DRAFT ENVIRONMENTAL IMPACT REPORT

El Dorado Hills Costco Project

STATE CLEARINGHOUSE NO. 2021080402

Prepared for:

County of El Dorado

January 2026

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TABLE OF CONTENTS

Section		Page
LIST OF ABBREVIATIONS		vii
	EXECUTIVE SUMMARY	ES-1
ES.1	Introduction	ES-1
ES.2	Summary Description of the Project	ES-1
ES.3	Environmental Impacts and Recommended Mitigation Measures	ES-2
ES.4	Alternatives to the Proposed Project	ES-3
ES.5	Areas of Controversy	ES-4
ES.6	Issues to be Resolved	ES-4
1	INTRODUCTION	1-1
1.1	Project Requiring Environmental Analysis	1-1
1.2	Purpose and Intended Uses of This Draft EIR	1-2
1.3	Scope of This Draft EIR	1-2
1.4	Agency Roles and Responsibilities	1-2
1.5	CEQA Public Review Process	1-3
1.6	Draft EIR Organization	1-3
1.7	Standard Terminology	1-4
2	PROJECT DESCRIPTION	2-1
2.1	Project Location	2-1
2.2	Project Objectives	2-4
2.3	Proposed Project	2-4
2.4	Required Offsite Transportation Improvements	2-37
2.5	Potential Permits and Approvals Required	2-38
3	ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES	3-1
3.1	Aesthetics	3.1-1
3.2	Air Quality	3.2-1
3.3	Biological Resources	3.3-1
3.4	Cultural Resources	3.4-1
3.5	Energy	3.5-1
3.6	Geology, Soils, and Paleontological Resources	3.6-1
3.7	Greenhouse Gas Emissions and Climate Change	3.7-1
3.8	Hazards and Hazardous Materials	3.8-1
3.9	Hydrology and Water Quality	3.9-1
3.10	Land Use and Planning	3.10-1
3.11	Noise and Vibration	3.11-1
3.12	Population and Housing	3.12-1
3.13	Public Services and Recreation	3.13-1
3.14	Transportation	3.14-1
3.15	Tribal Cultural Resources	3.15-1
3.16	Utilities and Service Systems	3.16-1
3.17	Wildfire and Evacuation	3.17-1

4 CUMULATIVE IMPACTS 4-1
4.1 Introduction to the Cumulative Analysis 4-1
4.2 Cumulative Impact Analysis Methodology 4-1
4.3 Cumulative Setting 4-2
4.4 Analysis of Cumulative Impacts 4-5

5 ALTERNATIVES 5-1
5.1 Introduction 5-1
5.2 Considerations for Selection of Alternatives 5-2
5.3 Alternatives Considered but not evaluated further 5-4
5.4 Alternatives Selected for Detailed Analysis 5-5
5.5 Environmentally Superior Alternative 5-37

6 OTHER CEQA SECTIONS 6-1
6.1 Growth Inducement 6-1
6.2 Significant and Unavoidable Adverse Impacts 6-2
6.3 Significant and Irreversible Environmental Changes 6-3
6.4 Economic Impact and Urban Decay Analysis 6-3

7 REPORT PREPARERS 7-1

8 REFERENCES 8-1

Appendices

Appendix A Notice of Preparation and Comments Received
Appendix B Air Quality Technical Report and North Site Remainder Area Technical Report
Appendix C Biological Resources Assessment, Aquatic Resources Delineation Report, and Oak Resources Technical Report
Appendix D Energy Technical Report and North Site Remainder Area Technical Report
Appendix E Geotechnical Study (December 10, 2024) and Draft Geotechnical Study (November 5, 2019)
Appendix F Greenhouse Gas Emissions Technical Report and North Site Remainder Area Technical Report
Appendix G Phase I Environmental Assessment
Appendix H Drainage Study
Appendix I Noise Modeling Data
Appendix J CEQA Analysis
Appendix K Fire Safe Plan and Evacuation Analysis
Appendix L Policy and Regulation Consistency Analysis
Appendix M Urban Decay Analysis

Figures

Figure 2-1 Regional Location 2-2
Figure 2-2 Project Site 2-3
Figure 2-3 Site Plan 2-5
Figure 2-4 North Site Elevations 2-9
Figure 2-5 Proposed Landscape Plan 2-11
Figure 2-6 Proposed Tree Removal 2-13

Figure 2-7 Proposed Lighting Plan 2-15
Figure 2-8 North Site Signage 2-17
Figure 2-9 North Site Infrastructure Improvements 2-19
Figure 2-10 North Site Preliminary Grading Plan 2-21
Figure 2-11 South Site Elevations 2-27
Figure 2-12 North Site Signage 2-29
Figure 2-13 North Site Infrastructure Improvements 2-31
Figure 2-14 South Site Preliminary Grading Plan 2-33
Figure 3.1-1 Viewpoints Locations 3.1-4
Figure 3.1-2 View 1 from Trail West of Project Site 3.1-5
Figure 3.1-3 View 2 North of Project Site from Silva Valley Parkway West of the Project Site 3.1-7
Figure 3.1-4 View 3 from Single Family-Residential Subdivision and Oak Meadow Elementary North of North Site 3.1-9
Figure 3.1-5 View 4 from Eastbound US 50 West of the Project Site 3.1-11
Figure 3.1-6 View 5 from Westbound US 50 East of the Project Site 3.1-13
Figure 3.1-7 Visual Simulation 1 from Trail West of the Project Site 3.1-17
Figure 3.1-8 Visual Simulation 2 from Silva Valley Parkway West of Project Site 3.1-19
Figure 3.1-9 Visual Simulation 3 of Proposed Fuel Facility from Single Family-Residential Subdivision and Oak Meadow Elementary from North of the North Site 3.1-21
Figure 3.1-10 Visual Simulation 4 of Project Site from Eastbound US 50 ..... 3.1-23
Figure 3.1-11 Visual Simulation 5 of Project Site from Westbound US 50 ..... 3.1-25
Figure 3.1-12 Proposed Lighting Plan and Extent of Illumination 3.1-31
Figure 3.3-1 Vegetation and Land Cover Types 3.3-9
Figure 3.6-1 Project Area Soils 3.6-7
Figure 3.11-1 Noise Measurement Locations and Existing Noise- and Vibration-Sensitive Land Uses 3.11-12
Figure 3.11-2 SoundPLAN Modeled Operational Noise Levels 3.11-41
Figure 3.11-3 SoundPLAN Modeled Operational Noise Increase 3.11-43
Figure 3.17-1 Fire Hazard Severity Zones 3.17-11
Figure 3.17-2 Wildfire Scenario #1 ..... 3.17-13
Figure 3.17-3 Wildfire Scenario #2 ..... 3.17-15
Figure 3.17-4 Wildfire Scenario #1 Percent Evacuating During Peak Hour 3.17-19
Figure 3.17-5 Wildfire Scenario # 2 Percent Evacuating During Peak Hour 3.17-21
Figure 3.17-6 Wildfire Scenario #1 Congestion Locations - No Project Under Existing Conditions 3.17-25
Figure 3.17-7 Wildfire Scenario #1 Congestion Locations – Plus Project Under Existing Conditions 3.17-27
Figure 3.17-8 Wildfire Scenario #1 Congestion Locations – No Project Under Near-Term Conditions (2034) 3.17-29
Figure 3.17-9 Wildfire Scenario #1 Congestion Locations – Plus Project Under Near-Term Conditions (2034) 3.17-31
Figure 3.17-10 Wildfire Scenario #2 Congestion Locations - No Project Under Existing Conditions 3.17-35

Figure 3.17-11 Wildfire Scenario #2 Congestion Locations – Plus Project Under Existing Conditions....3.17-37
Figure 3.17-12 Wildfire Scenario #2 Congestion Locations – No Project Under Near-Term Conditions (2034)..3.17-39
Figure 3.17-13 Wildfire Scenario #2 Congestion Locations – Plus Project Under Near-Term Conditions (2034)....3.17-41
Figure 5-1 Costco Project on South Site Alternative....5-6
Figure 5-2 Alternative 3: Flipped Costco Project Site Plan Alternative....5-16
Figure 5-3 Alternative 4: Relocation of the Fuel Facility Alternative....5-21
Figure 5-4 Alternative 5: Offsite Alternative....5-27
Figure 5-5 Alternative 6: Costco Project on North Site Alternative....5-32

Tables

Table ES-1 Summary of Impacts and Mitigation Measures....ES-5
Table 3.2-1 National and California Ambient Air Quality Standards....3.2-2
Table 3.2-2 Sources and Health Effects of Criteria Air Pollutants....3.2-16
Table 3.2-3 Attainment Status Designations for El Dorado County....3.2-17
Table 3.2-4 Local Ambient Air Quality Data for El Dorado County 2021-2023....3.2-18
Table 3.2-5 Summary of Daily Emissions of Criteria Air Pollutants and Precursors Associated with Costco Project Construction (Unmitigated)....3.2-29
Table 3.2-6 Summary of Daily Emissions of Criteria Air Pollutants and Precursors Associated with Construction of North Site Remainder Area and Operation of Costco Project (Unmitigated)....3.2-30
Table 3.2-7 Summary of Daily Emissions of Criteria Air Pollutants and Precursors Associated with Construction of North Site Remainder Area and Operation of Costco Project (Mitigated)....3.2-31
Table 3.2-8 Summary of Daily Operational Emissions of Criteria Air Pollutants and Precursors at Full Buildout of the Costco Project (2027) (Unmitigated)....3.2-32
Table 3.2-9 Summary of Daily Operational Emissions of Criteria Air Pollutants and Precursors Associated with the Costco Project and the North Site Remainder Area (2028) (Unmitigated)....3.2-33
Table 3.2-10 Maximum Cancer Risk under an Unmitigated Project Scenario....3.2-35
Table 3.2-11 Maximum Cancer Risk under a Mitigated Project Scenario....3.2-38
Table 3.3-1 Habitat Mitigation Summary Table....3.3-6
Table 3.3-2 Vegetation and Land Cover Types on the Project Site....3.3-8
Table 3.3-3 Special-Status Plants and Their Potential for Occurrence on the Project Site....3.3-12
Table 3.3-4 Special-Status Wildlife and Their Potential for Occurrence on the Project Site....3.3-15
Table 3.5-1 Pacific Gas and Electric Power Content Label (2024)....3.5-7
Table 3.5-2 Pioneer Community Energy Power Content Label (2023)....3.5-7
Table 3.5-3 Costco Project Construction-Related Energy Consumption1....3.5-11
Table 3.5-4 North Site Remainder Area Construction-related Energy Consumption....3.5-12
Table 3.5-5 Operational Energy Consumption....3.5-13
Table 3.5-6 Operational Energy Consumption....3.5-14
Table 3.5-7 Consistency with Applicable General Plan Energy Efficiency Strategies....3.5-15

Table 3.5-8 Consistency with Applicable State Renewable Energy and Energy Efficiency Strategies 3.5-16
Table 3.6-1 Summary of Soil Characteristics 3.6-6
Table 3.7-1 Statewide GHG Emissions by Economic Sector (2022) 3.7-15
Table 3.7-2 Costco Project-Generated Construction Greenhouse Gas Emissions 3.7-19
Table 3.7-3 Costco Project-Generated Operational Greenhouse Gas Emissions 3.7-20
Table 3.7-4 Summary of Costco Project Operational Efficiency Metric 3.7-21
Table 3.7-5 North Site Remainder Area Construction-Generated Greenhouse Gas Emissions 3.7-22
Table 3.7-6 Combined Costco Project and North Site Remainder Area Operational Greenhouse Gas Emissions 3.7-22
Table 3.7-7 Summary of Operational Efficiency Metrics for Combined Emissions of Costco Project and North Site Remainder Area 3.7-23
Table 3.7-8 Consistency with CARB's 2022 Scoping Plan Update 3.7-26
Table 3.7-9 Consistency with 2020 SACOG MTP/SCS 3.7-29
Table 3.7-10 Consistency with El Dorado County Regional Transportation Plan 2020-2040 ..... 3.7-33
Table 3.11-1 Groundborne Vibration Impact Criteria for General Assessment 3.11-2
Table 3.11-2 FTA Construction Vibration Damage Criteria 3.11-2
Table 3.11-3 Maximum Allowable Noise Exposure for Transportation Noise Sources 3.11-4
Table 3.11-4 Noise Level Performance Protection Standards for Noise Sensitive Land Uses Affected by Non-Transportation1 Sources 3.11-4
Table 3.11-5 Typical A-Weighted Noise Levels 3.11-8
Table 3.11-6 Human Response to Different Levels of Ground Noise and Vibration 3.11-9
Table 3.11-7 Existing Noise-Sensitive Receptors 3.11-11
Table 3.11-8 Summary of Existing Ambient Noise Level Survey 3.11-13
Table 3.11-9 Summary of Modeled Existing Traffic Noise Levels 3.11-14
Table 3.11-10 Reference Noise Levels Data 3.11-18
Table 3.11-11 Noise Emission Levels from Construction Equipment 3.11-21
Table 3.11-12 Modeled Construction Noise Levels at Costco Project North Site and South Site 3.11-22
Table 3.11-13 Modeled Nighttime Construction Noise Levels at Costco Project South Site 3.11-24
Table 3.11-14 Modeled Off-Site Construction Noise Levels at Nearby Sensitive Receptors 3.11-25
Table 3.11-15 Modeled Construction Noise Levels for Future Commercial Development at the North Site Remainder Area 3.11-25
Table 3.11-16 Summary of Modeled Traffic Noise Levels under Existing and Existing-Plus-Costco Project Conditions 3.11-29
Table 3.11-17 Summary of Modeled Traffic Noise Levels under Existing-Plus-Project and Existing-Plus-Project-Plus Remainder Area Development Conditions 3.11-32
Table 3.11-18 Noise Measurements at Similar Tire Centers in California 3.11-38
Table 3.11-19 Typical Construction Equipment Vibration Levels 3.11-45
Table 3.12-1 SACOG Regional Population Growth Forecast 3.12-2
Table 3.12-2 Comparison 1990, 2000, 2010, and 2020 Population 3.12-3

