temporary or long term basis. See Attachment 1.
2. LAFCO will require a "will serve" letter from CCWD in support of the annexation request. CCWD needs to fully understand the details of the proposed project before it can provide such a letter. This includes details on the number of new homes and businesses that would be constructed.

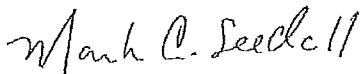


Kristin Vahl  
City of Pittsburg  
September 17, 2010  
Page 2

3. Under CCWD regulations any proposed use of water requires that the area where such water will be used be annexed to the CCWD service area. In addition, any use of water will require Central Valley Project Inclusion Review. Before water service entitlements can be established, Reclamation will require National Environmental Policy Act (NEPA) review. Of particular importance for NEPA is Reclamation compliance with federal Endangered Species Act (Section 7) with United States Fish and Wildlife Service and Cultural Resources (Section 106 of the National Historic Preservation Act). The CEQA document should clearly identify whether the project is eligible to use the East Contra Costa County Habitat Conservation Plan to support Endangered Species Act compliance. If the project is eligible to use the East Contra Costa County Habitat Conservation Plan, then the environmental documentation should confirm the project must comply with these requirements
4. The City of Pittsburg would need to submit to CCWD an application on behalf of the project developers for an annexation to CCWD and inclusion into the Central Valley Project (CVP). The application for annexation and inclusion requires that District costs be reimbursed. The City of Pittsburg will also be responsible for costs associated with Reclamation CVP Inclusion Review.
5. The environmental review should clearly define the amount of construction water that will be needed as well as the degree of permanent landscaping that will be included. The environmental document should also clearly limit the start of any construction activities including site grading and issuance of building permits until CCWD advises the City of Pittsburg in writing that all water related entitlements as well as all CCWD and Reclamation regulations are satisfied.

Please contact me at (925) 688-8119 should you have further questions.

Sincerely,



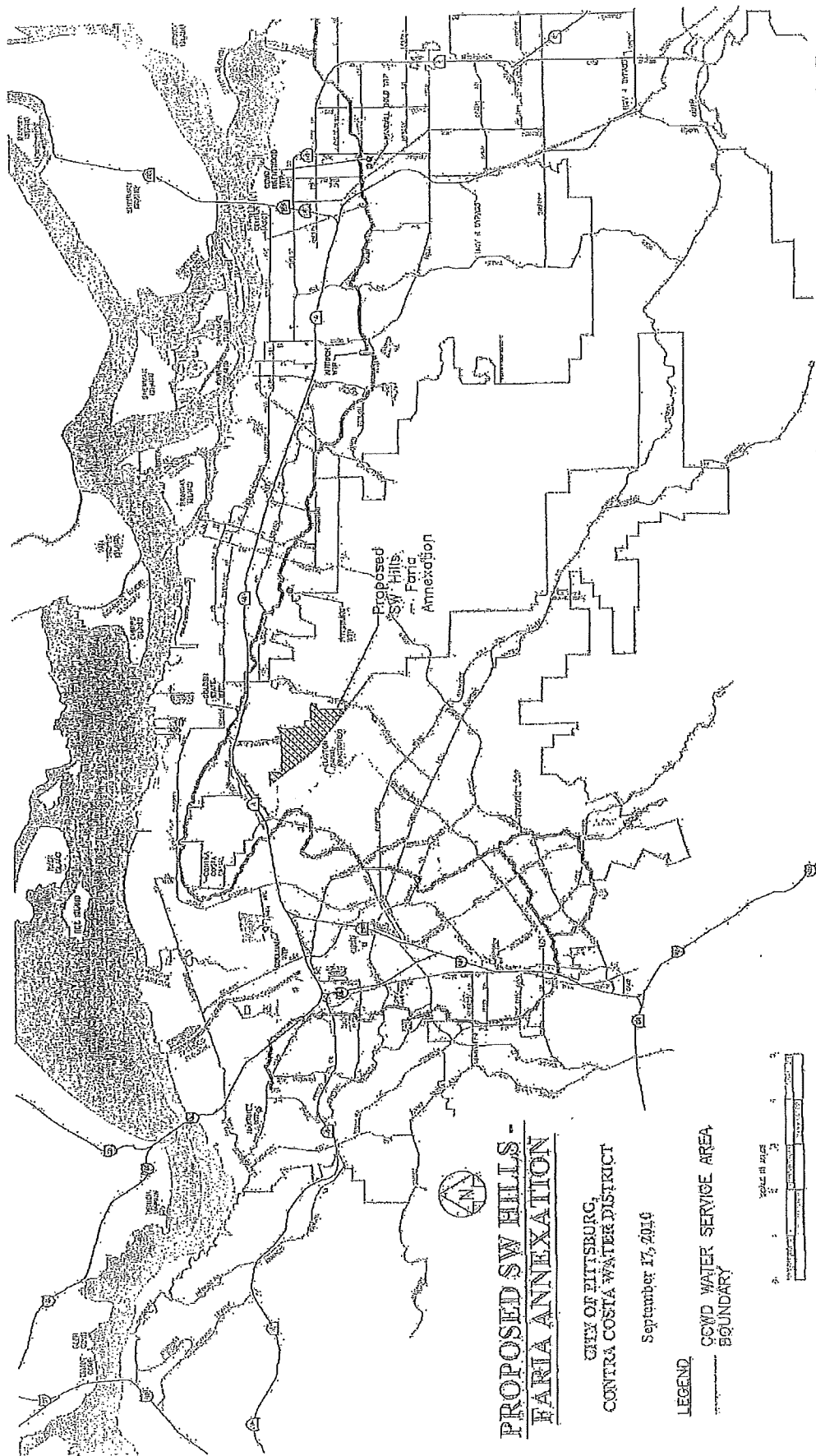
Mark A. Seedall  
Principal Planner

MAS/jmt/crp

Attachment 1

cc: Lou Ann Texaria, LAFCO  
Troy Bristol, Save Mt. Diablo

Shiela Larson USFWS  
Randi Adair, DFG





March 24, 2017

Hector Rojas  
City of Pittsburg  
Planning Division  
Civic Center  
65 Civic Avenue  
Pittsburg, CA 94565

**RE: Notice of Preparation – Faria/Southwest Hills Annexation Project**

Dear Mr. Rojas,

The East Bay Regional Park District appreciates the opportunity to comment on the Notice of Preparation of a draft Environmental Impact Report for the annexation of 606 acres into the City of Pittsburg city limits and the Contra Costa Water District and Delta Diablo Sanitation District service areas. The project would include preparation of a draft Master Plan to define potential development of up to 1,500 residential units. The District has commented previously on annexation and development proposals concerning this area.

The District remains concerned about the potential effects of development in the Los Medanos Hills, particularly in regards to potential impacts on the planned Concord Hills Regional Park on the closed portion of the former Concord Naval Weapons Station (CNWS). The District has been working closely with the City of Concord, the National Park Service, and numerous community stakeholders towards the establishment of a great urban regional park on the CNWS. Additionally, the District has worked extensively with the City of Concord and the United State Fish and Wildlife Service to develop a Biologic Opinion for the former CNWS pursuant to Section 7 of the Endangered Species Act that designates significant portions of the future regional park for resource protection purposes.

The Concord Hills Regional Park Land Use Plan is currently being developed. The current plan envisions an extensive multi-use trail network of over 20 miles, camping, picnicking, and a jointly operated visitor's center with the National Park Service highlighting the history of the Port Chicago Naval Magazine National Memorial. Over 90% of the site would be dedicated towards habitat protection with extensive habitat restoration.

The NOP acknowledges that future development of the area would include a project with a maximum build-out of 1,500 new homes. The EIR will need to be appropriately comprehensive as to assess the impacts not only of annexation, but of the future development that the NOP identifies. Additionally, Figure 3, Proposed Land Use Map, included in the NOP identified the extension of San Marcos Boulevard from its current terminus to Bailey Road. The impacts of this road extension, particularly to the properties biologic resources and traffic and circulation, will need to be fully evaluated in the EIR.

**Aesthetics**

The EIR will need to be thorough in its analysis of affected viewsheds and aesthetic impacts. The Los Medanos Hills serve as a visual backdrop for the City of Pittsburg and impacts to this view should be considered from multiple points. Additionally, the Los Medanos Hills are an important visual resource for the City of Concord and impacts to views from key view points in the City of Concord should be considered.

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General Manager

The Los Medanos Hills are an important visual resource from many points throughout the region. Visual simulations and aesthetic impact analysis should be conducted from multiple publically accessible viewpoints throughout the region including from Black Diamond Mines Regional Preserve, Mount Diablo State Park, and Briones Regional Preserve. The Concord Hills LUP proposes the establishment of hiking trails and a backcountry camp site within close proximity of the proposed area of development. Aesthetic impacts on these planned public facilities should be fully evaluated.

#### Agricultural Resources

The Concord Hills Regional Park will be grazed for both resource protection and fuel reduction purposes. Impacts on the ability of the District to effectively graze the future regional park should be considered including the potential for user/neighbor conflicts and the need for enhanced grazing infrastructure to ensure compatibility with adjoining development.

#### Air Quality and Greenhouse Gas Emissions

The EIR will need to fully evaluate the potential Air Quality and Greenhouse Gas (GHG) emissions on adjacent publically accessible regional parklands including the increase of vehicle and fugitive dust emissions and impacts on recreational users arising from temporary construction activities, permanent residential development, and vehicle emissions associated with the new development and extension of San Marcos Boulevard.

The Air Quality and GHG emissions on the broader Bay Area air basin and potential contributions to global climate change of the new residential development and extension of San Marcos Boulevard will also need to be evaluated and fully mitigated.

#### Biologic Resources

The EIR will need to fully evaluate and mitigate for the potential impacts to biologic resources on site as well as on the adjacent protected regional park. The adjacent regional park is largely designated as a Conservation Zone pursuant to the Biologic Opinion being developed to provide for mitigation for the Concord Reuse Project on the former Concord Naval Weapons Station. The regional park area and designated Conservation Zones are known habitat for a range of state and federally protected species included Golden Eagle, California Tiger Salamander, Alameda Whipsnake, and the California Red Legged Frog. The impacts of the adjacent development and the ability for these Conservation Zones to continue to provide the conservation value necessary to mitigate the impacts of the Concord Reuse Project will need to be fully analyzed and mitigated. The EIR should fully consider the impacts of adjacent human occupancy, impacts associated with the introduction of domesticated pets, and impacts associated with automobile use of the San Marcos Boulevard extension.