Table 3.12-3 El Dorado County Housing Element Update Population Forecast for El Dorado County 3.12-3
Table 3.13-1 El Dorado County General Plan Table 5-1: Minimum Level of Service 3.13-2
Table 3.14-1 Project-Generated Daily Vehicle Miles Traveled 3.14-13
Table 3.16-1 General Plan Table 5-1: Minimum Levels of Service 3.16-3
Table 3.16-2 Utility Service Providers for the Project Site 3.16-11
Table 3.16-3 EID Water Supply and Demand Comparison – Average Year (acre-feet per year) 3.16-12
Table 3.16-4 EID Water Supply and Demand Comparison – Single Dry Year (acre-feet per year) 3.16-12
Table 3.16-5 EID Water Supply and Demand Comparison – Multiple Dry Years (acre-feet per year) 3.16-13
Table 3.16-6 2022 Water Supply, Demand, and Meter Availability in the El Dorado Hills Supply Area 3.16-13
Table 3.16-7 Landfills and Remaining Capacities 3.16-15
Table 3.17-1 Fire Incidents in the El Dorado County January 2024-June 2025 ..... 3.17-9
Table 3.17-2 Travel Times (minutes), Wildfire Scenario #1 – Existing Conditions 3.17-24
Table 3.17-4 Travel Times (minutes), Wildfire Scenario #1 – Near Term (2034) Conditions 3.17-33
Table 3.17-5 Travel Times (minutes), Wildfire Scenario #2 – Existing Conditions 3.17-34
Table 3.17-6 Travel Times (minutes), Wildfire Scenario #2 – Near Term (2034) Conditions 3.17-43
Table 4-1 Geographic Scope of Cumulative Impacts 4-2
Table 4-2 Cumulative Projects List 4-3
Table 4-3 Modeled Cumulative Traffic Noise Levels under No Project and Plus-Project Conditions 4-16
Table 5-1 Summary of Environmental Effects of the Alternatives Relative to the Proposed Project 5-37
Table 6-1 El Dorado Hills Costco Market Area Retail Sales Attraction and Spending Leakage Summary (2024) 6-5

LIST OF ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
2022 Scoping Plan	*2022 Scoping Plan for Achieving Carbon Neutrality*
2022 TRU Amendments	Airborne Toxic Control Measure
2025 California Energy Code	2025 Building Energy Efficiency Standards
AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ACC II Program	Advanced Clean Cars II Program
ACC	Advanced Clean Cars
ACHP	President's Advisory Council on Historic Preservation
Active Transportation Plan	2020 El Dorado County Active Transportation Plan
ADA	Americans with Disabilities Act
ADT	average daily traffic
afy	acre-feet per year
ALUC	airport land use commission
ALUCP	airport land use compatibility plan
APN	Assessor's Parcel Numbers
APSA	Aboveground Petroleum Storage Act
AQMD	Air Quality Management District
Area Plan	Hazardous Materials Area Plan
ATCM	airborne toxic control measures
BACT	best available control technology
basin plan	water quality control plan
BCE	before common era
BMP	best management plan
BMP	best management practice
C&D	construction and demolition
CA MUTCD	California Manual on Uniform Traffic Control Devices
CA SDWA	California Safe Drinking Water Act
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy

CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CALGreen Code	California Green Building Standards Code
CalGreen Code	Tier 2 requirements of Part 11 of the Title 24 California Building Code
CALGreen	California Building Standards Commission Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CBC	California Building Code
CBSC	California Building Standards Code
CCA	Community Choice Aggregator
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CESA	California Endangered Species Act
CFC	California Fire Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
CHWMP	El Dorado County Hazardous Waste Management Plan
CIP	Capital Improvement Program
CIWMA	California Integrated Waste Management Act
CL	Commercial Limited
cm	centimeters
CMU	concrete masonry units
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level

CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
Costco	Costco Wholesale
County Code	El Dorado County Code of Ordinances
County	El Dorado County
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CR-PD	Commercial Regional – Planned Development
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibels
DCWWTP	Deer Creek Wastewater Treatment Plant
DOC	California Department of Conservation
DOF	California Department of Finance
Draft EIR	draft environmental impact report
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EB	eastbound
ECCWPP	El Dorado County Community Wildfire Protection Plan
EDCAQMD	El Dorado County Air Quality Management District
EDCSO	El Dorado County Sheriff's Office
EDCTC	El Dorado County Transportation Commission
EDHCSD	El Dorado Hills Community Services District
EDHFD	El Dorado Hills Fire Department
EDHWWTP	El Dorado Hills Wastewater Treatment Plant
EID	El Dorado Irrigation District
EIR	Environmental Impact Report
El Dorado Transit	El Dorado County Transit Authority
EO	executive order
EOP	El Dorado County Emergency Operations Plan
EPA	US Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986

ESA	federal Endangered Species Act
EV	electric vehicle
FAA	Federal Aviation Administration
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FHSZ	fire hazard severity zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPD	Fire Protection Districts
FRAP	Fire Resource and Assessment Program
FSP	fire safe plan
FTA	Federal Transit Administration
FTE	full-time equivalent employees
GBV	groundborne vibration
General Plan	El Dorado County General Plan
GHG	greenhouse gas
GHGRP	Greenhouse Gas Reporting Program
GVWR	gross vehicle weight rating
Handbook	*Handbook for Analyzing GHG Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*
HAP	hazardous air pollutants
HDPUV	heavy-duty pickup trucks and van
HMBEP	hazardous materials business emergency plan
HMBP	Hazardous Materials Business Plan
HMPC	hazard mitigation planning committee
hp	horsepower
HSC	Health and Safety Code
HVAC	heating, ventilation and air conditioning
Hz	hertz
ICT	Innovative Clean Transit
IDSG	El Dorado County Interim Design Standards and Guidelines
IEPR	Integrated Energy Policy Report
in/sec	inches per second
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
IWRMP	Integrated Water Resources Master Plan

LAFCO	El Dorado County Local Agency Formation Commission
lb/day	pounds per day
LCI	Governor's Office of Land Use and Climate Innovation
LDIGR	Local Development Intergovernmental Review
L_{dn}	day-night level
LDR	Local Development Review
LDV	light-duty vehicles
L_{eq}	equivalent sound level
LEV	low emission vehicle
LHMP	Local Hazard Mitigation Plan
LID	low-impact development
L_{max}	maximum sound level
L_{min}	minimum noise level
LOS	level of service
LRA	local responsibility area
LSI	large spark-ignition
LT	long-term
MBTA	Migratory Bird Treaty Act
MCAB	Mountain Counties Air Basin
MCL	Maximum Contaminant Level
mPa	micro-Pascals
mpg	miles per gallon
MPO	metropolitan planning organization
MRF	Materials Recovery Facility
MS4	municipal separate storm sewer system
MTIP	Metropolitan Transportation Improvement Program
MTP	metropolitan transportation plan
MTP/SCS	metropolitan transportation plan/sustainable community strategy
MWELO	Model Water Efficient Landscape Ordinance
MY	model year
N/A	not applicable
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEHRP	National Earthquake Hazards Reduction Program

NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOAA	National Oceanic and Atmospheric Administration
NOP	notice of preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NR-SR	non-residential sensitive receptor
OAL	Office of Administrative Law
OES	Governor's Office of Emergency Services
OPR	Governor's Office of Planning and Research
ORMP	El Dorado County Oak Resources Management Plan
OSHA	Occupational Safety and Health Administration
ozone	photochemical smog
PCAPCD	Placer County Air Pollution Control District
PD	planned development
PG&E	Pacific Gas and Electric
Phase I ESA	Phase I Environmental Assessment
PL	platte lands overlay
PM_{10}	respirable particulate matter with an aerodynamic diameter of 10 micrometers or less
$PM_{2.5}$	fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1970
ppm	parts per million
PPV	peak particle velocity
PRC	public resources code
project	EDH Costco Project
project	El Dorado Hills Costco EIR
project	El Dorado Hills Costco Project

PRPA	Paleontological Resources Preservation Act
PV	photovoltaic
Ramboll	Ramboll Americas Energy Solutions, Inc.
RMS	root mean square
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
R-SR	residential sensitive receptor
RTP	regional transportation plan
RWQCB	regional water quality control board
SACOG	Sacramento Area Council of Governments
SARA Title III	Superfund Amendments and Reauthorization Act of 1986
SB	Senate Bill
SCS	sustainable communities strategy
SDWA	Safe Drinking Water Act
SGMA	Sustainable Groundwater Management Act of 2014
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SmartWay	USEPA SmartWay
SPCC	spill prevention, control, and countermeasure
SPL	sound pressure level
SRA	state responsibility areas
SSBMI	Shingle Springs Band of Miwok Indians
ST	short-term
Study	Urban Decay Analysis Study
SWMP	stormwater management plan
SWMR	storm water mitigation report
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
SWRCB-DDW	State Water Resources Control Board Division of Drinking Water
TAC	Toxic air contaminates
Tanner Act	Toxic Air Contaminant Identification and Control Act
TAZ	traffic analysis zone
TC	transportation corridor
TDM	transportation demand management

Technical Advisory	Technical Advisory: Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways
TIA	traffic impact analysis
TIM	traffic impact mitigation
TMDL	total maximum daily load
TRU	transport refrigeration unit
U.S. 50	U.S. Highway 50
UAIC	United Auburn Indian Community
US	United States Route
USACE	US Army Corps of Engineers
USC	US Code
USDOT	US Department of Transportation
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UST	underground storage tank
UWMP	urban water management plan
UWMPA	Urban Water Management Planning Act
VdB	Vibration Decibels
VHFHSZ	very high Fire Hazard Severity Zones
VMT	vehicle miles traveled
VOC	volatile organic compound
WB	Westbound
WQO	Water Quality Objective
WRDMP	Water Resources Development and Management Plan
WUI	Wildland-Urban Interface
ZEV	zero emission vehicles

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This summary is provided in accordance with California Environmental Quality Act Guidelines (State CEQA Guidelines) Section 15123. As stated in Section 15123(a), "an EIR [environmental impact report] shall contain a brief summary of the proposed action and its consequences. The language of the summary should be as clear and simple as reasonably practical." As required by the guidelines, this chapter includes (1) a summary description of the El Dorado Hills (EDH) Costco Project (project), (2) a synopsis of environmental impacts and recommended mitigation measures (Table ES-1), (3) identification of the alternatives evaluated and of the environmentally superior alternative, and (4) a discussion of the areas of controversy associated with the project.

ES.2 SUMMARY DESCRIPTION OF THE PROJECT

ES.2.1 Project Location

The proposed EDH Costco Project (project) is located north of the Silva Valley Parkway/US 50 interchange in the El Dorado Hills community area of unincorporated El Dorado County. The project is bisected by Silva Valley Parkway and consists of the North Site (approximately 24.83 acres) and the South Site (approximately 18.42 acres). The project site consists of Assessor's Parcel Numbers (APNs) 122-720-002, -003, -018, -019, -020, and -021. Roadways providing local access include Silva Valley Parkway (traverses north-south) and Clarksville Crossing (traverses along the western property boundary). Regional access is provided via US 50 south of the site.

ES.2.2 Project Background

The project site is designated for commercial development in the El Dorado County General Plan. The location's proximity to existing infrastructure and transportation corridors facilitates the efficient use of the site for a regional retail center. The project is intended to address community retail needs while complying with state and local planning objectives. The Costco Warehouse Corporation (Costco) proposes to construct a membership-only Costco Member Warehouse retail store (warehouse retail building) and related site improvements, including a members-only fuel facility. The County previously released a Notice of Preparation on August 23, 2021 for the preparation of an Environmental Impact Report (EIR) for the proposed EDH-52 Commercial Center located in unincorporated El Dorado County; due to project revisions, a Revised NOP was released on February 28, 2025.

ES.2.3 Project Objectives

The State CEQA Guidelines require that an EIR include a statement of objectives for the project and that the objectives include the underlying purpose of the project. The following project objectives have been identified by the applicant:

- Develop a high-quality commercial development on currently vacant and underutilized land adjacent to US 50 that is adequately served by adequate existing infrastructure including roadways and utilities.
- Promote economic growth, new employment, and retail/service opportunities for County residents.
- Increase the number of employees in the El Dorado Hills area and contribute to the local jobs/housing balance.
- Construct and operate a new Costco warehouse retail building that serves the local community with goods and services from both nationally known businesses and also more regional and local businesses.
- Reduce energy consumption by incorporating sustainable design features and systems with enhanced energy efficiencies meeting State and federal code requirements.

- Provide a Costco warehouse retail building in a location that is convenient for its members, the community, and employees to travel to shop and work.
- Provide a state-of-the-art Costco warehouse retail building to better serve the membership in the greater El Dorado Hills area.
- Enhance the area with a warehouse retail building that is architecturally appealing, responsive to the El Dorado Hills area design context, sensitive to the adjacent community and future development(s), and compatible with the need for a new Costco in this market area.
- Continue and increase contribution to the County's tax base by Costco.
- Expand the space available for integrated retail sales of goods and services in the El Dorado Hills market.
- Minimize circulation conflicts between automobiles and pedestrians.
- Develop a Costco warehouse retail building that is large enough to accommodate all of the uses and services Costco provides to its members elsewhere.
- Meet member demand for high-quality gasoline at a fair price via a new Fuel Facility developed in conjunction with the proposed warehouse retail building.

ES.2.4 Characteristics of the Project

The South Site would include up to approximately 165,000 square feet of building area planned to be constructed as a Costco Wholesale Member Warehouse retail store. Within the store, Costco would offer, among other product and services, optical exams and optical sales, hearing aid testing and sales, food service preparation and sales, meat preparation and sales, bakery and sales of baked goods, alcohol sales, and tire sales and installation. Temporary outdoor sales may occur within the portion of the parking area adjacent to the warehouse retail building for seasonal sales, such as Christmas tree sales during the months of November and December. The South Site would also include a below grade and surface parking, which are further described below. Development on the South Site would exclude the 1.38-acre area located west of Clarksville Crossing where no development is proposed.

Approximately 3.29 acres of the North Site would be developed with a Costco members-only fuel facility and an employee parking area. The remainder of the North Site would include an approximately 13.79-acre out-parcel that would remain undeveloped at this time (North Site Remainder Area). The Costco project proposes no development for the North Site Remainder Area. However, future development of the North Site Remainder Area would be made more reasonably foreseeable by the proposed annexation of the entire North Site into the El Dorado Irrigation District and the El Dorado Hills Fire Department service areas. The assumed potential commercial development of the North Site Remainder Area is approximately 138,000 square feet and 316 employees. The future extension of Country Club Drive (County Capital Improvement Project No. 36105008), when constructed by the County, would occupy a portion of the North Site near its northern edge, though the future extension is an independent project proposed by, and to be undertaken by, the County and is not analyzed as a part of the project for purposes of this EIR.

ES.3 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

ES.3.1 Project-Specific Impacts

This EIR has been prepared pursuant to the CEQA and the State CEQA Guidelines to evaluate the physical environmental effects of the proposed project. El Dorado County is the lead agency for the project. The El Dorado Hills Costco project has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the Final EIR is prepared and the EIR public-review process is

complete, the County of El Dorado has the principal responsibility of certifying that the EIR adequately evaluates the impacts of the project.

Table ES-1, presented at the end of this chapter, provides a summary of the environmental impacts for the project. The table provides the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

ES.3.2 Significant-and-Unavoidable Impacts and Cumulative Impacts

The State CEQA Guidelines Section 15126.2(b) requires EIRs to include a discussion of the significant environmental effects that cannot be avoided if the proposed project is implemented. As documented throughout Chapter 3 (project level impacts) and Chapter 4, "Cumulative Impacts," of this Draft EIR, after implementation of the recommended mitigation measures, most of the impacts associated with the proposed project would be reduced to a less-than-significant level. The following impacts are considered significant and unavoidable; that is, no feasible mitigation is available to reduce the project's impacts to a less-than-significant level.

- Impact 3.14-2 and 4-14: The Costco project would result in a net increase of 21,123 daily VMT when compared to existing conditions, and development of the North Site Remainder Area would result in 11,462 VMT. Thus, implementation of the project and development of the North Site Remainder Area would exceed the threshold of no net increase in regional VMT. Implementation of identified mitigation measures would assist to reduce the extent of VMT impacts. However, it is not possible to determine if VMT associated with future commercial development of the Costo project and the North Site Remainder Area would be reduced below the County's threshold under project and cumulative conditions.

ES.4 ALTERNATIVES TO THE PROPOSED PROJECT

Chapter 5, "Alternatives," provides an analysis of alternatives to the proposed project. Brief descriptions of the alternatives evaluated in this Draft EIR provided below.

- Alternative 1: No Project–No Development Alternative assumes no development of the North Site and South Site, and these sites remain undeveloped.
- Alternative 2: No Project – Development Consistent with General Plan and Zoning: The proposed Costco project and its associated fuel facility would not be developed under this alternative. However, the North Site and South Site would develop consistent with the existing zoning of Commercial Regional–Planned Development (CR-PD), Commercial Limited (CL) and Transportation Corridor (TC). Commercial development potential on the North Site would be approximately 171,080 square feet of gross floor area (GFA), while the South Site commercial development potential would be approximately 170,818 square feet of GFA. In addition, this alternative could include residential up to 70 percent of GFA consistent provided in County Code of Ordinances Section 130.40.180.
- Alternative 3: Flipped Costco Project Site Plan Alternative: This alternative would involve the reduction of the Costco warehouse retail building to approximately 152,000 square feet and relocated to the North Site. The proposed fuel facility would remain the same size (3.29 acres consisting of steel canopy structure of approximately 13,000 square feet, covering four fueling bays with four two-sided dispensers each [32 fueling positions total]) but would be located in the southeastern corner of the South Site. The South Site Remainder Area (reserved for future development similar to the North Site under the proposed Costco project) would consist of approximately 138,000 square feet of potential commercial uses and approximately 316 employees.
- Alternative 4: Relocation of Fuel Facility Alternative: Under Alternative 4, the proposed Costco warehouse retail building and associated site plan for the South Site would remain the same as proposed. However, the proposed fuel facility design would remain as proposed, but would be sited further to the southeast on the North Site. The North Site Remainder Area (reserved for future development similar to the Costco project) would consist of approximately 138,000 square feet of potential commercial uses like the proposed project.

- Alternative 5: Offsite Alternative: This alternative would relocate the proposed Costco warehouse retail building and fuel facility to the northern portion of the El Dorado Hill Business Park on approximately 25 acres.
- Alternative 6: Costco Project on North Site Alternative: This alternative would involve the relocation of the Costco warehouse retail building and fuel facility to the North Site. The Costco warehouse retail building would be reduced to approximately 152,000 square feet and would involve the construction of structured parking for a total of 646 parking spaces. The South Site would be reserved for future development similar to the project and its commercial development potential would be approximately 170,818 square feet of GFA.

ES.5 AREAS OF CONTROVERSY

A notice of preparation (NOP) was distributed for the El Dorado Hills Project on February 28, 2025, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the project. A public scoping meeting was held on March 10, 2025. The purpose of the NOP and the scoping meeting was to provide notification that an EIR for was being prepared for the project and to solicit input on the scope and content of the environmental document. The NOP and responses to the NOP are included in Appendix A of this Draft EIR. Below is a summary of the issues of controversy identified in the NOP comments:

- aesthetic and nighttime lighting impacts of the project
- air quality and related public health impacts to area residents and Oak Meadow Elementary School from project construction and operation,
- biological resource impacts from project development,
- construction and operational water resource impacts of the project,
- exposure to naturally occurring asbestos released during project construction,
- greenhouse gas emissions and energy use impacts of the project,
- construction and operational noise impacts of the project,
- increased demands on public services, utilities, and infrastructure impacts of the project,
- increased traffic volumes, vehicle miles traveled, and transportation safety impacts from project operation,
- relationship of the project to the planned extension of Country Club Drive,
- wildfire hazards and conflicts evacuation activities from project traffic,
- cumulative impacts of the project.

ES.6 ISSUES TO BE RESOLVED

Section 15123 of the State CEQA Guidelines requires the summary section of a Draft EIR to identify issues to be resolved in the EIR, including the choice among alternatives and whether or how to mitigate the significant project effects. The following issues, in addition to the areas of controversy, are identified to be resolved:

- whether the project should be approved, modified, or denied;
- whether the is consistent with the El Dorado County General Plan; and
- whether the mitigation measures identified in the Draft EIR should be applied to the project.