#### Geology, Soils, & Seismicity

The EIR will need to fully disclose and evaluate the significant earth moving activity that would be necessary to make the site appropriate for development. The area has a history of geologic instability with past land slide activities impacting homes. The EIR will need to consider the potential for landslides as well as the potential for dust emissions resulting from earth moving activities.

#### Hydrology and Water Quality

The proposed development area includes the upper hillsides and ridgelines that form the eastern boundary of the Mount Diablo Creek watershed. Mount Diablo Creek runs through the former Concord Naval Weapons Station. Restoration and protection of the creek is a key goal of the Concord Reuse Plan. The EIR will need to fully consider any potential hydrologic or water quality impacts associated with the development of the residential project and the extension of San Marcos Boulevard, including the potential for contamination from runoff from the roadway. Additionally, a number of known ponds that provide breeding habitat for California Tiger Salamander and Red Legged Frog are located near the eastern boundary of the Concord Naval Weapons Station. These ponds will be managed as protected habitat as required by the U.S. Department of Fish and Wildlife Service as mitigation for the Concord Reuse Project. Runoff and alterations to the hydrology resulting



from the proposed development and roadway will need to be evaluated to ensure no impacts to these protected resources.

#### Noise

The EIR will need to consider the impacts of noise, both from temporary construction and permanent residences on the protected resources on the Concord Naval Weapons Station including on the nesting Golden Eagles. Additionally, impacts of noise on the planned adjacent recreational use including the adjacent backcountry campsite should be evaluated.

#### Traffic

The EIR will need to be thorough in its evaluation of traffic impacts both of the new residences and of the extension of San Marcos Boulevard. Impacts of potentially directing traffic into Concord onto Bailey Road will need to be studied. Bailey Road will be a primary access point to the future Concord Hills Regional Park. The addition of traffic to Bailey Road would have the potential to impact this access and will need to be fully evaluated and mitigated.

#### Parks and Recreation

The EIR will need to evaluate all relevant impacts to the planned Concord Hills Regional Park, including impacts arising from the increased population proposed at its border. The EIR will need to identify mitigation, including funding for long term maintenance, of any impacts arising from increased park use resulting from the adjacent development.

#### Conclusion

The EIR must be appropriately comprehensive to evaluate the whole of the action of development activities proposed in the Master Plan including the development of up to 1,500 homes and the extension of San Marcos Boulevard to Bailey Road. The EIR will need to consider impacts on the planned Concord Hills Regional Park and the protected habitats adjacent to the proposed development site. The District looks forward to reviewing the draft EIR and we request that we be included on any distribution of project materials.

The District appreciates the opportunity to provide these initial comments. Please feel free to contact me at 510-544-2623 or [bholt@ebparks.org](mailto:bholt@ebparks.org) should you have any questions.

Respectfully,



Brian W. Holt  
Acting Chief of Planning/GIS

Cc: Guy Bjerke, Concord Reuse Project Director

## NATIVE AMERICAN HERITAGE COMMISSION

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March 29, 2017

Hector Rojas  
City of Pittsburg  
65 Civic Avenue  
Pittsburg, CA 94565

RE: SCH#2017032027, Faria/Southwest Hills Annexation Project, Contra Costa County

Dear Mr. Rojas:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

**CEQA was amended significantly in 2014.** Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

#### AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or

tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- a. A brief description of the project.
  - b. The lead agency contact information.
  - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
  - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).
2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
  - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).
3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
  - a. Alternatives to the project.
  - b. Recommended mitigation measures.
  - c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).
4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
  - a. Type of environmental review necessary.
  - b. Significance of the tribal cultural resources.
  - c. Significance of the project's impacts on tribal cultural resources.
  - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).
5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).
6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
  - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).
7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
  - a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
  - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at:  
<http://nahc.ca.gov/resources/forms/>

#### NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([http://ohp.parks.ca.gov/?page\\_id=1068](http://ohp.parks.ca.gov/?page_id=1068)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have been already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.
3. Contact the NAHC for:
  - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.



- b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
- 4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
  - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
  - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
  - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions, please contact me at my email address: [sharaya.souza@nahc.ca.gov](mailto:sharaya.souza@nahc.ca.gov).

Sincerely,



Sharaya Souza  
Staff Services Analyst  
cc: State Clearinghouse

Mr. Rojas,

Please accept these comments regarding the NOP for the EIR of the Faria/Southwest Hills Annexation to the City of Pittsburg.

- \* All major and minor arterial streets in the project must have bike lanes as well as sidewalks.

- \* All major and minor collector streets in the project must have bike lanes as well as sidewalks.

- \* All streets connecting the proposed development to existing streets in the vicinity must include bike lanes and sidewalks.

The design of the bike lanes is dependent on the size of the street and the traffic's expected average speed.

(Fast traffic means buffered bike lanes Very fast traffic means protected bike lanes.)

- \* All open space must be connected by EBRPD-standard trails to other open space in the vicinity including to the Delta de Anza Regional Trail.

- \* A trail must be constructed on the summit of the ridge of hills between Concord and Pittsburg between Willow Pass (the pass) and Kirker Pass (the pass).

Design guidance regarding trail standards is available from both the East Bay Regional Park District and the Bay Trail organization.

- \* Bike lanes must be added to the narrow part of San Marco Boulevard (where they should have been constructed on day one).

(If this is not possible, expanding the sidewalk on each side of San Marco Boulevard to 10 feet in width might be sufficient, especially if curb cuts are provided for easy entrance and exit by the bicyclist, and if the City adjusts its municipal code to permit adults to bicycle on 10-foot wide sidewalks within the city limits.)

- \* Bailey Road must be widened (including bike lanes) between Concord and Pittsburg before the first building permit is issued.

This project is within three miles of the Pittsburg/Bay Point BART station, so the street grid should be designed to accommodate people bicycling to the BART station. This accommodation should be both within the project and on the streets leading up to the BART station. These mitigations should help make bicycling to the BART station more comfortable and inviting for the resident and to encourage him or her to bicycle to this public transit station. Standard bike lanes and a 10-foot wide path must be created before the first building permit is issued.

Regarding the list of 43 intersections that traffic from the project will impact: Each intersection should be upgraded and improved to Complete Streets standards. The county and the city of Pittsburgh have adopted this standard. Additional design information is available from NACTO. This is to encourage people already living in the area to walk and bike. By improving each of the impacted intersections in the vicinity of the proposed development, we are encouraging already existent residents to walk and bike and providing safe facilities for them to do so. Such a potential change of transportation mode will tend to make a reduction of motor vehicles on the streets, which will be a mitigation for the additional traffic added to the streets caused by the project. (Alas, the assumption that I am making here is that many or even most of the new residents of the development will be using an automobile almost exclusively for his or her personal transportation.)

Thank you for accepting this testimony.

All best wishes,

~0le

Bruce "0le" Ohlson  
Bike East Bay  
Delta Pedalers Bicycle Club  
Contra Costa Countywide Bicycle Advisory Committee  
CCTA Bicycle & Pedestrian Advisory Committee  
Caltrans District 4 Bicycle Advisory Committee  
TRANSPLAN appointee to Highway 4 Integrated Corridor Management Study  
Healthy and Livable Pittsburgh Collaborative

Walnut Creek Office  
1601 N. Main St., Suite 105  
Walnut Creek, CA 94596  
(925) 932-7776

March 31, 2017

City of Pittsburg  
Attn: Hector Rojas, Senior Planner  
65 Civic Avenue  
Pittsburg, CA 94565

Dear Mr. Rojas:

**RE: Faria/Southwest Hills Annexation Project**

Thank you for providing the opportunity for Greenbelt Alliance to comment on the Notice of Preparation (NOP) for the Faria/Southwest Hills Annexation Project (“Project”). The Project proposes the annexation of approximately 606 acres—including development of as many as 1,500 housing units—in the Southwest Hills to the City of Pittsburg, Contra Costa Water District, and Delta Diablo Sanitation District. We look forward to your careful review of these comments, many of which are reiterations of longstanding concerns we have with the annexation of the Southwest Hills. We also strongly encourage the City of Pittsburg to suspend its proposed annexation process to address the concerns outlined below.

**Inappropriate Sequencing and Piecemealing of the Environmental Review**

The annexation proposed by the City of Pittsburg precedes the public review and approval of either a specific development proposal or a detailed plan for the project area. The NOP confusingly describes the Project as the Draft Faria/Southwest Hills Master Plan (Draft Master Plan) even though no such plan has yet been made public. Apparently, the Draft Master Plan is forthcoming, but no timeline or public announcement has been made about the release of the plan. The annexation process and EIR should be suspended until the public have the opportunity to provide input on the Draft Master Plan.

The Project also precedes the completion of ongoing planning processes regarding conservation and development in the Southwest Hills, which will have considerable implications for future uses of the project area. Before annexation is considered, the City and partner jurisdictions should complete all ongoing planning processes that potentially affect the project site, including the Hillside Development Regulations required by the Pittsburg General Plan. According to the City of Pittsburg’s website, there have been no actions with respect to the Hillside Development Regulations since May 19, 2008, “at which time the [City] Council moved not to act on the Hillside Regulations and Design Guidelines as presented and instead to revisit the item at a future date uncertain.”<sup>1</sup> The City of Pittsburg should either complete the Hillside Development Regulations or the Draft Master Plan before an annexation proposal has moved to environmental review.

This approach inappropriately sequences and piecemeals the review and approval process for development in the project area. This results in a number of negative consequences, including the potential for incomplete environmental review, inadequate public engagement, and unnecessary conflicts with existing planning processes and policies. For example, the Contra Costa Water District and Delta Diablo Sanitation District cannot proceed with an annexation proposal without a determination of their ability to provide services to the site. Without a

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<sup>1</sup> <http://www.ci.pittsburg.ca.us/index.aspx?page=214>

specific development proposal to review, these agencies will be unable to accurately assess their capacity, putting existing service users at risk.

### **Environmental Effects of Potential Development**

The EIR must analyze all of the potential environmental effects that would result from the annexation and subsequent development, including the following:

#### **Growth Inducement**

The EIR must examine how the annexation would increase growth pressures in the project area and surrounding areas. In addition, the EIR must study the Project's impacts on other growth-inducing proposals in the City of Pittsburg, such as the James Donlon Boulevard Extension.