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Aesthetics			
Impact 3.1-1: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings Development of the proposed project would result in a membership-only Costco warehouse retail building and related site improvements, including a member-only fuel facility, an employee parking lot, and a below-grade parking structure. Implementation of the project would alter views by adding built-environment elements onto undeveloped land. However, these elements would not substantially alter the existing urban and suburban visual character of the surrounding area. Elements of the project's design, including building height, color palette, architectural massing and detailing, landscaping, and setbacks have been designed to blend with the visual character of the surrounding environment. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.1-2: Effects of Light and Glare The project would introduce new sources of light onto the existing, vacant project site. Light spillover onto adjacent land uses would be reduced by using less powerful lights on fixtures at the edge of a property. Reflective, glare causing materials would not be used. All fixtures would be downcast and include cutoff lenses which would reduce light spillover onto residential areas. Therefore, this impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Air Quality			
Impact 3.2-1: Conflict with or Obstruct Implementation of an Applicable Air Quality Plan The Costco project and future development on the North Site Remainder Area are consistent with the El Dorado County General Plan land use designations factored in the 2023 Ozone Plan and the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request, and would not conflict with the implementation of these plans. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.2-2: Generate Short-Term Construction-Related Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that Exceed Applicable Thresholds Construction of the project (including off-site roadway and infrastructure improvements) would not result in an exceedance of EDCAQMD's numerical thresholds for criteria pollutants and precursors. Further, for impacts related to particulate matter emissions to be considered less than significant, projects must comply with EDCAQMD Rule 223-1. The project would comply with EDCAQMD Rule 223-1 for fugitive dust control. The combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of ROG exceeding EDCAQMD thresholds. Thus, this impact would be significant.	S	Note that while Mitigation Measure 3.2-4a is implemented here to reduce ROG emissions, it is also applied under Impact 3.2-4 to reduce health risks related to implementation of the project. **Mitigation Measure 3.2-2: Architectural Coating VOC Limits for Development of the North Site Remainder Area** Future building construction of the North Site Remainder Area shall only use architectural coatings with a VOC content not exceeding 100 grams per liter during construction for all interior and exterior spaces. This requirement shall be included in plans submitted for review by the County prior to the issuance of building permits. **Mitigation Measure 3.2-4a: Apply Tier-4 Emission Standards to Diesel-Powered Off-Road Equipment** Construction equipment greater than 50 horsepower (hp) used at the site shall meet EPA Tier 4 Final emission standards for PM10 and PM2.5, if available. If Tier 4 Final equipment is not available, all construction equipment larger than 50 hp used at the site shall meet EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices. This requirement shall apply to the construction of the Costco project and construction of the North Site Remainder Area.	LTS
Impact 3.2-3: Generate Long-Term Operational Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that Exceed Applicable Thresholds Operation of the project would result in emissions of criteria pollutants from area, energy, mobile, and stationary sources. Because emissions of ROG and NOx would not exceed EDCAQMD thresholds, operational emissions associated with the project would not conflict with the efforts of EDCAQMD to attain the NAAQS and CAAQS. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.2-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations The increase in CO emissions from project-related increased traffic volumes at affected intersections and the on-site fuel facility are less than significant and the proposed project would not expose sensitive receptors to substantial concentrations of localized CO. Construction and operation of the Costco project could result in the exposure of nearby residential receptors to TAC-related health risks that exceed thresholds of significance for cancer risk for the unmitigated scenario. Regarding naturally occurring asbestos, the project site is adjacent to	S	**Mitigation Measure 3.2-4a: Apply Tier-4 Emission Standards to Diesel-Powered Off-Road Equipment** Construction equipment greater than 50 horsepower (hp) used at the site shall meet EPA Tier 4 Final emission standards for PM10 and PM2.5, if available. If Tier 4 Final equipment is not available, all construction equipment larger than 50 hp used at the site shall meet EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
areas in which NOA has been identified, thus construction of the project could result in airborne release of NOA, and this impact would be significant. Therefore, this impact would be significant.		emission control devices. This requirement shall apply to the construction of the Costco project and construction of the North Site Remainder Area. **Mitigation Measure 3.2-4b: Implement Asbestos Dust Mitigation Consistent with EDCAQMD Rule 223-2** An Asbestos Dust Mitigation Plan shall be prepared and submitted to the EDCAQMD and the County for review and approval by EDCAQMD for implementation during construction on the Costco project, future development of the North Site Remainder Area, and for offsite roadway improvements (if the presence of NOA is confirmed). The Asbestos Dust Mitigation Plan shall comply with the El Dorado County Code Chapter 8.44 (Asbestos and Dust Protection) and EDCAQMD Rule 223-2, which provides performance standards for ensuring that adverse impacts do not result from asbestos dust during construction.	
Impact 3.2-5: Generate Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People Odors resulting from construction-generated diesel exhaust would be temporary and would dissipate quickly because of the highly dispersive properties of diesel PM. Operation of the project would not result in the generation of nuisance odors because operational odors are not typically associated with commercial and retail land uses such as those proposed under the project and the proposed gasoline facility would feature gasoline dispensing nozzles equipped with Phase II Enhanced Vapor Recovery systems to avoid odor emissions. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Biological Resources			
Impact 3.3-1: Result in Disturbance or Loss of Special-Status Plant Species Development of the project site, including ground disturbance associated with construction of roads, parking areas, or buildings, could result in direct removal, or damage that results in eventual death or loss of special-status plants, if present on the project site. Because the loss of special-status plants could substantially affect the abundance, distribution, and viability of local and regional populations of these species, prior to the implementation of mitigation measures, this would be a significant impact.	S	**Mitigation Measure 3.3-1: Conduct Special-Status Plant Surveys and Implement Avoidance Measures and Mitigation** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ Prior to implementation of project activities and during the blooming period for Sanford's arrowhead (May–October), a qualified botanist shall conduct protocol-level surveys for special-status plants within the project site following survey methods from CDFW's *Protocols for Surveying and Evaluating Impacts on Special-Status Native Plant Populations and Natural Communities* (CDFW 2018 or most recent version). The qualified botanist shall: 1) be knowledgeable about	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		plant taxonomy, 2) be familiar with plants of the Sierra Nevada region, including special-status plants and sensitive natural communities, 3) have experience conducting floristic botanical field surveys as described in CDFW 2018, 4) be familiar with the California Manual of Vegetation (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/), and 5) be familiar with federal and state statutes and regulations related to plants and plant collecting. ▶ If special-status plants are not found, the botanist shall document the findings in a report to the applicant and El Dorado County, and no further mitigation shall be required. ▶ If special-status plants are found during special-status plant surveys and cannot be avoided, the applicant shall, in consultation with CDFW or USFWS, as appropriate depending on species status, develop and implement a site-specific mitigation strategy to compensate for loss of occupied habitat or individuals. Mitigation measures may include preserving and enhancing existing populations, establishing populations through seed collection or transplantation from the site that is to be affected, and/or restoring or creating habitat in sufficient quantities to offset loss of occupied habitat or individuals. Potential mitigation sites could include suitable locations within or outside of the project site. Habitat and individual plants lost shall be mitigated at a minimum 1:1 ratio, considering acreage as well as function and value. Success criteria for preserved and compensatory populations shall include: ▪ The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat. ▪ Compensatory and preserved populations shall be self-producing. Populations would be considered self-producing when: • plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and • reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity. If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long-term viable populations. Documentation of the completion of the mitigation strategy and coordination/consultation process with CDFW or USFWS shall be provided to El Dorado County before commencement of any project construction activities.	
Impact 3.3-2: Result in Disturbance to or Loss of Special-Status Wildlife Species and Habitat Project implementation would include land use conversion and development activities including ground disturbance, vegetation removal, and overall conversion of wildlife habitat, which could result in disturbance, injury, or mortality of several special-status wildlife species if present, reduced breeding productivity of these species, and loss of species habitat. Prior to implementation of mitigation measures, this would be a significant impact.	S	**Mitigation 3.3-2a: Conduct Preconstruction Surveys for Coast Horned Lizard, Implement Avoidance Measures, and Relocate Individuals** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ Within 14 days before the initiation of any construction activity, a qualified biologist familiar with the life history of coast horned lizard shall conduct a focused visual survey of habitat suitable for this species on the project site, which shall include walking linear transects of the site. ▶ If coast horned lizards are not detected during the focused survey, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and further mitigation shall not be required. ▶ If coast horned lizards are detected, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground disturbance activities and shall inspect the project site before initiation of project activities. If coast horned lizards are detected, the qualified biologist shall move individuals into nearby suitable habitat that will not be disturbed by project activities. ▶ Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities. **Mitigation 3.3-2b: Conduct Preconstruction Surveys for Western Spadefoot, Implement Avoidance Measures, and Relocate Individuals** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ Within 48 hours prior to project implementation, a qualified biologist shall conduct focused surveys in aquatic (i.e., wetlands) and upland (i.e., annual	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		grassland) habitats within approximately 860 feet (262 meters) of aquatic habitat (Baumberger et al. 2019) suitable for the species. Burrows considered potentially suitable for western spadefoot shall be identified and further examined by a qualified biologist (e.g., with a burrow scope, through hand excavation) to determine whether an adult toad is present in the burrow. ▶ If western spadefoot are not found, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and further mitigation will not be required. ▶ If western spadefoot are detected during focused surveys, adults, tadpoles, and egg masses shall be relocated by a qualified biologist with a valid CDFW scientific collecting permit to nearby suitable habitat that will not be disturbed by project activities. ▶ Because western spadefoot is proposed for listing under ESA, if the species is listed before project construction activities begin that could result in injury to or mortality of western spadefoot toads (i.e., ground disturbance, grading, land conversion), then the project applicant may be required to consult with USFWS under Section 7 or Section 10 of ESA. USACE is presumed to be the federal action agency because it has jurisdiction over the aquatic habitat on the project site (see Impact 3.3-4). If it is determined, in consultation with USFWS, that take of this species could occur after implementation of the measures described above, then the project applicant may be required to obtain incidental take authorization through Section 7 consultation or a Section 10 permit pursuant to ESA. In this case, the project shall not proceed until a biological opinion is issued by USFWS. ▪ Any conservation measures developed in coordination with USFWS during the course of formal or informal consultation under Section 7 or during Section 10 consultation would supersede the measures listed here. ▪ Such conservation measures could include, but would not be limited to, seasonal work restrictions for initial ground disturbance, preconstruction surveys by a qualified biologist, installation of wildlife exclusion fencing, biological monitoring, and worker environmental awareness training. Additional measures could include preservation, restoration, or enhancement of habitat on- or off-site; purchase of habitat credits from an agency-approved mitigation/conservation bank; work with a local land trust to preserve land; or any other method acceptable to USFWS.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▶ If USFWS determines that listing of western spadefoot under ESA is not warranted, or the species is not listed prior to project completion, then the above measures related to consultation with USFWS would not be applicable. Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities. **Mitigation 3.3-2c: Conduct Preconstruction Surveys for Northwestern Pond Turtle, Implement Avoidance Measures, and Relocate Individuals** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ Within 14 days prior to the initiation of any construction activities, a qualified biologist shall conduct preconstruction surveys for northwestern pond turtle in habitats for this species (i.e., the pond and suitable upland areas within 0.3 mile of the pond) that will be disturbed by construction activity. ▶ If northwestern pond turtles are found prior to the initiation of, or during, construction activities, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall relocate the turtle to a suitable habitat area outside of the project site. ▶ If a northwestern pond turtle nest is observed within the proposed impact area during the preconstruction survey, the nest shall be fenced off and avoided until the eggs hatch or the nest is no longer active as determined by a qualified biologist. The fenced area shall be open on one side with the opening facing the nearest aquatic habitat so that hatchling turtles can freely travel from the nest to the aquatic habitat. A qualified biologist shall monitor to ensure that hatchlings do not disperse into the construction area. If any hatchlings are observed within the project area, relocation of hatchlings shall occur as described in the encounter protocol below. ▶ If a northwestern pond turtle is encountered, work shall be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, a qualified biologist shall notify CDFW to determine the appropriate procedures related to relocation. Any worker who inadvertently injures or kills a northwestern pond turtle or who finds a northwestern pond turtle dead, injured, or entrapped must immediately report the incident to the applicant, who must immediately notify CDFW.	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▶ Because northwestern pond turtle is proposed for listing under the ESA, if the species is listed before the completion of project construction activities that could result in injury to or mortality of turtles (i.e., ground disturbance, grading, land conversion), then the project applicant may be required to consult with USFWS under Section 7 or Section 10 of ESA. USACE is presumed to be the federal action agency because it has jurisdiction over the aquatic habitat on the project site (see Impact 3.3-4). If it is determined, in consultation with USFWS, that take of this species could occur after implementation of the measures described above, then the project applicant may be required to obtain incidental take authorization through Section 7 consultation or a Section 10 permit pursuant to ESA. In this case, the project shall not proceed until a Biological Opinion is issued by USFWS. ▪ Any conservation measures developed in coordination with USFWS during the course of formal or informal consultation under Section 7 or during Section 10 consultation would supersede the measures listed here. ▪ Such conservation measures could include, but would not be limited to, seasonal work restrictions for initial ground disturbance, preconstruction surveys by a qualified biologist, installation of wildlife exclusion fencing, biological monitoring, and worker environmental awareness training. Additional measures could include preservation, restoration, or enhancement of habitat on- or off-site; purchase of habitat credits from an agency-approved mitigation/conservation bank; work with a local land trust to preserve land; or any other method acceptable to USFWS. ▶ If USFWS determines that listing of northwestern pond turtle under ESA is not warranted, or the species is not listed prior to project completion, then the above measures related to consultation with USFWS would not be applicable. CDFW may require mitigation for potential impacts on northwestern pond turtle as part of a streambed alteration agreement. If CDFW assigns mitigation that is more stringent than the measures proposed above, the CDFW measure shall take precedence. ▶ Documentation of compliance with this mitigation measure and the coordination/consultation process with CDFW and USFWS shall be provided to El Dorado County before commencement of any project construction activities.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Mitigation 3.3-2d: Conduct Take Avoidance Survey for Burrowing Owl and Implement Avoidance Measures The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ A qualified biologist shall conduct a focused survey for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet (500 meters) of the project site no less than 14 days before initiating ground disturbance activities using survey methods described in Appendix D of the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). Inaccessible areas (e.g., adjacent private property) will not be surveyed directly, but the biologist may use binoculars or a spotting scope to survey these areas. ▪ If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to the applicant and El Dorado County, and no further mitigation shall be required. ▪ If an active burrow is found within 1,640 feet of pending construction activities that would occur during the nonbreeding season (September 1 through January 31), the applicant shall establish and maintain a minimum protection buffer of 1,640 feet (500 meters) around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls throughout construction. The protection buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer would not disturb burrowing owl use of the burrow because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, a qualified biologist shall monitor the behavior of the burrowing owls during all project activities within 1,640 feet of the burrow. If the owls are disturbed or agitated (e.g., vocalizations, bill snaps, fluffing feathers to increase body size appearance, drooping wings and rotating them forward, crouching and weaving back and forth) by the project activities, the biologist shall have the authority to halt the activities and re-establish a buffer consistent with the first bullet until the agitated behavior ceases and normal behavior resumes. ▪ The buffer shall remain in place around the occupied burrow and associated satellite burrows until a qualified biologist has determined through	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		noninvasive methods that the burrows are no longer occupied by burrowing owl. A previously occupied burrow will be considered unoccupied if surveys demonstrate that no owls have used the burrow for seven consecutive days. ▪ If implementation of a buffer to prevent take of burrowing owl is not feasible, the project applicant shall consult with CDFW and obtain an Incidental Take Permit (ITP) prior to commencing project related ground-disturbing activities. The impacts of taking burrowing owl shall be minimized and fully mitigated. ▪ The project applicant shall compensate for the loss of burrowing owl by establishing permanent protection and perpetual management on land that provides burrowing owl habitat. Habitat management lands for burrowing owl may be established by conservation easement or fee title or credits may be purchased from a CDFW-approved conservation or mitigation bank. The compensatory mitigation shall satisfy permit conditions and all other permit conditions shall be implemented. ▪ Documentation of compliance with this mitigation measure and the coordination process with CDFW shall be provided to El Dorado County before commencement of any project construction activities. **Mitigation 3.3-2e: Conduct Focused Surveys for Special-Status Birds, Nesting Raptors, and Other Native Nesting Birds and Implement Protective Buffers** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ To minimize the potential for loss of special-status bird species, raptors, and other native birds, project activities (e.g., tree removal, vegetation clearing, ground disturbance, staging) shall be conducted during the nonbreeding season (approximately September 1-January 31, as determined by a qualified biologist), if feasible. If project activities are conducted during the nonbreeding season, no further mitigation shall be required. ▶ Within 14 days before the onset of project activities during the breeding season (approximately February 1 through August 31, as determined by a qualified biologist), a qualified biologist familiar with birds of California and with experience conducting nesting bird surveys shall conduct focused surveys for special-status birds, other nesting raptors, and other native birds. Surveys shall be conducted in accessible areas within 0.25 mile of the project site for Swainson's hawk, within 500 feet of the project site for other raptor species and	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		special-status birds, and within 50 feet of the project site for non-raptor common native bird nests. ▶ If no active nests are found, the qualified biologist shall submit a report documenting the survey methods and results to the applicant and El Dorado County, and no further mitigation shall be required. ▶ If active nests are found, impacts on nesting birds shall be avoided by establishing appropriate buffers around active nest sites identified during focused surveys to prevent disturbance to the nest. Project activity shall not commence within the buffer areas until a qualified biologist has determined that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Buffers typically shall be 0.25 mile for Swainson's hawk, and 500 feet for other raptors. Buffer size for non-raptor bird species shall be determined by a qualified biologist. Factors to be considered for determining buffer size shall include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and proposed project activities. Generally, buffer size for these species shall be at least 20 feet. The size of the buffer may be adjusted if a qualified biologist, determines that such an adjustment shall not be likely to adversely affect the nest. Any buffer reduction for a special-status species shall require consultation with CDFW. Periodic monitoring of the nest by a qualified biologist during project activities shall be required if the activity has potential to adversely affect the nest, the buffer has been reduced, or if birds within active nests are showing behavioral signs of agitation (e.g., standing up from a brooding position, flying off the nest) during project activities, as determined by the qualified biologist. ▶ Documentation of compliance with this mitigation measure and any required coordination with CDFW shall be provided to El Dorado County before commencement of any project construction activities. **Mitigation Measure 3.3-f: Implement Limited Operating Period, Conduct Focused Surveys, and Implement Avoidance Measures for Crotch's Bumble Bee** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▶ Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between August 15 and March 15, if feasible, to avoid impacts on nesting Crotch's bumble bees. ▶ Regardless of the feasibility of the above limited operating period, a qualified biologist familiar with bumble bees of California and experienced using survey methods for bumble bees shall conduct a habitat assessment and focused survey for Crotch's bumble bee before the start of any ground-disturbing activities. Surveys shall be performed when Crotch's bumble bee is most likely to be identified, typically from April through August (i.e., the colony active period) when floral resources and ideal weather conditions are present, and shall follow the methods in Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023). Surveys shall be conducted during the colony active period closest to the start of planned construction activities. Survey results shall be submitted to the applicant and El Dorado County no less than 7 days before construction begins. ▶ The applicant shall submit a survey report to CDFW within 1 month of survey completion and shall notify CDFW and El Dorado County within 24 hours if Crotch's bumble bees are detected. ▶ If Crotch's bumble bees are detected during the focused survey, appropriate avoidance measures shall be implemented. Avoidance measures shall include, but not be limited to, the following: ▪ Protective buffers shall be implemented around active nesting colonies or overwintering queens until these sites are no longer active. A qualified biologist, in coordination with CDFW, shall determine the appropriate buffer size to protect nesting colonies or overwintering queens; however, the buffer shall be a minimum of 50 feet. • If impacts on Crotch's bumble bee cannot be avoided, the applicant shall obtain an incidental take permit (ITP) from CDFW and shall implement all avoidance measures included in the ITP. • Documentation of compliance with this mitigation measure and any required coordination with CDFW or acquisition of an ITP shall be provided to El Dorado County before commencement of any project construction activities.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Mitigation Measure 3.3-2g: Conduct Surveys for Milkweed Plants, Monarch Eggs, and Monarch Caterpillars, and Implement Avoidance Measures The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ If construction activities (e.g., ground disturbance, vegetation removal, staging) on the project site occur during the period when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September) a qualified biologist shall survey the project site for milkweed plants. If milkweed plants are found, a qualified biologist shall inspect the milkweed plants for the presence of monarch eggs or caterpillars no more than 14 days before plant removal. If monarch eggs or caterpillars are detected, the milkweed plants shall be avoided until they are no longer being used by monarch caterpillars, as confirmed by a qualified biologist, if feasible. If no eggs or caterpillars are detected, no additional protection measures are necessary. ▶ Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities. **Mitigation 3.3-2h: Conduct Focused American Badger Survey and Establish Protective Buffers** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ Within 14 days before commencement of project activities, a qualified wildlife biologist familiar with American badger and experience using survey methods for the species shall conduct focused surveys of habitat suitable for the species within the project site to identify any American badger dens. ▶ If occupied dens are not found, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and further mitigation shall not be required. ▶ If occupied dens are found, impacts on active badger dens shall be avoided by establishing exclusion zones around all active badger dens, the size of which shall be determined by the qualified biologist such that the active badger den is not disturbed by project activities. No project activities (e.g., vegetation removal, ground disturbance, staging) shall occur within the exclusion zone until denning activities are complete or the den is abandoned, as confirmed by a qualified	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		biologist. The qualified biologist shall monitor each den once per week to track the status of the den and to determine when it is no longer occupied. When it is no longer occupied, project activities within the exclusion zone may occur. ▶ If occupied dens cannot be avoided during construction, passive exclusion such as installing one-way doors on the occupied burrow(s) may be considered. Passive relocation shall only occur outside of the cub-rearing season (generally March 1 to July 31) to avoid impacts on cubs still dependent on the den. CDFW shall be consulted prior to performing passive relocation and an exclusion plan shall be prepared and approved by CDFW. Costco shall work with a qualified biologist during the CDFW consultation process, if necessary, and passive relocation shall be performed by a qualified biologist. ▶ Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities. **Mitigation 3.3-2i: Conduct Focused Bat Surveys and Implement Avoidance Measures** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities. ▶ Prior to the start of project activities, a qualified biologist familiar with bats and bat ecology, and experienced in conducting bat surveys, shall conduct surveys for bat roosts in suitable habitat (e.g., large trees, crevices, cavities, exfoliating bark, foliage) within and adjacent to the project site. ▶ If no evidence of bat roosts is found, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and no further study shall be required. ▶ If evidence of bat maternity roosts or hibernacula is observed, the species and number of bats using the roost shall be determined by a qualified biologist using noninvasive methods. Bat detectors (i.e., acoustic monitoring) or evening emergence surveys shall be used if deemed necessary to supplement survey efforts by the qualified biologist. ▶ A no-disturbance buffer of 250 feet shall be established around active pallid bat or western red bat maternity roosts or hibernacula, as well as substantial maternity roosts or hibernacula of other bat species considered to be a wildlife nursery by the qualified biologist, and project activities shall not occur within this buffer until after the roosts are unoccupied as determined by a qualified biologist.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▶ If roosts of pallid bat or western red bat are determined to be present and must be removed, the bats shall be excluded from the roosting site before the tree is removed. A program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) shall be replaced in consultation with CDFW and may require construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. If determined necessary during consultation with CDFW, replacement roosts shall be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site by a qualified biologist, the roost tree may be removed. ▶ Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities.	
Impact 3.3-3: Result in Degradation or Loss of Riparian Habitat or Other Sensitive Natural Communities Project implementation would include activities resulting in ground disturbance, vegetation removal, and land development, which would result in removal of riparian habitat and sensitive natural communities. This would be a significant impact.	S	**Mitigation Measure 3.3-3a: Map and Compensate for Loss of Sensitive Natural Communities** The following measure shall be implemented prior to implementation of project construction activities. ▶ The applicant shall compensate for unavoidable loss of purple needlegrass grassland such that no net loss of habitat function occurs by one of these three methods: ▪ restoring degraded purple needlegrass grassland outside of the project site at a sufficient ratio to offset the loss of habitat function (at least 1:1); or ▪ creating habitat mitigation through relocation of plants and establishment of purple needlegrass grassland; or ▪ preserving existing purple needlegrass grassland of equal or better value to the sensitive natural community affected through a conservation easement at a sufficient ratio to offset the loss of habitat function (at least 1:1). ▶ Prepare and implement a Compensatory Mitigation Plan that includes the following:	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▪ For preserving existing habitat, the Compensatory Mitigation Plan shall include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The applicant shall provide evidence in the plan that the necessary mitigation has been implemented or that the applicant has entered into a legal agreement to implement it and that compensatory habitat shall be preserved in perpetuity. ▪ For restoring or enhancing habitat, the Compensatory Mitigation Plan shall include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met and parties responsible for the restored or enhanced habitat. ▪ Success criteria required to maintain habitat function for preserved and compensatory populations shall include: • The extent of occupied area and density of plants associated with the sensitive natural community (number of plants per unit area) in compensatory habitats shall be equal to or greater than the affected occupied habitat. • Compensatory and preserved sensitive natural communities shall be self-producing. Populations would be considered self-producing when: - Plants associated with sensitive natural communities reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and - Reestablished and preserved habitats contain an occupied area and density comparable to existing occupied habitat areas in similar habitat types in the project vicinity. Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities. **Mitigation Measure 3.3-3b: Compensate for Loss of Riparian Habitat** The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		The following measures shall be implemented prior to vegetation removal or ground disturbing activities: ▶ A Streambed Alteration Notification shall be submitted to CDFW, pursuant to Section 1602 of the California Fish and Game Code. If proposed project activities are determined to be subject to CDFW jurisdiction, the applicant shall abide by the measures to protect fish and wildlife resources required by any executed agreement prior to any vegetation removal or activity that may affect the resource. Measures to protect fish and wildlife resources shall include, at a minimum, a combination of the following mitigation. ▶ The applicant shall compensate for the loss of riparian habitat such that no net loss of habitat function and values occurs by: ▪ restoring degraded riparian habitat outside of the project site; ▪ purchasing riparian habitat credits at a CDFW-approved mitigation bank; or ▪ preserving existing riparian habitat of equal or better value to the affected riparian habitat through a conservation easement at a sufficient ratio to offset the loss of riparian habitat function (at least 1:1). ▶ The applicant shall prepare and implement a Compensatory Mitigation Plan that includes the following: ▪ For preserving existing riparian habitat outside of the project site in perpetuity, the Compensatory Mitigation Plan shall include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The applicant shall provide evidence in the plan that the necessary mitigation has been implemented or that the applicant has entered into a legal agreement to implement it and that compensatory habitat shall be preserved in perpetuity. ▪ For restoring or enhancing riparian habitat outside of the project site, the Compensatory Mitigation Plan shall include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▪ Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the applicant (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above. ▪ Documentation of compliance with this mitigation measure and receipt of a Lake and Streambed Alteration Agreement from CDFW (or a letter from CDFW stating that such an Agreement is not required) shall be provided to El Dorado County before commencement of any project construction activities.	
Impact 3.3-4: Result in Degradation or Loss of State or Federally Protected Wetlands Project implementation would include activities resulting in ground disturbance, vegetation removal, and land development, which would result in removal (fill) of wetlands. This would be a significant impact.	S	**Mitigation 3.3-4: Obtain Permits for Impacts on Wetlands** ▶ The 2025 aquatic resources delineation report shall be submitted by the applicant to USACE, with a request for preliminary jurisdictional determination. ▶ Authorization for fill or waters of the United States shall be secured from USACE and the RWQCB through the Clean Water Act Sections 401 and 404 permitting processes. In association with the Section 404 and prior to the issuance of any grading permit, Section 401 Water Quality Certification from the Central Valley RWQCB shall be obtained. For impacts on waters of the state that are not also waters of the United States and are therefore not covered by the 401 Water Quality Certification, the applicant shall apply to the RWQCB for Waste Discharge Requirements following the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Water Resources Control Board 2021). Any waters of the United States or waters of the state that are affected by the project shall be replaced on a no-net-loss basis in accordance with the applicable USACE and California Water Board mitigation standards in place at the time of construction. ▶ Prior to commencing activity that may divert the natural flow or otherwise alter the bed or bank, of any lake or stream on the project site, the applicant shall notify CDFW, through issuance of a Lake and Streambed Alteration Notification (notification). If CDFW determines, based on the notification, project activities trigger the need for a Lake and Streambed Alteration Agreement, the proponent shall obtain an agreement from CDFW before the activity commences. The applicant shall conduct project construction activities in accordance with the agreement, including implementing reasonable measures in the agreement necessary to protect fish and wildlife resources, when working within the bed or bank of waterways or in riparian habitats associated with those waterways. These measures may include but not be limited to demarcation of	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		the construction area, biological monitoring, environmental awareness training for construction crews, and compensatory measures (e.g., restoration, long-term habitat management). ▶ Documentation of compliance with this mitigation measure and receipt of a Lake and Streambed Alteration Agreement from CDFW, as well as wetland permitting from USACE, shall be provided to El Dorado County before commencement of any project construction activities.	
Impact 3.3-5: Interfere with Wildlife Movement Corridors or Impede the Use of Wildlife Nurseries Development of the project site would result in removal of natural habitat, which has been identified as an ECA. Natural habitat on the project site may also provide roosting habitat for common bat species (i.e., in large oak trees). However, the project site is surrounded by dense residential development and large roads and highways. As a result, the project site likely does not currently function as a significant wildlife nursery site or wildlife movement corridor. However, bird nesting colonies and bat roosts that may be considered wildlife nurseries may be present on the project site. Thus, prior to implementation of mitigation measures, the impact related to wildlife nurseries would be significant.	S	**Mitigation 3.3-2e: Conduct Focused Surveys for Special-Status Birds, Nesting Raptors, and Other Native Nesting Birds and Implement Protective Buffers** **Mitigation 3.3-2i: Conduct Focused Bat Surveys and Implement Avoidance Measures**	LTS
Impact 3.3-6: Conflict with Local Policies and Ordinances Project implementation would include activities resulting in removal of oak trees and oak woodlands. The applicant will comply with the El Dorado County ORMP. Therefore, there would be no impact related to conflict with local policies and ordinances.	NI	No mitigation is required for this impact.	NI
Cultural Resources			
Impact 3.4-1: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources Project-related ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources pursuant to Section 15064.5. This would have a significant impact.	S	**Mitigation Measure 3.4-1a: Develop and Implement a Worker Environmental Awareness Training** The applicant shall retain a qualified professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeologists to prepare a worker environmental awareness training. Training shall be provided to all construction personnel and supervisors who will have the potential to encounter and alter archaeological and paleontological resources on the project site and off-site transportation improvements. A copy of the worker environmental awareness training shall be provided to the County before construction activities begin. The	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		topics to be addressed in the worker environmental awareness training will include, at a minimum: ▶ types of cultural resources located on the project site, ▶ types of evidence that indicates cultural resources might be present (e.g., glass shards, lithic scatters), ▶ what to do if a worker encounters a possible resource, ▶ what to do if a worker encounters animal bones or possible human bones, and ▶ repercussions for removing or intentionally disturbing archaeological resources. **Mitigation Measure 3.4-1b: For All Ground-Disturbing Construction Activities, Halt Ground Disturbance upon Discovery of Subsurface Archaeological Features** If any precontact or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits are discovered during construction, all ground-disturbing activity within 100 feet of the resources shall be halted, and a qualified professional archaeologist shall be retained to assess the significance of the find. If the qualified archaeologist determines the archaeological material to be Native American in nature, the applicant and the County shall contact the appropriate Native American tribe(s) for their input on the preferred treatment of the find. If the find is determined to be significant by the archaeologist (i.e., because it is determined to constitute a unique archaeological resource), the archaeologist shall develop, and the applicant shall implement appropriate procedures to protect the integrity of the resource and ensure that no additional resources are affected. Procedures could include but would not necessarily be limited to preservation in place (which shall be the preferred manner of mitigating impacts on archaeological sites), archival research, subsurface testing, or contiguous block unit excavation and data recovery (when it is the only feasible mitigation, and pursuant to a data recovery plan).	
Impact 3.4-2: Disturb Human Remains Based on documentary research, no evidence suggests that any precontact or historic-period marked or un-marked human interments are present within or in the immediate vicinity of the project site. However, ground-disturbing construction activities could uncover previously unknown human remains. Compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 would make this impact less than significant.	LTS	No mitigation is required for this impact.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Energy			
Impact 3.5-1: Wasteful, Inefficient, or Unnecessary Consumption of Energy, During Project Construction or Operation Construction activities associated with the project would be temporary and would not increase long-term energy or fuel demand. Regarding operation, the project would, at minimum, comply with the energy efficiency requirements of both the 2025 CalGreen Code and the 2025 California Energy Code. Additionally, the project would include multiple design features to improve energy efficiency and prevent the wasteful or inefficient use of energy for building operations. Operational-phase mobile sources and landscape equipment are expected to account for 0.44 percent of countywide gasoline consumption and 0.0021 percent of state-wide gasoline consumption in 2027, while diesel-fuel mobile and stationary sources related to the project would account for 1.19 percent of the total diesel that would be used countywide and 0.0039 percent of the total diesel fuel that would be consumed state-wide in 2027. There are no unusual project characteristics that would require the use of gasoline, diesel, natural gas, or electricity that would be more energy intensive than is used for comparable activities, equipment, or vehicles that would not conform to current emissions standards (and related fuel efficiencies). This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.5-2: Conflict With or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency The proposed project would include energy efficiency features such as high-efficiency landscaping that would align with Objective 5.6.2 of the El Dorado County General Plan. The proposed project would also comply with all mandatory requirements for nonresidential land uses required in the 2025 California Energy Code (Title 24 Part 6) and the 2025 CALGreen Code (Title 24 Part 11) and would include several energy and water efficient features, on-site EV chargers, and 100 percent renewable electrical power as part of Costco's Clean Energy Contract with PG&E. Therefore, this impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Geology and Soils			
Impact 3.6-1: Loss, Injury, or Death Resulting from Seismic Hazards The county is identified as having relatively low potential for seismic activity and a review of published geologic maps, in the General Plan EIR and the Geotechnical Study confirm that project implementation is not likely to cause potential adverse	LTS	No mitigation is required for this impact.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
effects associated with strong seismic shaking. Construction and operation of the project would not exacerbate existing seismic hazards. Compliance with CBC requirements would ensure that potential adverse effects related to strong seismic shaking would be further minimized, such that the exposure of people or structures to hazards, risk of loss, injury or death resulting from rupture of a known earthquake fault or strong seismic shaking would be avoided or reduced. This impact would be less than significant.			
Impact 3.6-2: Result in Substantial Soil Erosion or the Loss of Topsoil Because of the natural topographical gradients of the project site and proposed construction grading activities, soil erosion from development of the project's residential uses may occur on the site. However, compliance with SWRCB's Construction General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit Order WQ 2022-0057-DWQ) and County Code of Ordinances Chapter 110.14 (Grading, Erosion, and Sediment Control) would ensure that impacts related to substantial erosion or the loss of topsoil during construction, operation, and maintenance would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.6-3: Be Located on Expansive Soil, Creating Substantial Direct or Indirect Risks to Life and Property or 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, Liquefaction, or Collapse As part of the County's project approval and review process, a geotechnical report has been prepared. Soil exploration and index testing analysis conducted for the Geotechnical Study observed low to moderate potential for expansion of soils. The project site is not located on an unstable geologic unit. Potential for slope instability is considered low given the elevation differential and shallow gradients on the site, and therefore the project site is not susceptible to landslides. Based on the types of soils present at the project site, the potential for liquefaction and lateral spreading is not considered a hazard at the project site. Additionally, the potential for seismic compression is considered low based on the soil density and composition on the site. Any recommendations from the Geotechnical Study related to soil compaction or unstable soils would be incorporated into the project. As a result, this impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.6-4: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature The project area is underlain by Jurassic and Triassic age metavolcanic rocks, primarily of marine origin, consisting of basaltic to andesitic breccias, flows, and tuffs, with minor sandstone and conglomerate. The lack of significant sedimentary deposits limits the potential for paleontological resources. Nevertheless, no comprehensive paleontological studies have been conducted in the county, and as a result, no information is available regarding the sensitivity of certain areas. As identified in the project site geotechnical investigations, the site consists of geologic conditions common in the region and does not contain unique geologic features. Although it is anticipated that the project does not contain unique paleontological resources, the potential to discover paleontological resources onsite still exists. Therefore, this impact is considered to be significant.	S	**Implement Mitigation Measure 3.4-1a: Develop and Implement a Worker Environmental Awareness Training** The applicant shall retain a qualified professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeologists to prepare a worker environmental awareness training. Training shall be provided to all construction personnel and supervisors who will have the potential to encounter and alter archaeological resources on the project site and off-site transportation improvements. A copy of the worker environmental awareness training shall be provided to the County before construction activities begin. The topics to be addressed in the worker environmental awareness training will include, at a minimum: ▶ types of cultural resources located on the project site, ▶ types of evidence that indicates cultural resources might be present (e.g., glass shards, lithic scatters), ▶ what to do if a worker encounters a possible resource, ▶ what to do if a worker encounters animal bones or possible human bones, and ▶ repercussions for removing or intentionally disturbing archaeological resources. **Mitigation Measure 3.6-4: Implement Procedures for the Inadvertent Discovery of Paleontological Resources** If any paleontological resources are encountered during development of the project (including off-site transportation improvements to the intersections of Silva Valley Parkway and Entrada Lane and White Rock Road and Valley View Parkway-Vine Street), the construction contractor shall ensure that all activities in the immediate area of the find are halted and that the applicant is informed. The applicant shall then retain a qualified paleontologist meeting the Secretary of the Interior's qualifications to evaluate the discovery, prepare a report evaluating the discovery, and include recommendations in the report pursuant to the guidelines established by the Society of Vertebrate Paleontology, including, if applicable, development and implementation of a paleontological resource impact mitigation program for treatment of the discovery.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Greenhouse Gas Emissions and Climate Change			
Impact 3.7-1: Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment Project-generated emissions of construction GHGs would be below PCAPCD's brightline threshold of 10,000 $MTCO_2e$. Operational emissions related to the project would exceed PCAPCD's 1,100 $MTCO_2e$/year de minimis threshold for project operations; however, the project's calculated operational efficiency metric would be below PCAPCD's efficiency matrix threshold for urban, non-residential projects. The project would not result in GHG emissions that would exceed PCAPCD thresholds during project construction or operation. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.7-2: Conflict With an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases The Proposed Project would include design features such as transportation infrastructure improvements, installation of EV chargers that meet CalGreen voluntary Tier 1 requirements, building-energy and water efficiency features, and employment opportunities near existing residential development and public transit, all of which support the GHG reduction goals of CARB's 2022 Scoping Plan Update, SACOG's 2020 MTP/SCS, or the El Dorado County RTP 2020-2040. Thus, the project would not conflict with the implementation of these plans and would include design features to support their GHG reduction goals. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Hazards and Hazardous Materials			
Impact 3.8-1: Create a Significant Hazard through Routine Transport, Use, or Disposal of Hazardous Materials or 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 Project construction activities and subsequent operations would involve hazardous materials. All hazardous materials used during construction and operation would be subject to the federal, state, and local requirements that provide protection measures to avoid impacts to the environment and public health. The Phase 1 ESA identified multiple concrete structures (including a pit and trough) where potential for dumping of hazardous materials may have occurred. In addition, construction	S	**Mitigation Measure 3.8-1: Require Soil Sampling If Stained Soil or Unusual Soil Odor Is Encountered During Removal of On-Site Concrete Structures and Construction of Off-Site Improvements** If stained soils or unusual soil odors are encountered, halt work conditions would be implemented on the portions of the area with stained or odorous soils and a qualified geotechnical soils engineer shall conduct soil sample testing to confirm if there are any constituents that exceed established screening level thresholds. If any screening level thresholds are exceeded, the applicant shall coordinate with the County and other applicable regulatory agencies (e.g., RWQCB and DTSC) to remediate the extent of soil contamination until such contamination is below all acceptable constituent screening levels.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
of off-site roadway improvements may encounter unknown hazardous materials. This impact would be significant.			
Impact 3.8-2: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25-Miles of an Existing or Proposed School The Oak Meadow Elementary School is located adjacent and northwest of the project site. In addition, as part of warehouse retail operations and the proposed fuel facility, the project would transport hazardous materials within 0.25-miles of Oak Meadow Elementary School. Nevertheless, the handling and transportation of hazardous materials during construction would be subject to the requirements of the USDOT, CHP, and EDCAQMD, which would minimize the potential for the project to result in emitting hazardous emissions or acutely hazardous materials, substances, or waste within 0.25-miles of an existing or proposed school. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.8-3: For a Project Located within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, within 2 Miles of a Public Airport or Public Use Airport, Would the Project Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Project Area The project site is not located within 2 miles of a public airport or public use airport. The nearest airport is the Cameron Park Airport, 3.8 miles northeast of the project site. Because of this distance, the project site is not located within any ALUCP. Therefore, construction and operation of the project is not anticipated to be exposed to a safety hazard or excessive noise. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Hydrology and Water Quality			
Impact 3.9-1: Violate Water Quality Standards or Waste Discharge Requirements Construction activities would involve grading, movement of soil, and blasting, which could result in erosion and sedimentation, and discharge of other nonpoint source pollutants in onsite stormwater that could then drain to off-site areas and degrade local water quality. In addition, the project would include fuel storage and dispersal, and tire maintenance that could generate stormwater pollutants including oils, lubricants, and heavy metals. The project would be required to implement a SWPPP and associated BMPs to control erosion, reduce sedimentation and turbidity of surface runoff, and provide leak and spill protection	LTS	No mitigation is required for this impact.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
for heavy equipment and hazardous material use. During operation, the project would be required to implement BMPs and low-impact development (LID) measures in accordance with existing State and El Dorado County regulations, including the Grading Ordinance, the Design Manual, the Drainage Manual, and the West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan. Impacts would be less than significant.			
Impact 3.9-2: Substantially Alter Existing Drainage Patterns of the Project Site Such That Substantial Erosion and Siltation Would Occur Construction of the project would include earth-disturbing activities that have the potential to result in soil erosion during excavation, grading, and trenching. The project would add impervious surface to the currently undeveloped project site. Implementation of the project would be subject to existing regulations pertaining to construction erosion control BMPs and post-construction stormwater runoff control, including the County's Grading Ordinance, the County SWMP's Construction Site Runoff Control Program, NPDES Construction General Permit, County's Design Manual, and MS4 permit requirements. Compliance with existing regulations would ensure that the impacts associated with soil erosion and siltation would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.9-3: Substantially Alter Drainage Patterns of the Project Site Such That Flooding On-Site or Off-Site Would Occur, or Flood Flows Would Be Impeded or Redirected Project components such as the warehouse and paved parking areas would alter surface drainage patterns as a result of adding impermeable surface and altering flow patterns that could yield increased amounts of stormwater runoff resulting in on-site or off-site flooding. However, the Storm Drainage Study prepared for the project concluded that the proposed drainage facilities incorporated into the project design would be sufficient to manage stormwater runoff on-site and would not result in adverse impact to downstream channels. The project would also not impede or redirect flood flows because the project is not located in flood hazard zone and the surface water flow would be managed by the proposed drainage facilities. Therefore, the impacts related to flooding on-site or off-site and impeding or redirecting flood flows would be less than significant.	LTS	No mitigation is required for this impact.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.9-4: Conflict with or Obstruct Implementation of a Water Quality Control Plan The Basin Plan implemented by the Central Valley RWQCB is a master policy document for managing water quality in the region. Carson Creek located south of the project site is a tributary to Deer Creek, which is identified in the Basin Plan with various beneficial uses. Implementation of the project would not use mercury containing materials and would not violate water quality standards as discussed in Impact 3.9-1. Therefore, the impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Land Use and Planning			
Impact 3.10-1: Cause a Significant Environmental Impact Because of a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect The project would not alter or conflict with General Plan land use policy provisions and would be consistent with the SACOG 2020 MTP/SCS. The project would not conflict with County land use policies adopted for the purposes of avoiding or mitigating an environmental effect. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Noise and Vibration			
Impact 3.11-1: Project-Related Short-Term Construction Noise Impacts at Nearby Noise-Sensitive Receptors Most noise-generating construction activity would be performed during daytime hours (i.e., between 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends and holidays) when construction noise is exempt from County noise standards pursuant to Section 130.37.020 of the County Code. However, nighttime construction activity would be required for the Costco project on the South Site during non-exempt hours (i.e., between 7:00 p.m. and 7:00 a.m. Monday through Friday and 5:00 p.m. and 8:00 a.m. on weekends). Hourly construction noise levels at the nearest sensitive receptors would reach 72.6 dBA L_{eq} during daytime construction activities and 57.9 dBA L_{eq} during nighttime construction (i.e., concrete pours). Construction noise levels would not exceed the FTA daytime residential construction noise standard (i.e., 90 dBA L_{eq}) or result in in daytime noise levels at NR-SR 2 (i.e., Oak Meadow Elementary School) that could result in adverse effects to the interior operation of educational buildings. However, construction noise would result in a substantial increase in nighttime noise levels at nearby residential receptors (i.e., R-SR 3 and R-SR 4) that could result in adverse health effects (e.g., sleep disruption). Construction of future	S	**Mitigation Measure 3.11-1a: Implement Measures to Reduce Exposure of Noise-Sensitive Receptors to Construction-Generated Noise from the North Site Remainder Area** To minimize noise levels generated by construction activities, the North Site Remainder Area applicants shall require the construction contractor(s) to implement the following, or equally effective measures, to reduce noise during daytime and nighttime construction: ▶ All construction equipment and material staging areas shall be set back as far as possible from nearby off-site noise-sensitive receivers, including but not limited to the residences near Village Green Drive, Mertola Drive, and Oak Meadow Elementary School near Silva Valley Parkway. ▶ All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer specifications. Equipment engine shrouds shall be closed during equipment operation. ▶ Prohibit the idling of construction equipment for extended periods of time in the vicinity of sensitive receptors.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
development of the North Site Remainder Area could also generate significant construction noise impacts on nearby receptors. Therefore, this impact is significant.		▶ Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors). ▶ Construction equipment with back-up alarms shall be equipped with either audible self-adjusting backup alarms or alarms that only sound when an object is detected. Self-adjusting backup alarms shall automatically adjust to 5 dB over the surrounding background levels. All non-self-adjusting backup alarms shall be set to the lowest setting required to be audible above the surrounding noise levels. ▶ The contractor shall designate a disturbance coordinator and post that person's telephone number conspicuously around the construction site and provide it to nearby residences. The disturbance coordinator shall receive all public complaints and be responsible for determining the cause of the complaint and implementing any feasible measures to alleviate the problem. **Mitigation Measure 3.11-1b: Implement Measures to Reduce Exposure of Noise-Sensitive Receptors to Nighttime Construction Noise** The Costco project shall implement or incorporate the following construction noise reduction measures into construction specifications for construction contractor implementation during nighttime project construction: ▶ Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors). ▶ Construction equipment with back-up alarms shall be equipped with either audible self-adjusting backup alarms or alarms that only sound when an object is detected. Self-adjusting backup alarms shall automatically adjust to 5 dB over the surrounding background levels. All non-self-adjusting backup alarms shall be set to the lowest setting required to be audible above the surrounding noise levels. ▶ The contractor shall designate a disturbance coordinator and post that person's telephone number conspicuously around the construction site and provide it to nearby residences. The disturbance coordinator shall receive all public complaints and be responsible for determining the cause of the complaint and implementing any feasible measures to alleviate the problem. ▶ Stationary noise sources such as generators or pumps shall be located as far away from noise-sensitive uses as feasible. ▶ Individual operations and techniques shall be replaced with quieter procedures (e.g., mixing concrete off-site instead of on-site, using electric-powered	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		equipment instead of pneumatic or internal combustion powered equipment) where feasible. ▶ All motorized construction equipment shall be shut down when not in use to prevent idling. ▶ Notify residents and occupants within 500 feet of the project construction area at least 30 days in advance of anticipated times when construction noise levels are anticipated to exceed evening or nighttime noise limits established in the noise element of the general plan or noise ordinance. ▶ For construction activity that would occur within 1,300 feet of adjacent off-site sensitive receptors (i.e., R-SR 3, R-SR 4), temporary sound barriers to attenuate noise, such as temporary noise curtains, sound walls, or similar products that provide a barrier to attenuate construction noise, shall be installed. The temporary sound barrier shall be located between the project construction noise sources and receptors to shield the receptors from construction noise. When installed properly, acoustic barriers can reduce construction noise levels by approximately 10 dB (NCHRP 1999). The installation of any temporary sound barrier shall meet all the following criteria: ▪ Be installed as close as feasible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s); ▪ Shall consist of durable, flexible composite material featuring a noise barrier layer bound to sound-absorptive material on one side; and ▪ Shall consist of rugged, impervious material with a surface weight of at least one pound per square foot, such that a minimum of 10 dBA reduction is achieved on the receiving side of the sound barrier.	
Impact 3.11-2: Exposure of Existing Sensitive Receptors to Excessive Traffic Noise Levels Project operation would result in an increase in traffic volumes along project-affected roadways, resulting in long-term permanent increases in traffic noise. Traffic noise modeling was conducted for the existing and the existing-plus-project conditions on weekdays and weekends. Based on modeling conducted and applicable County standards, project-generated traffic volumes would exceed the threshold for substantial traffic noise increase along two roadway segments (i.e., Silva Valley Parkway between US 50 Westbound Ramps and future Country Club Drive, and White Rock Road between US 50 Eastbound Ramps and Clarksville Crossing). However, there are no existing sensitive receptors along these roadway	LTS	No mitigation is required for this impact.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
segments and the nearest sensitive receptors would not be exposed to traffic noise levels that exceed the applicable County exterior noise standard for sensitive uses (i.e., 60 dBA Ldn). In addition, future development along the North Site Remainder Area would not result in a doubling of traffic volumes along the surrounding roadway network and thus would not result in a substantial increase (e.g., 3+ dBA) in traffic noise. For these reasons, this impact would be less than significant.			
Impact 3.11-3: Exposure of Existing Sensitive Receptors to Long-Term Stationary Noise Sources The project would involve new noise-generating activities and the long-term operation of new noise sources that could expose existing off-site receptors to excessive noise levels. New operational noise sources would include HVAC units, backup generators, the use of trucks at loading docks, and parking lots. Based on noise attenuation modeling using reference noise levels for these noise sources, the operation of the project would not exceed applicable noise standards at existing residential receptors or expose off-site sensitive receptors to permanent substantial increases in noise. Therefore, this impact is less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.11-4: Exposure of Persons to or Generation of Excessive Construction Vibration Construction activity associated with the project would generate short-term increases in vibration near existing sensitive receptors. Based on the distance between the equipment anticipated to be used during project construction and the location of nearby structures and sensitive receptors, vibration levels could exceed applicable thresholds with respect to structural damage and human annoyance. Therefore, this impact would be significant.	S	**Mitigation Measure 3.11-4: Develop and Implement a Vibration Control Plan for Subsequent Developments in the North Site Remainder Area** A vibration control plan shall be developed by the project applicant, in consultation with an acoustic professional, that demonstrates with substantial evidence based on finalized project-specific construction parameters (e.g., specific equipment profiles, location of construction activities, duration of activities), that vibration would not exceed the applicable thresholds of 0.20 in/sec PPV at nearby structures and 80 VdB at sensitive land uses. The plan shall be submitted to El Dorado County for approval prior to the issuance of construction permits. To assess and, when needed, reduce vibration impacts from construction activities on the North Site Remainder Area, the following measures shall be implemented: ▶ The vibration control plan shall consider all potential vibration-inducing activities that would occur within 300 feet of an existing sensitive receptor and include various measures, setback distances, precautions, monitoring programs, and alternative methods to vibration intensive activities with the potential to result in adverse impacts to sensitive receptors. The following vibration control measures (or other equally effective measures) shall be included in the plan:	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▪ All construction activity shall be limited to daytime hours between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. on weekends in accordance with Section 130.73.020. ▪ To prevent disturbance for sensitive land uses, minimum setback requirements the use of vibration-intensive equipment shall be established based on the proposed activities and locations, once determined. Established setback requirements (e.g., 97 feet) can be breached only if a site-specific ground vibration study conducted by a qualified geotechnical engineer or ground vibration specialist indicates that the buildings would not be exposed to ground vibration levels in excess of 80 VdB and ground vibration measurements performed during the construction activity confirm that the buildings are not being exposed to levels in excess of 80 VdB. ▪ To prevent structural damage, minimum setback requirements for different types of ground vibration producing activities (e.g., impact pile driver) shall be established based on the proposed activities and locations, once determined. Factors to be considered include the specific nature of the vibration producing activity (e.g., type and duration of pile driving), local soil conditions, and the fragility/resiliency of the nearby structures. Established setback requirements (e.g., 26 feet) can only be breached if a project-specific, site-specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage would occur at nearby buildings or structures. ▪ Operate all vibration-inducing impact equipment as far away from vibration-sensitive sites as reasonably possible from nearby structures and vibration-sensitive uses. ▪ Phase high-impact activities as to not to occur simultaneously with other construction activities. ▪ Vibration levels from pile driving shall be monitored and documented at the nearest sensitive land use to document that applicable thresholds are not exceeded. Recorded data shall be submitted to the County within 48 hours of measurements. If it is found at any time that thresholds are exceeded, pile driving shall cease in that location, and methods shall be implemented to reduce vibration to below applicable thresholds, or an alternative pile installation method shall be used at that location.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Population and Housing			
Impact 3.12-1: Induce Substantial Unplanned Population Growth in an Area, Either Directly or Indirectly The proposed project would consist of commercial uses and would not create new housing, but could generate approximately 616 employees consistent with the site General Plan land use designations and zoning as well as projected job growth for the El Dorado Hills Community Region. The site is also part of assumed areas of development within the SACOG 2020 MTP/SCS. As such, the employment growth increase associated with the project is considered to be within the County's projected increase and no substantial unplanned population growth would occur. Therefore, this impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Public Services and Recreation			
Impact 3.13-1: Result in Increased Demand for Fire Protection Facilities and Services The project site is in a suburban area of El Dorado County that would require annexation to the service area of the EDHFD. Because the project (including the proposed Costco warehouse and fuel station) would serve the existing population rather than introducing new residents, it would not substantially increase demand for fire protection services beyond planned service levels. Consequently, no new or physically altered fire protection facilities would be needed to maintain acceptable service ratios or response times. The project would be required to comply with all applicable County, State, and EDHFD fire protection requirements, and would pay the development fees that help fund fire services. Therefore, the impact on fire protection services would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.13-2: Result in Increased Demand for Law Enforcement Protection Facilities and Services Because the proposed commercial development would serve the existing population and would not introduce new residential units or otherwise increase population in El Dorado Hills, no new or altered law enforcement facilities would be required to maintain acceptable service ratios or response times. Consequently, the project would not result in any physical environmental impacts related to construction of new police facilities. Therefore, impacts to law enforcement services would be less than significant.	LTS	No mitigation is required for this impact.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Transportation			
Impact 3.14-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities The project would be consistent with established EDCTC and County policies and plans related to the circulation system. Implementation of the project would not significantly alter the physical transportation network surrounding the project site such that existing and planned transit, roadway, bicycle, and pedestrian facilities would be adversely affected. In addition, the project would include the construction of frontage improvements that would include sidewalk and onsite pedestrian paths in accordance with County General Plan policies. Development of the North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development. Although the specific types of commercial uses are currently unknown, future development would be subject to County policies and plans, and thus would not conflict with a program, plan, ordinance, or policy addressing transit, roadway, bicycle, or pedestrian facilities. For these reasons, this impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.14-2: Conflict with or Be Inconsistent with State CEQA Guidelines Section 15064.3(b) Regarding Vehicle Miles Traveled The Costco project would result in a net increase of 21,123 daily VMT when compared to existing conditions, and development of the North Site Remainder Area would result in 11,462 VMT. Thus, implementation of the project and development of the North Site Remainder Area would exceed the threshold of no net increase in regional VMT. Implementation of identified mitigation measures would assist to reduce the extent of VMT impacts. However, it is not possible to determine if VMT associated with future commercial development of the Costo project and the North Site Remainder Area would be reduced below the County's threshold. This impact would be significant and unavoidable.	SU	**Mitigation Measure 3.14-2a: Provide a Mandatory Commute Reduction Program for Costco Employees** Costco shall provide a Mandatory Commute Reduction Program for employees and must include all of the following measures as described in the California Air Pollution Control Officers Association Handbook for Analyzing GHG Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity: ▶ Commute Trip Reduction Marketing: Costco shall develop and implement a marketing strategy to promote a commute reduction program. The following features (or similar alternatives) shall be provided: ▪ on-site or online commuter information services, ▪ employee transportation coordinators, and ▪ guaranteed ride home service. ▶ Provide Ridesharing Program: Costco shall develop and implement a ridesharing program. The following strategies provide examples of a multifaceted approach for promoting a rideshare program: ▪ designating a certain percentage of desirable parking spaces for ridesharing vehicles,	SU

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▪ designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles, and ▪ providing an app or website for coordinating rides. ▶ Provide End-of-Trip Bicycle Facilities: Costco shall install and maintain end-of-trip bicycle facilities for employee use. End-of-trip facilities include bike parking, bike lockers, showers, and personal lockers. **Mitigation Measure 3.14-2b: Implement Pedestrian Network Improvements** Costco shall provide pedestrian network improvements near the site, constructing sidewalks along the project frontage on Clarksville Crossing and Silva Valley Parkway. In addition, Costco shall construct sidewalks north of the project frontage on the east side of Silva Valley Parkway to connect to existing sidewalk near Oak Meadow Elementary School, thereby providing connectivity with the surrounding neighborhood. **Mitigation Measure 3.14-2c: Develop a TDM Program and Implement VMT Reduction Measures for Subsequent Developments in the North Site Remainder Area** Each project applicant of future proposed projects located within the North Site Remainder Area shall either demonstrate through a technical analysis that its project would not exceed County VMT thresholds or shall implement VMT-reducing infrastructure and/or strategies within the commercial facility to mitigate those impacts. If VMT thresholds are exceeded, the applicant shall prepare and submit a Transportation Demand Management (TDM) Plan to the County for approval, which shall include a series of measures to reduce project-related VMT. Measures may include strategies such as ridesharing initiatives (e.g., carpooling), subsidizing employee use of public transit, and promoting bicycling, walking, and the use of public transit. The TDM Plan shall be subject to the County's review and approval, and no development shall proceed until the TDM Plan is deemed acceptable to the County. **Mitigation Measure 3.14-2a: Provide a Mandatory Commute Reduction Program for Costco Employees** ▶ Commute Trip Reduction Marketing: Commute trip reduction marketing would result in an estimated up to 4 percent employee VMT reduction. Information sharing and marketing promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, walking, and biking, thereby reducing VMT.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▶ Provide Ridesharing Program: Ridesharing programs are estimated to result in up to 8 percent employee VMT reduction. Ridesharing encourages carpooled vehicle trips in place of single-occupancy vehicle trips, thereby reducing the number of trips and VMT. ▶ Provide End-of-Trip Bicycle Facilities: Bicycle facilities are estimated to result in up to 4.4 percent employee VMT reduction. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing VMT. **Mitigation Measure 3.14-2b: Provide Pedestrian Network Improvements** The implementation of pedestrian network improvements is estimated to result in up to 6.4 percent employee VMT reduction. **Mitigation Measure 3.14-2c: Develop a TDM Program and Implement VMT Reduction Measures for Subsequent Developments in the North Site Remainder Area** The VMT reduction associated with implementation of this measure is currently unknown due to the lack of detail on development within the North Site Remainder Area. Implementation of Mitigation Measures 3.14-2a and 3.14-2b would reduce employee trips by requiring Costco to share information about travel choices with employees, develop and implement a ridesharing program, and provide pedestrian facilities and end-of-trip bicycle facilities for employee use. However, employee trips only account for 3,825 daily VMT, which is approximately 18 percent of the project's total daily VMT. For illustrative purposes, the maximum reductions associated with Mitigation Measures 3.14-2a and 3.14-2b were summed and could achieve up to a 22.8 percent reduction in project employee commute VMT. Implementation of the mandatory commute reduction program for Costco employees with 100 percent employee participation and the implementation of pedestrian network improvements would decrease employee VMT by 872, therefore, reducing employee VMT to 2,953 with mitigation. Although Mitigation Measures 3.14-2a and 3.14-2b would reduce employee VMT, the primary source of daily VMT is driven by warehouse shopping by Costco members. The nature of the Costco land use and business model is auto oriented as members purchase items in bulk at Costco facilities, thus making walking, biking, or transit trips to the warehouse retail building impractical. Therefore, even with the implementation of Mitigation Measures 3.14-2a and 3.14-2b, the project would result in a net increase to regional VMT. Implementation of Mitigation Measure 3.14-2c would require the	