#### **Greenhouse Gas Emissions, Air Pollution, and Vehicle Miles Traveled**

Using projections of build-out, the EIR must analyze greenhouse gas emissions (GHGs), criteria air pollutants, and vehicle miles traveled. These effects would have a significant impact on local air quality and public health and contribute significantly to climate change. The anticipated increase in greenhouse gas emissions and vehicle miles travelled would negatively impact the region's ability to achieve the rigorous State of California targets for reducing GHGs. Additional vehicle miles traveled would also negatively impact the local and regional transportation system and dampen the benefits of transit investments throughout East Contra Costa County.

#### **Impacts on Water Resources and Water Quality**

The EIR must assess impacts on local and regional water supplies, groundwater, water recharge capacity, water quality, and riparian and aquatic habitats. After years of extreme drought, these environmental services are already significantly impacted by the current ratepayers. These water resources are also projected to be at increasing risk due to the effects of climate change. Demands on wastewater treatment systems could also be significant, especially in light of extensive infrastructure expansion throughout the Southwest Hills.

#### **Impacts on Habitat, Endangered Species, Hillside, and Agricultural resources**

The EIR must analyze the impacts on habitats, species, hillsides, and agricultural resources in and around the proposed annexation. These include impacts on species of special concern and loss of habitat connectivity across the Mount Diablo Range. The Project would significantly impact ridges and hillsides with steep slopes, causing the potential for major erosion and seismic instability. Conversion of habitat and agricultural land for development would also negatively impact aesthetic resources (e.g. interruption of viewsheds), cultural and historic resources (e.g. historic structures, Native American sites), and recreational resources (e.g. impacts on hiking opportunities related to Concord Hills Regional Park and other planned trail networks).

#### **Impacts on Concord Hills Regional Park**

The EIR must analyze the potential for significant impacts on the new Concord Hills Regional Park that will be within 150 feet of the Project. After years of planning for this new public park for Contra Costa County, it is very concerning that the City of Pittsburg would continue with the Project without significant analysis of the relationship between the Draft Master Plan and the Concord Hills Regional Park. Previous attempts to annex the Southwest Hills have raised significant concerns from the City of Concord and the East Bay Regional Parks District, among many other agencies and organizations. These parties must review the Draft Master Plan before the City of Pittsburg continues with the EIR.

**Impacts of New Local Infrastructure**

The EIR must assess how development in the area would require expansion of local infrastructure and city services. The construction, installation, and maintenance and operation of this infrastructure would have significant environmental impacts. They would also result in additional financial costs for the City of Pittsburg and other agencies, and could significantly impact the quality of services for current residents. On the other hand, developing within existing areas could substantially reduce these costs, which must be thoroughly analyzed in the EIR.

**Inclusion of All Feasible Measures to Mitigate/Avoid the Projects' Environmental Effects**

CEQA requires an EIR to describe all feasible mitigation measures that could minimize significant environmental impacts. (Cal. Code Regs., tit. 14, §15126.4.) For example, the EIR must consider measures to prevent or limit development in the affected areas and mitigate the environmental effects of additional car trips in these areas, such as expanded public transportation options or funding for air pollution reduction programs.

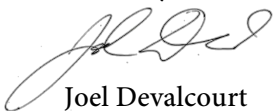
**Infill Project Alternatives**

The City of Pittsburg should consider project alternatives that promote compact, mixed-use development in the city's core, such as the robust implementation of the Railroad Avenue Specific Plan. This type of development provides well-documented environmental, economic, and social equity benefits, both for the residents of Pittsburg as well as the entire Bay Area region. By limiting the availability of land for sprawl development, this will prepare Pittsburg for a fundamental shift toward redevelopment of its urban center and away from hillside construction that will have significant negative environmental impacts.

**Conclusion**

In light of the significant deficiencies in the annexation proposal, we request that the City of Pittsburg suspend its processing of the proposal and proceed with its planning efforts to establish meaningful open-space protections for the Southwest Hills. We look forward to your consideration of these comments. Please contact us regarding future actions regarding this project.

Sincerely,



Joel Devalcourt  
Regional Representative, East Bay  
Greenbelt Alliance  
925.932.7776

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April 4, 2017

**Via Electronic Mail Only**

Mr. Hector Rojas  
Senior Planner  
City of Pittsburg Planning Department  
65 Civic Avenue  
Pittsburg, California 94565  
E-Mail: [hrojas@ci.pittsburg.ca.us](mailto:hrojas@ci.pittsburg.ca.us)

Re: Faria/Southwest Hills Annexation

Dear Mr. Rojas:

On behalf of Save Mount Diablo, we thank you for the opportunity to provide comments on the Notice of Preparation (“NOP”) of an Environmental Impact Report (“EIR”) for the Faria/Southwest Hills Annexation (“Project”). Save Mount Diablo (“SMD”) is a non-profit conservation organization that acquires land for addition to parks on and around Mount Diablo and monitors land use planning that could affect protected lands. We submit the following comments on the NOP for your consideration.

The applicants have several times before presented this proposal to the City. Previously, the City attempted to provide CEQA review with virtually no information regarding the actual development plans for the proposed annexation area. *See* City of Pittsburg, Initial Study/Mitigated Negative Declaration for Southwest Hills/Faria Annexation, December 2010 and Initial Study/NOP dated March 10, 2014. We pointed out, in our letter dated January 27, 2011, and in a letter from Save Mount Diablo dated April 7, 2014, that CEQA requires review of the entire project—the planned development motivating the annexation, and not simply the annexation itself. Without information regarding that development, the CEQA review was inadequate. We further pointed out that such information was required for an annexation, and that without it, LAFCO could not approve the request. Several agencies, including LAFCO and the Contra Costa Water District, submitted comments bolstering this point.



Now, the applicant has returned with what appears to be a similar proposal. The City states that, because the Project was refined to include preparation of a Master Plan and Land Use Map, a new NOP was deemed necessary. NOP at p. 5. Yet, the NOP that was released for environmental review on March 9, 2017 is just as incomplete and vague as its predecessors. As a result, the City must issue a new NOP with sufficient detail about the project and its impacts for further public review.

## **I. The NOP Lacks Necessary Information Regarding the Project and Its Probable Environmental Impacts**

The purpose of an NOP is to “solicit guidance from members of the public agencies as to the scope and content of the environmental information to be included in the EIR.” California Environmental Quality Act (“CEQA”) Guidelines § 15375; see also CEQA Guidelines § 15082. In order to effectively solicit such guidance, the NOP must provide adequate and reliable information regarding the nature of the project and its probable environmental impacts. As the following discussion illustrates, the City’s NOP does not meet the minimum standard for adequacy in this regard.

### **A. Project Description**

One of CEQA’s fundamental requirements is that an EIR contain an accurate and complete project description. See *County of Inyo v. City of Los Angeles*, 71 Cal.App.3d 185 (1977); see also CEQA Guidelines § 15124. A clear and comprehensive project description is the sine qua non for meaningful public review. Without it, the public cannot be assured that the environmental impacts of the entire Project have been considered in the EIR. In addition, CEQA requires evaluation of “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.” CEQA Guidelines § 15378(a). Breaking the project into smaller sub-projects will lead to inadequate environmental review. See, e.g., *Bozung v. Local Agency Formation Comm’n* (1975) 13 Cal.3d 263, 283-84 (CEQA mandates that “environmental considerations do not become submerged by chopping a large project into many little ones”).

To be adequate, an NOP must provide enough information and describe the proposed project in sufficient detail to enable members of the public to make a meaningful response to the NOP. CEQA Guidelines § 15082(a)(1)(A)&(B). Unfortunately, the City’s NOP fails to meet this basic standard. The Project as described in the NOP lacks sufficient specificity to allow the public to understand specifically what the applicant and City contemplate for the site. Critical Project components of the development remain undefined. Those aspects of the Project that the NOP attempts to



describe are depicted with so little detail that a reader is left with no idea of what the Project will look like at build-out or how it will work.

The most glaring deficiency is the NOP's failure to provide a description of the Master Plan for the area. The NOP also fails to include the site plan to accompany the Master Plan (as is required by the City's municipal code at § 18.72.060.B.) and fails to indicate the location of roads, public services, and other infrastructure improvements such as storm water facilities. Similarly, the NOP fails to specify the Development regulations that apply to the Project and fails to explain how the Project would be consistent with those regulations. The NOP's description of the Master Plan's Design Review Guidelines is equally cryptic. The NOP states that the Project will be subject to such Guidelines and that they "are intended to provide a framework for the design of future development within the project site." NOP at 6. However, the NOP fails to provide the Design Review Guidelines, depriving the public of the opportunity to review them and provide comments.

Finally, the NOP states that the Project would include an amendment to the City's General Plan, and a rezoning of the proposed Master Plan area. NOP at 8. Yet, the NOP fails to provide any insight as to the purpose and need or the specific nature of the amendment and rezoning. These issues must be comprehensively addressed in the EIR in order to understand the implications for the site and the region.

In sum, the NOP is inadequate in that it fails to describe critical project components and their exact location. Indeed, inasmuch as this Project appears to be at the earliest stages of planning, we question the value in releasing an NOP prior to the applicant identifying specifically what is contemplated for the Project site. Once an actual project is proposed, the City will have to issue a new NOP for public review.

## **B. Analysis of the Project's Probable Environmental Effects**

The CEQA Guidelines specify that an NOP shall include a description of the probable environmental effects of the project. CEQA Guidelines § 15082. Here too, the NOP fails to meet CEQA's mandate. Despite the fact that the City has previously prepared and circulated two Initial Studies on the Project, the NOP fails to provide a description of the Project's probable environmental effects. *Id.* Instead, it only provides a list of the issue areas that would be analyzed in the EIR. NOP at 8-10. Moreover, this list is plainly incomplete.

## **1. Recreation**

The NOP fails to include impacts to recreation as a probable environmental effect, much less describe those impacts. Various comment letters sent to the City about the Project in 2014 identified specific potential impacts that should be analyzed as part of an EIR. For example, SMD submitted comments regarding potential impacts to recreation. SMD Comments on the 2014 NOP dated April 7, 2014 at 1 and 2. Similar comments were submitted to the City by the City of Concord and East Bay Regional Park District, yet the NOP ignores these comments and entirely omits recreation impacts from the Project's probable environmental effects. Annexation and development of the site would result in a substantial increase in new population adjacent to area regional parks. The EIR must evaluate the Project's impacts on recreation resources, including visual impacts and impacts related to increased demand for recreational resources.