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		project applicants proposing development in the North Site Remainder Area to conduct project level VMT analyses and, if needed, to develop a TDM plan and implement strategies to reduce VMT associated with commercial development. However, due to the programmatic level of this analysis and lack of project details, it is currently unknown whether VMT associated with future development could be mitigated to a less-than-significant impact. For these reasons, this impact would be significant and unavoidable.	
Impact 3.14-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Uses The project would involve the construction of a new commercial use on the project site. Project applicants would be required to obtain encroachment and transportation permits for oversized vehicles prior to the initiation of project construction. The County standard permit conditions require a traffic control plan to be prepared in accordance with CA MUTCD and Caltrans Standard Plans. The CA MUTCD identifies the necessary traffic control measures that project contractors should provide to minimize transportation hazards and ensure the safety of the traveling public. The project and future development would be required to comply with applicable roadway design standards and regulations, including off-site improvement standards for all modes of transportation. In addition, the project plans would be subject to review by the County to ensure that applicable design standards and regulations are met to minimize transportation hazards during project operations. For these reasons, the project would not substantially increase transportation hazards due to a design feature or incompatible use. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.14-4: Result in Inadequate Emergency Access The Costco project and future development within the North Site Remainder Area would be designed and constructed in accordance with the standards and regulations identified in the CFC as adopted by the El Dorado Hills Fire Department, including provisions to maintain emergency access during construction and operations. For these reasons, implementation of the project would not result in inadequate emergency access. This impact is less than significant.	LTS	No mitigation is required for this impact.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Tribal Cultural Resources			
Impact 3.15-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource Although consultation did not result in the identification of any tribal cultural resources, ground-disturbing activities could damage or destroy previously unknown tribal cultural resources. Therefore, impacts to tribal cultural resources is considered to be significant.	S	**Mitigation Measure 3.15-1a: Prepare and Implement a Worker Cultural Awareness and Sensitivity Training for Tribal Cultural Resources** Prior to project-specific ground-disturbing activities, the applicant/Contractor shall provide a Tribal Cultural Resources Awareness and Sensitivity Training (training) for all personnel involved in project construction, including field consultants and construction workers, at their own expense. The training shall be developed in coordination with Native American Tribes that have participated in consultation on this project. The training shall be conducted before any project-related ground disturbing or construction activities begin at the project site. The training will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The training will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American Tribal values. All ground-disturbing equipment operators shall be required to receive the training and sign a form that acknowledges receipt of the training. Mitigation Measure 3.15-1a shall be included as a note on any project Improvement Plans subject to review and approval by the El Dorado County Planning and Building Department. **Mitigation Measure 3.15-1b: Tribal Monitoring: Initial Ground Disturbance** The project proponent or their construction contractor shall comply with the following measure to assist with identification of TCRs at the earliest possible time during project-related earthmoving activities: ▶ The project proponent shall contact the UAIC THPO (thpo@auburnrancheria.com) at least 2 to 3 months prior to project ground-disturbing activities to retain the services of a UAIC Certified Tribal Monitor(s).	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		The duration of the construction schedule and Tribal Monitoring shall be determined at this time. ▶ A contracted UAIC Certified Tribal Monitor(s) shall monitor the initial ground disturbance in the project area. If there are cultural finds, the UAIC THPO may require additional Tribal Monitoring. ▶ Tribal Monitors or Tribal Representatives shall have the authority to direct that work be temporarily paused, diverted, or slowed within 100 feet of the immediate impact area if sites, cultural soils, or objects of potential significance are identified. The temporary pause/diversion shall be of an adequate duration for the Tribal Representative to examine the resource. ▶ Appropriate treatment of TCRs or other cultural finds may include but is not limited to: a. Recordation of the resource(s) b. Avoidance and preservation of the resource(s) c. Recovery and reburial of the resource(s) onsite or in a feasible off-site location in a designated area subject to no future disturbance. The location of the reburial shall be acceptable to the UAIC. ▶ To track the implementation of this measure, the Tribal Monitor(s) shall document field-monitoring activities on a Tribal Monitor log. ▶ The Tribal Monitor(s) shall wear the appropriate safety equipment while on the construction site. ▶ The Tribal Monitor, in consultation with the UAIC THPO and the project proponent shall determine a mutual end or reduction to the on-site monitoring if/when construction activities have a low potential for impacting Tribal Cultural Resources. ▶ In the event the Tribal Monitor does not report to the job site at the scheduled time after receiving 24-hour business day notice, construction activities may proceed without tribal monitoring. At no time, regardless of the presence or absence of a Tribal Monitor, shall suspected TCRs be mishandled or disrespected. ▶ The County of El Dorado shall assist with resolution of disagreements between the project proponent/contractor and the Tribe if such occurs on the project.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Mitigation Measure 3.15-1b shall be included as a note on any project Improvement Plans subject to review and approval by the El Dorado County Planning and Building Department. **Mitigation Measure 3.15-1c: Unanticipated Discoveries of Tribal Cultural Resources** During any ground-disturbing activities, including construction, if any suspected Tribal Cultural Resources (TCRs) or resources of cultural significance to any culturally affiliated Tribe, including but not limited to features, anthropogenic/cultural soils, cultural belongings or objects (artifacts), shell, bone, shaped stones or bone, or ash/charcoal deposits, are discovered by any person during construction activities, including ground disturbing activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work shall cease in and within the immediate vicinity of the find regardless of whether the construction is being actively monitored by a Tribal Monitor, cultural resources specialist, or professional archaeologist. A Tribal Representative and the County of El Dorado shall be immediately notified, and the Tribal Representative in coordination with the County of El Dorado shall determine if the find is a TCR (PRC §21074) and the Tribal Representative shall make recommendations for further evaluation and treatment as necessary. <u>Treatment and Documentation</u> The culturally affiliated Tribe shall consult with the County of El Dorado to (1) identify the boundaries of the new TCR and (2) if feasible, identify appropriate preservation in place and avoidance measures, including revision or adjustments to the existing construction process, and long-term management, or (3) if avoidance is infeasible, a reburial location in proximity of the find where no future disturbance is anticipated. Permanent curation of TCRs will not take place unless approved in writing by the culturally affiliated Tribe. The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of TCRs that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the TCR and can range from a small lock box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored. The construction contractor(s) and the County of El Dorado shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		a reburial location that is consistent with the Tribe's preferences, excavation of the reburial location, and assisting with the reburial, upon request. Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 2 weeks of the discovery and submitted to the appropriate California Historical Resource Information System (CHRIS center in a timely manner. Work at the discovery location shall not resume until authorization is granted by the County of El Dorado in coordination with the culturally affiliated Tribe. If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the County Coroner and the culturally affiliated Tribe shall be contacted immediately. Upon determination by the County Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will work with the project proponent to define appropriate treatment and disposition of the burials. Mitigation Measure 3.15-1c shall be included as a note on any project Improvement Plans subject to review and approval by the El Dorado County Planning and Building Department.	
Utilities and Service Systems			
Impact 3.16-1: Significant Environmental Effects from the Relocation or Construction of New or Expanded Utility Infrastructure The project would involve development of commercial uses on vacant land. The extension of existing utility infrastructure in the vicinity of the project site would be required to serve the water, sewer, stormwater drainage, electricity, telecommunications, and natural gas requirements for the overall project site. Connections to existing infrastructure would occur within new paved areas of Silva Valley Parkway and Clarksville Crossing along the project site's frontage. The environmental impacts associated with the extension of existing utility infrastructure are evaluated and disclosed in Sections 3.1 through 3.16 of this EIR because this work would be part of the grading and construction phases of the Costco project on the North Site and South Site. No additional utility infrastructure would be needed off site to adequately serve the overall project site. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 3.16-2: Sufficient Water Supplies Available to the Serve the Project The project would involve development of commercial uses on vacant land, which would be annexed into EID's service area. According to a FIL provided by EID to the applicant on June 10, 2025, the Costco project would require approximately 20.7 EDUs of water supply. The North Site Remainder Area could require approximately 86.3 EDUs of water supply, depending on the types of commercial uses that are proposed for future development. As of January 2022, there were approximately 16,910 EDUs of water supply available in El Dorado Hills Water Supply Region. EID determined in its 2020 UWMP that its water supply portfolio is capable of meeting water demand in its service area in normal, single dry, and consecutive dry years from 2020 through 2045. The parcels that encompass the project area were considered in the water demand projections for the UWMP. Construction-related water use for activities such as dust control and concrete mixing would be temporary and would not represent an ongoing commitment by EID. Therefore, this impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.16-3: Adequate Wastewater Treatment Capacity The project would involve development of commercial uses on vacant land, which would be annexed into EID's service area. The Costco project would require approximately 12.7 EDUs of sewer service and the North Site Remainder Area could require approximately 83.4 EDUs of sewer service, depending on the types of commercial uses that are proposed for future development. EID provided a FIL to the applicant on June 10, 2025, which confirmed that adequate wastewater treatment capacity is currently available to serve the project. EID is evaluating upgrades to the existing wastewater collection and treatment system; however, these upgrades would be necessary to accommodate future growth in the service area independently of the project. This impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.16-4: Generate Excess Solid Waste, Impair Attainment of Solid Waste Reduction Goals, or Fail to Comply with Regulations Related to Solid Waste The Costco project would generate small amounts of construction debris and, once operational, approximately 2,368 pounds of solid waste per day. The North Site Remainder Area is assumed to include approximately 138,000 square feet of future development, which has potential to generate up to 2,970 pounds of solid waste per day. This solid waste would represent a small percentage of the maximum daily throughput and permitted capacity of existing solid waste disposal facilities. The overall project would adhere to all State requirements and County	LTS	No mitigation is required for this impact.	LTS

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
ordinances that govern waste management, including requirements for construction and demolition debris recycling, solid waste diversion, mandatory commercial recycling and organic waste disposal, and hazardous materials disposal. The project would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure; impair the attainment of solid waste reduction goals; or conflict with federal, State, and local management and reduction statutes and regulations related to solid waste. This impact would be less than significant.			
Wildfire and Evacuation			
Impact 3.17-1: Physically Interfere with or Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan All development proposed for the project would be designed, constructed, and maintained to comply with applicable local, regional, state, and/or federal requirements related to emergency access, fire protection, and evacuation. The project would not impair implementation of or physically interfere with the El Dorado County Emergency Operations Plan or the county hazard mitigation plans, as it would not have any effect on the framework or procedural guidance in these plans or otherwise affect plans for wildfire mitigation or preparedness. Therefore, the project would not interfere with adopted emergency response plans and the impact would be less than significant.	LTS	No mitigation is required for this impact.	LTS
Impact 3.17-2: Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury or Death Involving Wildland Fires, or Exacerbate Wildfire Risks due to Slope, Prevailing Winds, and Other Factors, and Thereby Expose Project Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire The project site is located entirely within a CAL FIRE-designated Moderate Fire Hazard Severity Zone. During operation, the project would incorporated requirements set forth under the CBC and CFC, which includes defensible space requirements, noncombustible building materials, and interior sprinklers. The Costco project FSP evaluates potential impacts resulting from wildland fire hazards and identifies measures to address these hazards. However, wildfire hazards could occur, especially under construction activities. This impact would be significant.	S	**Mitigation Measure 3.17-2: Implement Fire Prevention Measures for Construction of the Costco Project, Off-Site Roadway Improvements, and North Site Remainder Area** The following requirements shall be a requirement during construction and will be identified on building, grading, and construction plans for the Costco project, off-site roadway improvements, and the North Site Remainder Area. These requirement will be incorporated into future fire safe plans prepared for future development of the North Site Remainder Area. <u>Smoking</u> ▶ Smoking shall be prohibited except in approved areas. A designated smoking area where smoking is permitted will be signed. <u>Combustible Debris, Rubbish, and Waste</u> ▶ Combustible debris shall not be left in structures.	LTS