In addition, the proposed development site is immediately adjacent to a planned new regional park at the Concord Naval Weapons Station, just southwest of the ridgeline on the western boundary of the project. Development in the upper portion of the hillside would be visible from and overlook areas of Pittsburg and Concord, and the new regional park. Graded portions of the hillside and construction of homes would potentially visually encroach on parklands and view sheds. The EIR must provide a full evaluation of these potentially significant impacts.

## **2. Biological Resources**

A variety of biological communities and habitat types occur in the Project area. The NOP provides no indication as to the extent of impacts to these communities and habitats. The NOP also does not identify the proposed study areas (which will differ by species), the thresholds of significance, or potential mitigation measures.

A full analysis of the Project-specific and cumulative effects on biological resources impacts will be essential to development of effective mitigation measures to ensure that impacts on biological resources impacts will be fully offset. This detailed analysis must be prepared by a qualified, independent biologist with expertise in upland habitat. The biological resources study must be based on surveys and detailed field studies that are completed at appropriate times of the year for each species potentially in the area. A search of the California Natural Diversity Database ("CNDDDB") maintained by the Department of Fish & Game is a good starting point, but it is not sufficient to provide the level of detail necessary for the EIR. The EIR must also include wetland delineations to the extent they have been completed by the U.S. Army Corps of Engineers.

Moreover, because the project area is part of the East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP or Plan), the EIR must detail how the project will comply with and mitigate significant impacts through the HCP/NCCP. Mitigation measures for impacts to biological resources should be supported by the U.S. Fish and Wildlife Service, the Department of Fish and Game, and the U.S. Army Corps of Engineers. Deferral of mitigation measures until specific projects are proposed and federal and state permitting processes have begun is not appropriate.

### **3. Hydrology and Water Quality**

The EIR must determine whether development of the proposed Project would result in the violation of any water quality standards, result in substantial new amounts of polluted runoff, interfere with groundwater recharge, or alter the existing drainage pattern of the site.

Significant impacts to the hydrologic regime and water quality are likely as a result of the construction and operation of the proposed Project. Impacts to water quality will occur both from construction activities and the development project. Moreover, as previous comments have stated, the proposed annexation area includes the upper hillsides and ridgelines that form the eastern boundary of the Mount Diablo Creek watershed. See East Bay Regional Park District Comments on the 2014 NOP dated April 9, 2014 at 2. The EIR should provide an exhaustive and detailed analysis of the Project's hydrological and water quality impacts associated with development in the upper portions of the watershed and identify feasible mitigation for any impacts determined to be significant.

### **4. Air Quality and Toxic Air Contaminants**

The City previously received comments on the Project's potential to increase toxic air contaminants in the area. City of Concord Comments on the 2014 NOP dated April 8, 2014. In their comments, the City of Concord explained that much of the City of Concord, which is immediately adjacent to the Project site, is designated as a Community Air Risk Evaluation area, indicating a higher concentration of toxic air contaminants. The NOP ignores this comment and omits analysis of toxic air contaminants. The EIR should include an evaluation of the Project's contribution to these contaminants, how they might exacerbate existing concentrations of these contaminants, and potential impacts to at-risk populations.

## **5. Greenhouse Gas Emissions**

The NOP fails to identify the thresholds of significance the EIR would rely upon, or the methodology for analyzing the Project's increase in GHG emissions. Nor does the NOP even identify the other applicable GHG-related plans, policies or regulations with which the Project would be required to be consistent. The City must ensure that the EIR accurately identifies the Project's increase in GHG emissions and adequately analyzes how the increase in emissions would contribute to climate change. It will be critical that the mitigation measures for the Project ensure that GHG emissions are reduced to less than significant levels.

## **6. Utilities and Services**

The EIR must identify the increased demand for all essential public services and utilities (e.g., police, fire, schools, parks, wastewater treatment, and solid waste) resulting from the proposed Project and compare this increase in demand with available capacity. The document must determine whether capacity exists to serve allowable development without reducing existing services. In addition, the EIR must analyze the cumulative demand for these services, utilities and facilities. Where expansion of services would have environmental impacts, the EIR must analyze those impacts as well.

## **7. Land Use and Planning**

One of the most egregious omissions is the NOP's failure to identify the Project's potential land use and planning impacts as a probable environmental effect. As discussed above, without the details of the proposed General Plan amendment, it is not possible for the public to submit meaningful comments on this Project component. The EIR must specifically identify the proposed amendment to the City's General Plan, analyze its environmental implications, and propose mitigation measures or Project alternatives to remedy these inconsistencies. The EIR must also identify and analyze any other of the Project's inconsistencies with the City's General Plan.

## **8. Cumulative Impacts**

An EIR must discuss the cumulative impacts of a project if the incremental effects of a project are considerable when viewed in connection with the effects of other past, current, and probable future projects. CEQA Guidelines §§ 15130(a), 15065(c). The analysis of cumulative impacts is particularly important in the context of long-range planning documents because the growth allowed under such plans is often substantial and because they set forth the policies that will guide the development of future, individual

projects for many years. As noted in the CEQA Guidelines, one requirement of an EIR for planning documents is that they provide a more thorough analysis of cumulative impacts than is required for individual projects. See CEQA Guidelines § 15168. A legally adequate cumulative impacts analysis must consider the impacts of the Project combined with other past, present, and probable future projects. CEQA Guidelines § 15130(b)(1). Projects currently under environmental review by the City clearly qualify as reasonably probable future projects to be considered in a cumulative impacts analysis. See *San Franciscans for Reasonable Growth v. City & County of San Francisco*, 151 Cal.App.3d 61, 74 n.13 (1984). In addition, projects anticipated beyond the near future should be analyzed for their cumulative effect if they are reasonably foreseeable. See *Bozung v. Local Agency Formation Comm'n*, 13 Cal.3d 263, 284 (1975).

The EIR's discussion of cumulative impacts should address any other pending proposals for development within the Project vicinity that would threaten impacts of the sort promised by the Project.

## **II. City's Hillside Development Standards Ordinance Should be Completed Prior to Project Evaluation**

This Project would directly impact the hills outside of and, if the Project is approved, within the City. Analysis of Project impacts would be greatly aided by the Hillside Development Standards Ordinance, which for some reason Pittsburg has tabled. The Ordinance should be completed, approved, and used to inform the EIR process for the proposed Project. While the Pittsburg General Plan includes policies related to hillside protection, we note that EIRs for other development projects, such as the Montreux Residential Subdivision, clearly fail to identify and discuss how projects conflict with such policies. It is clear that a separate ordinance focused on Hillside Development Standards is necessary.

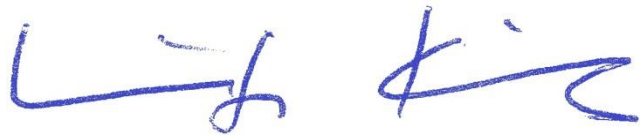
## **III. Conclusion**

Thank you again for the opportunity to provide these comments. SMD remains concerned about the potential far-reaching impacts of this Project and about the lack of detailed information provided about this proposed development. Please provide this office with notification of the release of the draft EIR for the proposed Project. We also request that the City keep us informed of all contracts, notices, hearings, staff reports, briefings, meetings, and any other events related to the Project.

Mr. Hector Rojas  
April 4, 2017  
Page 8

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

A handwritten signature in blue ink, appearing to read "Winter King", with a stylized, cursive script.

Winter King

A handwritten signature in blue ink, appearing to read "Carmen J. Borg", with a stylized, cursive script.

Carmen J. Borg, AICP  
Urban Planner

cc: Seth Adams, Save Mount Diablo

875738.4

Hello Hector,

I am submitting this comment in response to the proposed project and EIR related to the Faria/Southwest Hills Annexation [AP-10-717 (ANNEX)]. Upon reviewing the notice of preparation for the EIR, I was pleased to see a section related to transportation. My concern is how this will be addressed. It has been my observation that these development projects do not give enough resources to resolve the issues related to impacted roads and freeways at peak commute hours. I also fear that the project will "passes the buck" to another agency to resolve the issue. With many new developments going in along Highway 4 in Concord, Pittsburg, Antioch and Brentwood the freeway has surpassed its capacity at certain points. This was even acknowledged in the EIR report for the San Marco Development (Page 132 - <http://www.ci.pittsburg.ca.us/Modules/ShowDocument.aspx?documentid=1366>). The EIR even recommends adding lanes to highway 4 as a mitigation measure.

I am not suggesting that this project be responsible for resolving all the shared traffic problems associated with the many home developments being built around our area of the East Bay. My concern is that if no authority takes responsibility for the traffic demand increase, and we keep building more developments, we end up in a "death by 1000 cuts" type of situation. No one project in and of itself caused the issue, but the cumulative total of all the projects adds up significant traffic issue. I would ask that the City of Pittsburg take this into consideration during the development of the EIR and as the project progresses forward.

Regards,

David Kubeck  
Pittsburg Resident  
2776 Alves Ranch Rd  
Pittsburg, CA 94565





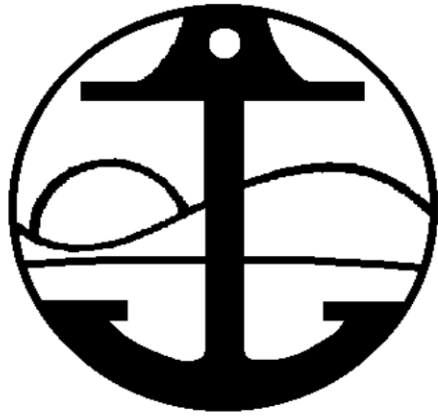
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## APPENDIX C

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**CITY OF PITTSBURG  
DEVELOPMENT SERVICES  
PLANNING DEPARTMENT**



**FARIA/SOUTHWEST HILLS ANNEXATION AND  
PREZONING AMENDMENT**

**INITIAL STUDY**

**MARCH 2014**



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## ***INITIAL STUDY***

***March 2014***

### **PROJECT OVERVIEW**

1. Project Title: Faria/Southwest Hills Annexation & Prezoning Amendment
2. Lead Agency Name and Address: City of Pittsburg  
Development Services, Planning Department  
65 Civic Avenue  
Pittsburg, CA 94565
3. Contact Person and Phone Number: Kristin Pollot  
Associate Planner  
(925)252-6941
4. Project Location: Southwest Hills Subarea of the Pittsburg General Plan, southwest  
of the existing Pittsburg municipal boundary.
5. Project Sponsor's Name and Address: Louis Parsons  
Discovery Builders  
4061 Port Chicago, Suite H  
Concord, California 94520
6. General Plan Designations: Pittsburg: Low Density, Hillside Low Density Residential,  
Open Space  
County: Agricultural Lands
7. Zoning Designations: Existing County: A-4 and A-2  
Existing Pittsburg Prezoning: HPD and OS Districts  
Proposed Pittsburg Prezoning: HPD-S and OS-S Districts
8. Public agencies whose approval is required: City of Pittsburg  
Contra Costa Local Agency Formation  
Commission (LAFCO)
9. Project Description Summary:

The proposed project encompasses approximately 607 acres and consists of requests for: 1) annexation into the City of Pittsburg City Limits, the Contra Costa Water District (CCWD) service boundary and the Delta Diablo Sanitation District (DDSD) service boundary, and 2) amendment of the pre-zoning designations on site from HPD (Hillside Planned Development) and OS (Open Space), to HPD-S (Hillside Planned Development, with an Interim Study Overlay) District and

OS-S (Open Space, with an Interim Study Overlay) District. The project site is located within the Spheres of Influence (SOI) for the City of Pittsburg, DDSD and CCWD, and is within the Pittsburg Voter-Approved Urban Limit Line (ULL). A master plan or plans for development have not been submitted as a part of this request for annexation, and no physical development is proposed at this time. Any future development or subdivision of the project site would be subject to its own separate CEQA analysis, at such time when a specific development proposal is submitted to the City.

## SOURCES

It should be noted that all the technical reports and modeling results used for the purposes of this analysis are available upon request at the City of Pittsburg Development Services, Planning Division located at 65 Civic Avenue, Pittsburg, California. The following documents are referenced information sources utilized by this analysis:

1. ABAG Dam Failure Inundation Area Hazards Maps for Pittsburg and Antioch, available online: [www.abag.ca.gov/bayarea/eqmaps/damfailure/dfpickc.html](http://www.abag.ca.gov/bayarea/eqmaps/damfailure/dfpickc.html).
2. Bay Area Air Quality Management District CEQA Guidelines, June 2010.
3. California Department of Conservation, Farmland Mapping and Monitoring Program, Contra Costa County Important Farmland Map, 2008.
4. California Department of Conservation, Farmland Mapping and Monitoring Program, Contra Costa County Williamson Act Land Map, 2007.
5. California Department of Conservation, Farmland Mapping and Monitoring Program, Contra Costa County Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, 2009.
6. California Environmental Quality Act (CEQA) 2010 Guidelines 21000 et. seq: [http://ceres.ca.gov/ceqa/docs/2010\\_CEQA\\_Statutes\\_and\\_Guidelines.pdf](http://ceres.ca.gov/ceqa/docs/2010_CEQA_Statutes_and_Guidelines.pdf).
7. California Water Code sections 10910 through 10915.
8. City of Pittsburg Draft 2005 Greenhouse Gas Baseline Inventory and Analysis, City of Pittsburg.
9. City of Pittsburg, "Pittsburg 2020: A Vision for the 21st Century" (Pittsburg General Plan). Adopted November 16, 2001(including amendments through July 2010).
10. City of Pittsburg Emergency Operations Plan (EOP), adopted by City Council Resolution No. 06-10223.
11. City of Pittsburg General Plan Update, Existing Conditions and Planning Issues. June 1998.
12. City of Pittsburg Municipal Code (PMC), available online: [www.codepublishing.com/ca/pittsburg/](http://www.codepublishing.com/ca/pittsburg/).
13. Contra Costa LAFCO, Initial Study for the Proposed SOI Expansions for the City of Pittsburg, Delta Diablo Sanitation District and Contra Costa Water District, April, 2009.
14. Contra Costa LAFCO Water and Wastewater MSR for Central Contra Costa County, April 9, 2008.
15. East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan, available online: [www.co.contra-costa.ca.us/depart/cd/water/HCP/](http://www.co.contra-costa.ca.us/depart/cd/water/HCP/).
16. Google Earth, 2013.
17. Health and Safety Code section 7050.5.

18. Natural Resources Conservation Service. *Web Soil Survey for Contra Costa County*. Available at: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Accessed March 5, 2014.

## ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is “Potentially Significant Impact” as indicated by the checklist on the following pages.

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

## DETERMINATION

On the basis of this initial study:

- ☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☒ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier Environmental Impact Report (EIR) pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Kristin Pollot, Associate Planner  
Printed Name

City of Pittsburg  
For



## **E. BACKGROUND AND INTRODUCTION**

This Initial Study identifies and analyzes the potential environmental impacts of the Faria/Southwest Hills Annexation Project (proposed project). The information and analysis presented in this document is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures are prescribed.

The mitigation measures prescribed for environmental effects described in this Initial Study would be implemented in conjunction with the project, as required by CEQA. The mitigation measures would be incorporated into the project through project conditions of approval. The City would adopt findings and a Mitigation Monitoring/Reporting Program for the project in conjunction with approval of the project.

Per Section 15152 of the CEQA Guidelines, a project which is consistent with the General Plan and zoning of the City may tier from the analysis contained in the General Plan EIR, incorporating by reference the general discussions from the broader EIR. Because the proposed project is consistent with the existing Pittsburg General Plan land use and zoning designations for the project site, this Initial Study will tier from the Pittsburg General Plan EIR (GP EIR). Applicable mitigation measures identified in the GP EIR would be required to be implemented as part of the project. In some cases, project-specific mitigation measures for potentially significant impacts that were not identified in the GP EIR, would also be required to be implemented as part of the proposed project.

### **Prior Environmental Analysis**

An earlier analysis may be used where, pursuant to the tiering, program, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines Section 15063(c)(3)(D)). A program level Environmental Impact Report (EIR) was prepared for the comprehensive General Plan Update for the City of Pittsburg (GP EIR) and was certified by the Pittsburg City Council on November 16, 2001 (SCH No. 1999072109). A mitigation monitoring plan and statements of overriding considerations were adopted by the City for the General Plan Update through Resolutions No. 01-9489 and 01-9519. The resolutions and EIR are incorporated herein by reference and are available for review in the Planning Department at City Hall, during normal business hours.

The developer has not submitted a development proposal or master plan with this request for annexation. Future development applications would be processed in conformance with applicable Pittsburg General Plan and zoning code requirements and would be subject to their own project-specific CEQA analysis in order to ensure that potential impacts of those specific projects that could not be reasonably evaluated with a program-level General Plan, would be identified. The project level review would also ensure that previously adopted mitigation measures applicable to the development of the site are implemented.

An Initial Study for the Faria Annexation Project was released for public review in 2010. Extensive comments were received by the City, requesting further analysis in an EIR. The City has

determined that an EIR should be prepared. This Initial Study will be used to focus the content of the EIR.

## **F. PROJECT DESCRIPTION**

The proposed project consists of a request for annexation of approximately 607 acres into the City of Pittsburg, as well as the CCWD and DDS. In addition, the project includes a change in pre-zoning designations from HPD (Hillside Planned Development) and OS (Open Space) to HPD-S (Hillside Planned Development, with an Interim Study Overlay) District and OS-S (Open Space, with an Interim Study Overlay) District. For purposes of this CEQA analysis, the maximum buildout for the proposed project is assumed to include 1,500 single family units. Because the proposed project does not include detailed designs to be evaluated, the project will be evaluated at a program-level.

The Faria Annexation area was one of multiple areas identified in the City of Pittsburg 2005 voter-approved Urban Limit Line and Pre-zoning Act. The site, already incorporated into the City's Sphere of Influence, was pre-zoned for residential and open space uses. The requested change in pre-zoning would add an Interim Study Overlay District to the existing pre-zoned designations.

## **G. ENVIRONMENTAL CHECKLIST**

The following Checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are project-specific mitigation measures recommended, as appropriate, as part of the proposed project.

For this checklist, the following designations are used:

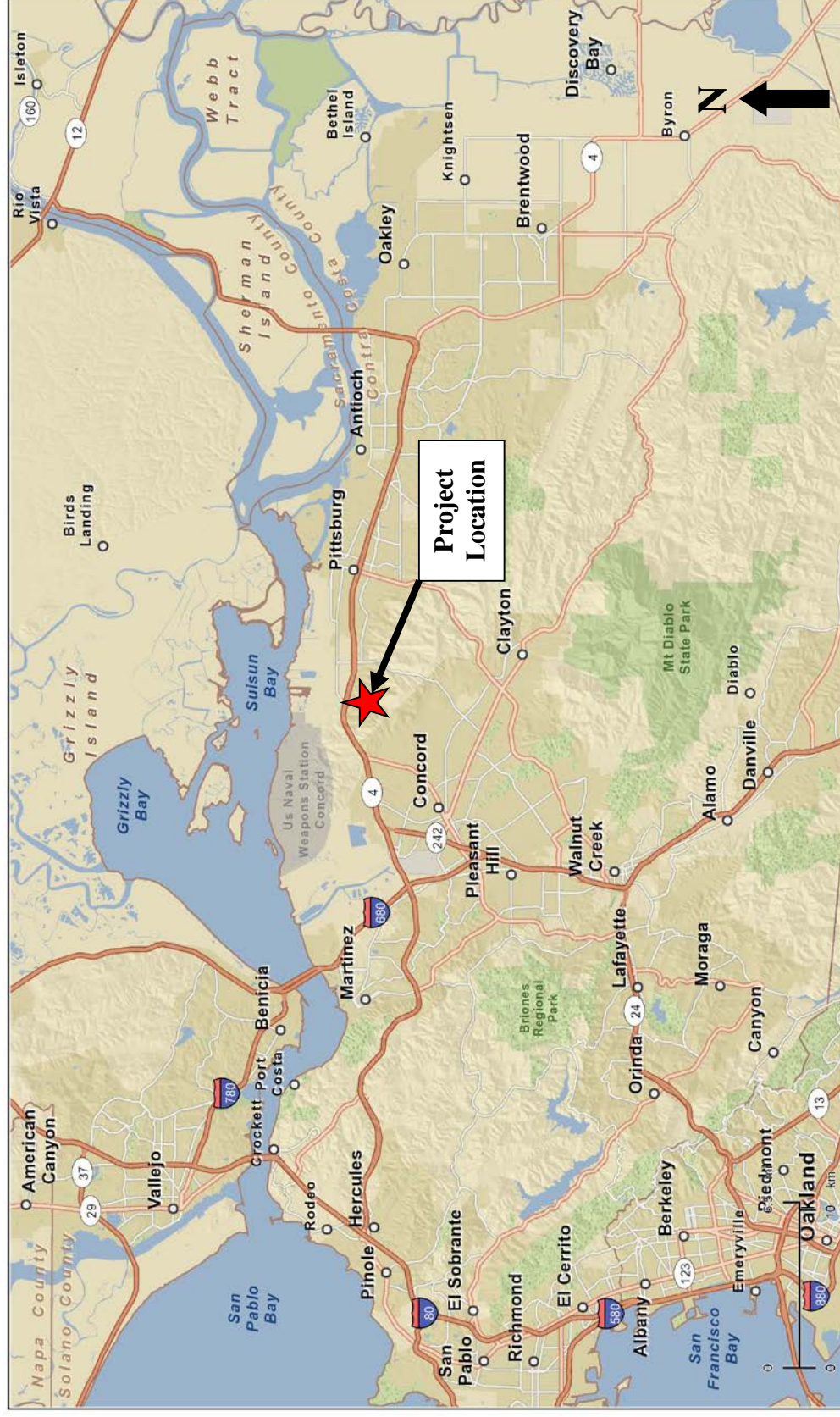
**Potentially Significant Impact:** An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

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

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

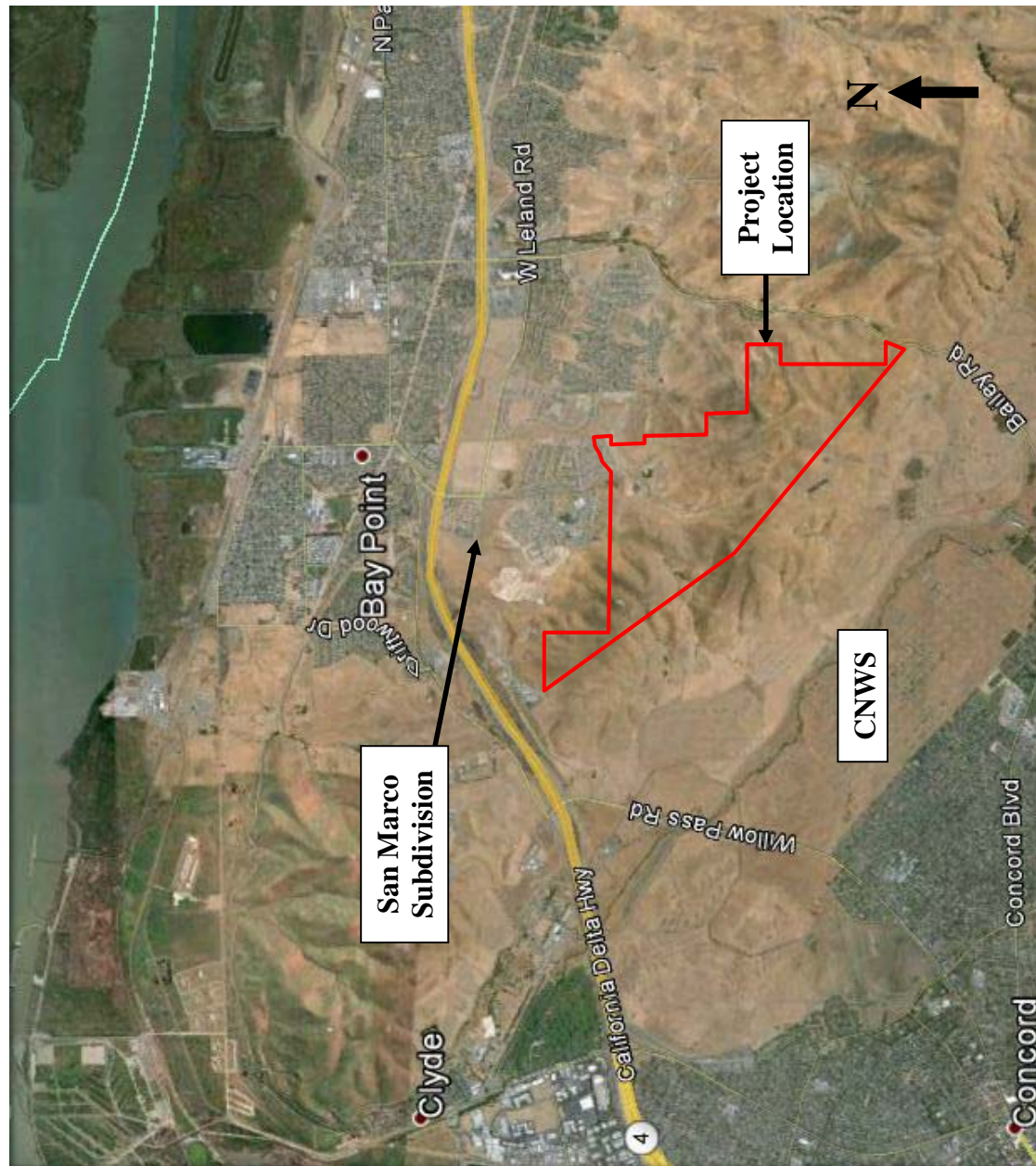
**No Impact:** The project would not have any impact.

### Figure 1 Regional Project Location





**Figure 2**  
**Project Vicinity Map**



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

### **Discussion**

- a,c. The City of Pittsburg has not identified the project area specifically as a scenic vista; however, the Pittsburg General Plan identifies the southern hills, with ridges and rolling topography, rock outcroppings, mature trees, sensitive habitats and views, as opportunity areas for the creation of distinctive hillside neighborhoods (Pittsburg General Plan, page 4-10). While the proposed annexation does not include any physical development or plans for development at this time, future development plans would alter the visual quality of the site, therefore creating a ***potentially significant*** impact on existing scenic vistas and the visual character of the site.

#### **Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Aesthetics chapter of the Faria/Southwest Hills Annexation Project EIR.*

- b. According to the California Department of Transportation, state scenic highways are not located within, or within view of, the project site, and scenic resources do not exist within, or within view of, a state scenic highway that could be damaged (California Scenic Highway Mapping System, Contra Costa County). Therefore, the project would not damage any scenic resources within the vicinity of a State scenic highway and a ***less-than-significant*** impact would result.
- d. The proposed annexation does not include any physical development or plans for development at this time. However, future development plans would include new sources of light and glare. Therefore, the proposed project would have a ***potentially significant*** impact on lighting and glare.

#### **Mitigation Measure(s)**

*Further analysis of this impact will be discussed in the Aesthetics chapter of the Faria/Southwest Hills Annexation Project EIR.*

<b>II. AGRICULTURE AND FOREST RESOURCES.</b> <i>Would the project:</i>		Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	✗	<input type="checkbox"/>
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗
e.	Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Discussion**

- a,e. The Pittsburg General Plan Urban Design, Resource Conservation and Land Use Elements do not identify farmland resources within the project area, but do include policies to protect farmland. In addition, the project site does include Prime Farmland soils according to the Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, and the project site is defined as Grazing Land by the California Department of Conservation. The proposed project would create a change in the existing environment which could result in loss of potential farmland; therefore a ***potentially significant*** impact could occur.

#### **Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Agricultural Resources chapter of the Faria/Southwest Hills Annexation Project EIR.*

- b. Williamson Act contract lands do not exist within the project area (California Department of Conservation). The site is currently zoned for agricultural uses under the Contra Costa County zoning code (current jurisdiction); however, the site was pre-zoned by the Pittsburg voters in 2005 for a combination of low density residential, hillside low density residential and open space uses, therefore a ***less-than-significant*** impact related to agriculturally zoned land would occur.

- c, d. Forest lands are not located within the project area. Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

<b>III. AIR QUALITY.</b> <i>Would the project:</i>		Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Expose sensitive receptors to substantial pollutant concentrations?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	✗	<input type="checkbox"/>

### **Discussion**

- a,b     The Pittsburg General Plan Resource Conservation Element contains goals and policies designed to achieve the goals of all applicable air quality plans. The proposed annexation would be consistent with the existing land use designations of the Pittsburg General Plan Land Use Elements, and annexation of the project site would subject future development on the site to the requirements of the Resource Conservation Element of the Pittsburg General Plan. Although no development is currently proposed at this time, the allowed units within the annexation could potentially conflict with or obstruct implementation of the applicable air quality plan or air quality standards, and impacts would be considered ***potentially significant***.

#### **Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Air Quality and Greenhouse Gas Emissions chapter of the Faria/Southwest Hills Annexation Project EIR.*

- c,d     Development is not currently proposed for the project site at this time. However, future development of the site could expose sensitive receptors to substantial pollutant concentrations and result in a cumulatively considerable net increase of criteria pollutants, and impacts would be considered ***potentially significant***.

#### **Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Air Quality and Greenhouse Gas Emissions chapter of the Faria/Southwest Hills Annexation Project EIR.*

- e.     Typical sources of objectionable odor include industrial or intensive agricultural uses, which are not proposed as part of the project, nor are they located near the project site.



Diesel fumes from construction equipment and delivery trucks are often found to be objectionable. Development is not currently planned for the project site, and sources of odor are not present on or adjacent to the site. Therefore, a *less-than-significant* impact would occur.

<b>IV. BIOLOGICAL RESOURCES.</b> <i>Would the project:</i>		Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Discussion**

- a-d. The proposed annexation area is located within the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) Inventory Area. The HCP/NCCP identifies the undeveloped annexation area as containing grassland habitat. Grassland habitat consists of herbaceous vegetation dominated by grasses and forbs. Most of the grassland in the HCP/NCCP inventory area was historically or is currently disked to improve foraging value for livestock or for dry land farming and most is currently grazed by livestock.

The existing site could provide habitat for wildlife species, including migratory birds. As a result, development of the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California

Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, the future development of the project site could have a ***potentially significant*** impact on protected species.

Mitigation Measure(s)

*Further analysis of these impacts will be discussed in the Biological Resources chapter of the Faria/Southwest Hills Annexation Project EIR*

- e. Development is not currently proposed for the project site at this time. However, future development of the project site could conflict with policies or ordinances protecting biological resources, resulting in a ***potentially significant*** impact.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Biological Resources chapter of the Faria/Southwest Hills Annexation Project EIR*

- f. Although no development is currently proposed for the project site, the proposed annexation is located within the East Contra Costa County Habitat Conservation Plan. Therefore, future development of the project site could conflict with the provisions of an adopted Habitat Conservation Plan, resulting in a ***potentially significant*** impact.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Biological Resources chapter of the Faria/Southwest Hills Annexation Project EIR*

<b>V. CULTURAL RESOURCES.</b> <i>Would the project:</i>		Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	✗	<input type="checkbox"/>	<input type="checkbox"/>
b.	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	✗	<input type="checkbox"/>	<input type="checkbox"/>
c.	Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	<input type="checkbox"/>	✗	<input type="checkbox"/>	<input type="checkbox"/>
d.	Disturb any human remains, including those interred outside of formal cemeteries.	<input type="checkbox"/>	✗	<input type="checkbox"/>	<input type="checkbox"/>

### **Discussion**

- a-d. According to Figure 8-2 of the Pittsburg General Plan Existing Conditions Report, there are some Native American archeological and historic archeological sensitive areas in the southern hills, west of the existing city limits (within the project area). While development is not proposed at this time, future development proposals would be subject to applicable policies contained in the Resource Conservation Element of the General Plan; these policies have been specifically included in the GP for the preservation of historical and cultural resources.

Although this environmental analysis is intended to provide a ‘worst case scenario’ evaluation for development of 1,500 single family homes, without a development plan indicating exactly where this development would occur, it is impossible to know whether or not the archeologically sensitive areas would be specifically affected. However, future development would not only be subject to the requirements of the General Plan as mentioned above, but would also be subject to additional project-specific CEQA review once a specific development proposal is submitted to the City for review. The Urban Design Element of the Pittsburg General Plan also includes goals and policies for the preservation of views, ridgelines and prominent rock outcroppings (which would be considered unique geologic features) in hillside areas (Policy 4-P-9). However, surface evidence of previous human activity is not always present, and construction activities may uncover undocumented cultural resources. Should areas containing evidence of prehistoric or historic period activity such as buried hearths, areas of discolored sediment containing shell, broken fragments of silicate rock, bone, or concentrations of historic period (greater than 45 years old) refuse or features be uncovered, a ***potentially significant*** impact would occur.

#### **Mitigation Measure(s)**

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

- V.1                      *Prior to submittal of a tentative map application within the Faria/Southwest Hills Annexation area, a Cultural and Historical Resources Survey shall be*

*conducted for the project site by a qualified archaeologist and submitted for the City's review and approval. The required analysis and mitigation measures shall be implemented by the project applicant(s) to minimize or avoid impacts to any identified cultural resources to the greatest extent feasible.*

V.2 *In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during earth-moving activities, all work within 100 feet of the resource shall be halted, and the applicant shall consult with a qualified archeologist. Representatives of the City and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation.*

V.3 *If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives.*

*If a Native American archeological, ethnographic, or a spiritual resource is discovered, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and are Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.*

*In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.*

V.4 *If a human bone or bone of unknown origin is found during earth-moving activities, all work shall stop within 100 feet of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.*

## VI. GEOLOGY AND SOILS.

*Would the project:*

	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗

### Discussion

- a,c. The proposed annexation area consists of approximately 607 acres of grazing land. Figure 10-2 of the General Plan (Fault Branches) identifies minor faults within the project area, and Figure 13-6 from the Existing Conditions Report identifies a major fault immediately west of the site. Although no development is currently proposed for the site, future development of the project site has the potential to expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving earthquakes. Therefore, a ***potentially significant*** impact could occur.

#### Mitigation Measure(s)

*Further analysis of these impacts will be discussed in the Geology and Soils chapter of the Faria/Southwest Hills Annexation Project EIR.*

- b. The project site is generally undeveloped and comprised of rounded hills, valleys and swales and is located about one mile south of State Highway 4, in Pittsburg, California. Future development would require substantial ground disturbance, resulting in temporarily exposed soils. Topsoil could be lost and exposed soil could be transported to downstream

waterways when subject to wind and/or water. Therefore, a ***potentially significant*** impact would occur.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Geology and Soils chapter of the Faria/Southwest Hills Annexation Project EIR.*

- d. Expansive soils will shrink and swell as a result of moisture changes. This can cause heaving and cracking of slabs-on-grade, pavements, and structures. Future development of the project site would require sampling and testing of the soils to determine their expansion potential. Therefore, expansive soils could have a ***potentially significant*** impact on future development of the site.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Geology and Soils chapter of the Faria Annexation Project EIR.*

- e. The proposed project includes annexation into the CCWD and will not be utilizing a septic tank system. Therefore, ***no impact*** would occur.

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

### Discussion

- a,b. Future development of the proposed annexation area would cumulatively contribute to increases of greenhouse gas (GHG) emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO<sub>2</sub>) and, to a lesser extent, other GHG pollutants, such as methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). Sources of GHG emissions include area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. Because the proposed project could generate GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy, or regulation, a ***potentially significant*** impact could occur.

#### Mitigation Measure(s)

*Further analysis of these impacts will be discussed in the Air Quality and Greenhouse Gas Emissions chapter of the Faria/Southwest Hills Annexation Project EIR.*



<b>VIII. HAZARDS AND HAZARDOUS MATERIALS.</b>		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
<i>Would the project:</i>					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	✗	<input type="checkbox"/>
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h.	Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Discussion**

- a. Annexation of the area planned for residential use would not be anticipated to result in new sources or the generation of hazardous materials. Residential land uses are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future residents may use common household cleaning products on-site, which could contain potentially hazardous chemicals; however, due to the regulations of such products and the amount utilized on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, the project would not create a significant hazard to the public or the environment through the routine

transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

- b,c. The project site has historically been used for agricultural grazing. Agricultural operations could involve the use of pesticides and/or herbicides. Development of the proposed project site could result in the exposure of workers to elevated pesticide levels during grading or other excavation activities. In addition, the project site is located within one-quarter mile of an existing school. Therefore, future development could create a ***potentially significant*** impact related to an accidental release of hazardous materials into the environment.

Mitigation Measure(s)

*Further analysis of these impacts will be discussed in the Hazards and Hazardous Materials chapter of the Faria/Southwest Hills Annexation Project EIR.*

- d. According to the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, the annexation area is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, the project would not create a significant hazard to the public or the environment, and ***no impact*** would occur.
- e,f. There are no public or private airports located within the City of Pittsburg, and no public airports located within two miles of City limits. Buchanan Airfield, the closest airport to Pittsburg, is approximately 3.5 miles west of the westernmost edge of the site. As such, the project site is not located within two miles of any public airports or private airstrips, and does not fall within an airport land use plan area. Therefore, ***no impact*** would occur.
- g. The City of Pittsburg Emergency Operations Plan (EO) was last updated in 2005 (City Council Resolution No. 05-10223). The EOP outlines procedures for educating the public about emergency preparedness and also establishes procedures for responding to emergency situations, including management of communication systems, provision of medical assistance, and maintenance of local financing structures and government leadership roles in the aftermath of a significant emergency event. Future development of the site could alter the existing street system or result in temporary blockage of roadways. Therefore, a ***potentially significant*** impact would occur.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Hazards and Hazardous Materials chapter of the Faria/Southwest Hills Annexation Project EIR.*

- h. Future development of the proposed project would be susceptible to wildland fire hazards. Much of the threat is due to open grasslands on and adjacent to the site. Therefore, future build-out of the annexation area could have a ***potentially significant*** impact with respect to exposing people or structures to the risk of loss, injury or death involving wildland fires.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Hazards and Hazardous Materials chapter of the Faria/Southwest Hills Annexation Project EIR.*

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

### **Discussion**

- a,f. Development is not currently proposed at this time, and the project itself would not expand or intensify existing uses, nor would it introduce any new uses that would violate water quality standards, deplete groundwater supplies, or have an adverse physical impact to natural drainage patterns, stormwater drainage systems, or water quality.

Future development of the proposed project would involve construction-related activities and, during the early stages of construction, topsoil could be exposed. A limited potential exists for wind and water erosion and discharge of sediment and/or urban pollutants into project stormwater runoff during construction, which could adversely affect downstream water quality. Therefore, a ***potentially significant*** impact could occur related to water quality.

Mitigation Measure(s)

*Further analysis of these impacts will be discussed in the Hydrology and Water Quality chapter of the Faria/Southwest Hills Annexation Project EIR.*

- b. Development is not currently proposed at this time and the project itself would not deplete or interfere with ground water supplies. However, future build-out would introduce impervious surfaces to the site which could interfere with groundwater recharge. As a result, the project could have a ***potentially significant*** impact with respect to groundwater recharge.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Hydrology and Water Quality chapter of the Faria/Southwest Hills Annexation Project EIR.*

- c-e. Although no development is currently proposed for the annexation area, future development of the site would introduce impervious surfaces where none currently exist. Therefore, future development could alter the existing drainage pattern of the site or area, 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. As a result, the project could have a ***potentially significant*** impact.

Mitigation Measure(s)

*Further analysis of these impacts will be discussed in the Hydrology and Water Quality chapter of the Faria/Southwest Hills Annexation Project EIR.*

- g-i. The project area is located in FEMA Zone X, defined as areas determined to be outside the 0.2 percent annual chance floodplain, and within flood panels 06013C0115F, 06013C0114F, and 06013C0302F. As noted in the Pittsburg General Plan, Federal Emergency Management Agency (FEMA) 100-year flood zones do not occur within the project area. In addition, the project site is not located within a dam failure inundation hazard area, as defined by the Association of Bay Area Governments. As a result, the project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Therefore, ***no impact*** would result.
- j. The project site is located within the southwestern hills of Pittsburg, and the elevation of the project site reduces the potential for damage from a seiche or tsunami to less than significant levels. Therefore, a ***less-than-significant*** impact would occur related to inundation by seiche, tsunami, or mudflow.

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

### **Discussion**

- a. Annexation of the undeveloped project area would involve the annexation of land designated for residential use adjacent to existing and approved residential development. Given the site's immediate vicinity, the project would have ***no impact*** related to the physical division of an established community.
- b. The Land Use and Urban Design Elements of the General Plan include residential land use designations for the project site, and goals and policies related to development along urban edges and development in hillside areas which have been designed to protect the unique setting of the southern hills. Future development of the project must comply with all applicable land use plans, policies, and regulations of agencies with jurisdiction over the project. Without compliance with applicable land use plans, policies, and regulations a ***potentially significant*** impact could occur.

#### **Mitigation Measure(s)**

*Further analysis of this impact will be discussed in the Land Use and Planning chapter of the Faria/Southwest Hills Annexation Project EIR.*

- c. Regional Habitat Conservation Plans (HCPs) establish a coordinated process for permitting and mitigating the incidental take of endangered species. The adopted East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP) is intended to provide regional conservation and development guidelines to protect natural resources while improving and streamlining the permit process for endangered species and wetland regulations. As a part of the HCP/NCCP, the Conservation Strategy includes provisions for targeted land acquisition, habitat enhancement, restoration and creation, and species population enhancement

As noted in the HCP/NCCP, burrowing owls, San Joaquin kit fox, California tiger salamander and golden eagles are all considered special status species, and the proposed annexation area is known or expected to contain habitat for these species. Therefore, the project could have a potentially significant impact on applicable habitat conservation plans.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Biological Resources chapter of the Faria/Southwest Hills Annexation Project EIR.*

<b>XI. MINERAL RESOURCES.</b> <i>Would the project:</i>		Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✗</b>
b.	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>✗</b>

**Discussion**

- a,b. According to Chapter 12.3 of the Existing Conditions Report for the General Plan, available information does not indicate that there are any regionally or locally important mineral resources within or adjacent to the site. Therefore, ***no impact*** to mineral resources would occur as a result of development of the project.



<b>XII. NOISE.</b> <i>Would the project result in:</i>	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗

### **Discussion**

- a,c. The Noise Element of the Pittsburg General Plan establishes goals, standards and policies related to established noise standards and compliance requirements. Although development is not proposed at this time, future development of the area would introduce new noise sources to the area, primarily associated with traffic. Therefore, the proposed project could expose persons to or generate noise levels in excess of standards, or result in permanent increase in ambient noise levels, and a ***potentially significant*** impact could occur.

#### **Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Noise chapter of the Faria/Southwest Hills Annexation Project EIR.*

- b,d. Although no development is currently planned, future development of the proposed project would create new sources of noise and ground borne vibration from construction activities that would add to the noise environment in the immediate project vicinity. Therefore, the proposed project would create a ***potentially significant*** impact to ambient noise levels.

#### **Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Noise chapter of the Faria/Southwest Hills Annexation Project EIR.*

- e,f. The project area is not located within the vicinity of a public airport or a private airstrip and is not within an airport land use plan. Therefore, the proposed project would not be exposed to excessive air traffic noise, and ***no impact*** would occur.

<b>XIII. POPULATION AND HOUSING.</b> <i>Would the project:</i>		Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✗

### **Discussion**

- a. Physical development is not proposed at this time for the project site. Future development of the proposed annexation could potentially expand or intensify existing uses, and could introduce new uses or policies that would induce population growth and the need for more housing, beyond what has already been anticipated and analyzed by the General Plan and the GP EIR. Therefore, the project could have *a **potentially significant*** impact related to inducing substantial population growth.

#### **Mitigation Measure(s)**

*Further analysis of this impact will be discussed in the Faria/Southwest Hills Annexation Project EIR.*

- b,c. Housing would not be displaced as part of the proposed annexation project. The annexation of the project site would be consistent with existing land use designations in the General Plan and would provide additional housing opportunities. Therefore, the project would have ***no impact*** related to the displacement of substantial numbers of existing housing or people.

#### **XIV. PUBLIC SERVICES AND UTILITIES**

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

	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less- Than- Significant Impact	No Impact
a. Fire protection?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Schools?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Parks?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Other Public Facilities?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### **Discussion**

- a. Fire protection for the site is currently provided by the Contra Costa County Fire Protection District (CCCFPD), and once the site is annexed into the city limits, the CCCFPD will continue to provide fire protection services to the area. Although plans do not exist for build-out of the site, future development would increase the needs for fire protection services. Therefore, a ***potentially significant*** impact could occur.

##### **Mitigation Measure(s)**

*Further analysis of this impact will be discussed in the Public Services and Utilities chapter of the Faria/Southwest Hills Annexation Project EIR.*

- b. The project area is designated for Open Space and Low Density Residential land use in the General Plan Land Use Element, and is within the Pittsburg voter approved Urban Limit Line. Although development is not currently planned for the annexation site, future development of the site has the potential to increase demand for police protection services; therefore, the project could have a ***potentially significant*** impact to police protection services.

##### **Mitigation Measure(s)**

*Further analysis of this impact will be discussed in the Public Services and Utilities chapter of the Faria/Southwest Hills Annexation Project EIR.*

- c. The project area is designated for Low Density Residential and Open Space land uses in the General Plan Land Use Element, and is within the Pittsburg voter approved Urban Limit Line. The project area is within the Mt. Diablo Unified School District, and future development facilitated by the proposed annexation would increase the number of students attending the Delta View Elementary, Riverview Middle School and Mt. Diablo High School. Therefore, future development of the annexation would have a ***potentially significant*** impact on school facilities.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Public Services and Utilities chapter of the Faria/Southwest Hills Annexation Project EIR.*

- d. The proposed annexation does not include current plans for development. Future development could cause a substantial increase in population, resulting in an increased demand for parks and open space. Therefore, a ***potentially significant*** to park facilities would occur.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Public Services and Utilities chapter of the Faria/Southwest Hills Annexation Project EIR.*

- e. The project area is designated for low density residential and open space land use in the General Plan Land Use element, and is within the Pittsburg voter approved Urban Limit Line. Although no development is planned at this time, future development of the site could result in 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 other public services. Therefore, a ***potentially significant*** impact would occur.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Public Services and Utilities chapter of the Faria/Southwest Hills Annexation Project EIR.*

<b>XV. RECREATION.</b> <i>Would the project:</i>		Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	✗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Discussion**

- a,b. The proposed annexation does not include plans for development at this time and therefore does not include park facilities. However, future development could cause a substantial increase in population, resulting in an increased demand for parks, open space, and recreational facilities. Therefore, a *potentially significant* to park facilities would occur.

**Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Public Services and Utilities Chapter of the Faria/Southwest Hills Annexation Project EIR.*

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

### **Discussion**

- a,b. The proposed annexation does not currently have plans for development; however, future development of the site could cause an increase in traffic load. Therefore, future build-out of the proposed project could cause an increase in traffic beyond the level of service standard established by the county congestion management agency, thus a ***potentially significant*** impact could occur.

#### **Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Transportation, Traffic, and Circulation chapter of the Faria/Southwest Hills Annexation Project EIR.*

- c. The proposed project is not located near an airport, and does not include any improvements to airports or a change in air traffic patterns. Therefore, because the proposed project would not result in a change in air traffic patterns, including either an increase in air traffic levels or a change in location that results in substantial safety risks, ***no impact*** would occur.
- d,e. Although this environmental analysis is intended to provide a ‘worst case scenario’ evaluation for development of up to 1,500 single family homes, without a development plan indicating exactly where and how this development would occur, it is impossible to know whether or not there would be impacts related to transportation design features, neighboring incompatible uses, or inadequate emergency access. Future development of

the annexation site would be subject to the requirements of the General Plan and additional CEQA review (including a subsequent traffic study) when a specific development proposal is submitted for review. None the less, future development could result in a ***potentially significant*** impact related to design features and emergency access.

Mitigation Measure(s)

*Further analysis of these impacts will be discussed in the Transportation, Traffic, and Circulation chapter of the Faria/Southwest Hills Annexation Project EIR.*

- f. The future development of the proposed project would increase demand for alternative transportation. Impacts could occur associated with the increase in demand and/or adequacy of existing alternative transit facilities. Therefore, the proposed project could have a ***potentially significant*** impact on alternative transportation.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Transportation, Traffic, and Circulation chapter of the Faria/Southwest Hills Annexation Project EIR.*



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

### **Discussion**

- a-c,e. Development is currently not proposed for the annexation site. Future development of the site would generate new sources of wastewater and potentially alter the existing stormwater drainage system; as a result, the proposed project could have a ***potentially significant*** impact on wastewater treatment and stormwater drainage.

#### **Mitigation Measure(s)**

*Further analysis of these impacts will be discussed in the Public Services and Utilities chapter of the Faria/Southwest Hills Annexation Project EIR.*

- d. Raw (untreated) water supplies for the City of Pittsburg are primarily provided by the Contra Costa Water District (CCWD), and the raw water supply from CCWD is further supplemented by several municipal wells within the Planning Area. Raw water supplies are treated at the City Water Treatment Plant adjacent to the CCWD canal. From the water treatment plant, treated water is distributed throughout the City. The majority of raw water supplies for the City of Pittsburg come from the CCWD, with approximately 10 percent to

15 percent of the City's water supply coming from municipal wells. The proposed annexation area is currently within the CCWD SOI but not within the CCWD service area, and existing water supply entitlements do not exist to serve the project area. Therefore, future build-out of the site would create a ***potentially significant*** impact on available water supplies.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Public Services and Utilities chapter of the Faria/Southwest Hills Annexation Project EIR.*

- f,g. Future development of the annexation site could result in the future development of a maximum of 1,500 homes within the project area, creating new sources of solid waste. Therefore, a ***potentially significant*** impact related to solid waste could occur.

Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Public Services and Utilities chapter of the Faria/Southwest Hills Annexation Project EIR .*

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

### Discussion

- a. Although no development is proposed at this time, this proposed environmental analysis is intended to provide a 'worst case scenario' evaluation for development of up to 1,500 single family homes, which would have the potential to degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. As a result of the above, the proposed project would have a ***potentially significant*** impact.

#### Mitigation Measure(s)

*Further analysis of this impact will be discussed in the Biological and Cultural Resources chapters of the Faria/Southwest Hills Annexation Project EIR.*

- b,c. This Initial Study demonstrates that the proposed project could result in adverse impacts to human beings, either directly or indirectly. In addition, all project impacts identified in this Initial Study would be potentially significant and the project's incremental contribution to potential cumulative impacts would be cumulatively considerable. Therefore, the project's impact would be considered ***potentially significant***.

Mitigation Measure(s)

*Further analysis of these impacts will be discussed in applicable sections of the Faria/Southwest Hills Annexation Project EIR.*