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▶ Combustible Debris, Rubbish, and Waste shall be removed from buildings at the end of each work shift. ▶ Rubbish containers shall be constructed of noncombustible materials or materials that meet a peak rate of heat release not exceeding 300 kW/m2 when tested in accordance with ASTM E1354. ▶ Combustible Debris, Rubbish, and Waste shall not be disposed of by burning on the site. Electrical ▶ Temporary wiring for electrical power and lighting shall comply with the California Electrical Code. Storage of Flammable and Combustible Liquids and Gases ▶ Storage of flammable and combustible liquids and gases shall be in accordance with CFC Section 5704 and Chapter 58. ▶ Flammable and combustible liquids and materials storage areas shall be maintained clear of combustible vegetation and waste materials. ▶ Sources of ignition and smoking shall be prohibited in flammable and combustible liquid and gas storage areas. Vehicles and Equipment ▶ When not in use, project vehicles and equipment shall be parked in a designated parking or storage area with at least 30 feet of separation between the parking area and any unmanaged flammable vegetation. ▶ Vehicle and equipment fueling shall be conducted in designated locations and at least 10 feet from combustible debris or building material storage areas. ▶ Vehicle and equipment fueling and servicing areas shall be located at least 30 feet from any hot work areas. Access for Firefighting ▶ Fire Apparatus access for firefighting shall be provided to all construction and demolition sites. ▶ Fire Apparatus access for firefighting shall be provided within 100 feet of temporary or permanent fire department connections, including fire hydrants. ▶ Fire Apparatus access must be maintained until fire apparatus access roads are available.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		▶ Fire Apparatus access roads shall be at least 15 feet wide and have a vertical clearance of 13 feet 6 inches. ▶ Fire Apparatus access roads shall be of an all-weather surface capable of supporting a minimum of 75,000 lbs. gross vehicle weight (minimum of 3 inches of AC over 8 inches of Compacted AB rock). ▶ Fire Apparatus access roads shall be designed to meet turning radius requirements of forty (40) feet inside and fifty-six (56) feet outside. ▶ Any dead-end roadway in excess of 150 feet in length shall be provided with not less than a fifty-six (56) foot outside turning radius. ▶ Key boxes would be provided as required by CFC Chapter 5. ▶ As soon as construction begins, Fire Department access roads shall be provided for both the North and South sites. <u>Water Supply</u> ▶ An approved water supply, either temporary or permanent, shall be available for firefighting as soon as combustible building materials arrive on-site. The water supply during the project construction shall provide a minimum flow rate of 500 gallons per minute. The fire hydrant that provides this fire flow shall be within 500 feet of the combustible materials and adjacent to a fire apparatus access road. <u>Red Flag Warning Protocol</u> ▶ The National Weather Service issues Red Flag Warnings, indicating that conditions are such that wildfire ignitions and spread may occur (e.g., low humidity, high winds). The Red Flag Warning protocol is intended to raise on-site construction crews' awareness of the fire danger and limit activities that pose a high risk of igniting a wildfire. During Red Flag Warning or Watch periods, no hot work or open flames shall be performed unless the El Dorado Hills Fire Department has been consulted to discuss the type of hot work activity and what precautions would be provided. Other construction, operation, maintenance, and decommissioning activities may proceed during these periods under heightened awareness conditions. ▶ To ensure compliance with Red Flag Warning restrictions, the National Weather Service website shall be monitored daily during normal conditions or 2 to 3 times a day during Red Flag Warnings at the project site during construction and decommissioning.	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Off-Site Roadway Improvements ▶ Construction activities associated with off-site transportation improvements identified in Chapter 2, "Project Description," shall be required to comply with current Fire Code provisions required by the El Dorado Hills Fire Department and CAL FIRE (e.g., CCR Title 24 – Part 9 [California Fire Code]). These provisions address handling of flammable and combustible liquids, portable generators, fire reporting, access for emergency vehicles, water supply for fire protection, and portable fire extinguishers.	
Impact 3.17-3: Require the Installation or Maintenance of Associated Infrastructure that May Exacerbate Fire Risk or the May Result in Temporary or On-Going Impacts to the Environment Defensible space would be established around the structures for the Costco project and future development of the North Site Remainder Area, consistent with California Public Resources Code 4291 and El Dorado Hills Fire Department standards (#W-001 and # W—002). The Costco project Fire Safe Plan includes biological survey recommendations prior to vegetation management activities. Construction of off-site roadway improvements would be required to comply with current Fire Code provisions required by the El Dorado Hills Fire Department and CAL FIRE. However, wildfire hazards could occur, especially under construction activities of infrastructure and off-site roadway improvements. This impact would be significant.	S	**Mitigation Measure 3.17-2: Implement Fire Prevention Measures for Construction of the Costco Project, Off-Site Roadway Improvements, and North Site Remainder Area**	LTS
Impact 3.17-4: Risk of Post-Fire Downslope or Downstream Flooding as a Result of Run-Off, Slope Instability, or Drainage Changes As discussed in Impact 3.17-2, implementation of the project could exacerbate wildfire risk during construction. Project operation would improve conditions related to on-site wildfire risk through vegetation fuel modification and compliance with state and local fire protection standards. A wildfire from construction activities could create a post-fire condition of the project site that could create site instability that would expose people or structures to significant risks of loss, injury, or death due to wildland fire or to risks related to downslope, flooding, or landslides. This impact would be significant.	S	**Mitigation Measure 3.17-2: Implement Fire Prevention Measures for Construction of the Costco Project, Off-Site Roadway Improvements, and North Site Remainder Area**	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Cumulative Impacts			
Impact 4-1: Contribute to Cumulative Visual Character and Lighting/Glare Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-2: Contribute to Cumulative Air Quality Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-3: Contribute to Cumulative Impacts on Biological Resources	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-4: Contribute to Cumulative Impacts on Cultural Resources	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-5: Contribute to Cumulative Energy Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-6: Contribute to Cumulative Impacts on Paleontological Resources	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-7: Contribute to Cumulative Greenhouse Gas Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-8: Contribute to Cumulative Hazard and Hazardous Material Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-9: Contribute to Cumulative Water Resource Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-10: Contribute to Cumulative Land Use and Planning Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
Impact 4-12: Contribute to Cumulative Population and Housing Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-13: Cumulative Public Services and Recreation Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-14: Contribute to Cumulative Impacts on Transit, Bicycle, and Pedestrian Facilities, Vehicle Miles Traveled, Safety, and Emergency Access	Would Cumulatively Considerable and Significant and Unavoidable	No feasible mitigation measures are available to address this cumulative impact.	SU
Impact 4-15: Contribute to Cumulative Utility Service Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-16: Contribute to Cumulative Tribal Cultural Resource Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Impact 4-17: Contribute to Cumulative Wildfire and Evacuation Impacts	Not Cumulatively Considerable	No mitigation is required for this impact.	LTS
Other CEQA			
Impact 6-1: Result in Economic Changes from the Project that Would Result in Urban Decay	LTS	No mitigation is required for this impact.	LTS

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1 INTRODUCTION

This draft environmental impact report (Draft EIR) evaluates the environmental impacts of the proposed El Dorado Hills Costco Project (project). This Draft EIR has been prepared under the direction of the County of El Dorado with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et seq.). This chapter of the Draft EIR provides information on:

- the project requiring environmental analysis (synopsis);
- the type, purpose, and intended uses of the Draft EIR;
- the scope of this Draft EIR;
- the agency roles and responsibilities;
- the public review process;
- the organization of the Draft EIR; and
- the standard terminology used in this Draft EIR.

1.1 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The project site is in an unincorporated area of El Dorado County, in the El Dorado Hills area and is north of U.S. Highway 50 (U.S. 50) and is bisected by Silva Valley Parkway, resulting in a North Project Site area (North Site - 24.83 acres) and a South Project Site area (South Site - 18.42 acres). The total project site encompasses approximately 43.26 acres, including Assessor's Parcel Numbers (APNs) 122-720-002, -003, -018, -019, -020, and -021, and is undeveloped/vacant. APN 122-720-21 (6.57 of 7.75 acres) is primarily reserved for the future extension of County Club Drive to Silva Valley Parkway, which is not part of the project. The General Plan Land Use Designation for both areas is Commercial (C). The North Site is currently zoned Commercial Regional – Planned Development (CR-PD). The South Site is predominantly zoned CR-PD and includes two small parcels zoned Commercial Limited (CL) and Transportation Corridor (TC)

The project consists of the development of a new Costco Wholesale Member Warehouse retail store (warehouse retail building), Costco Wholesale fuel facility (fuel facility), and associated site improvements. The warehouse retail building is proposed for the South Site and the fuel facility and Costco employee parking is proposed on the North Site. The remainder of the North Site (North Site Remainder Area) is not currently proposed for development in connection with the Costco project. However, the EIR evaluates impacts of future development of the North Remainder Area at a programmatic level because development of such area becomes more reasonably foreseeable if the proposed annexations to the El Dorado Irrigation District and the El Dorado Hills Fire Department are approved such that utilities fire protection services are available to the entire North Site and South Site.

The following are the anticipated requested entitlements for the project:

- Planned Development Permit (PD15-0001) for a Costco Wholesale Member Warehouse retail building and Costco Wholesale fuel facility.
- Conditional Use Permit (CUP23-0012) for a tire center, outdoor vehicle display, and recurring outdoor seasonal sales, such as Christmas Tree sales.
- Variance (V22-0001) to allow building-attached signage square footage area beyond the current allowance in the El Dorado County Zoning Ordinance.
- Lot Line Adjustment would be submitted to the County Surveyor.

The reader is referred to Chapter 2, "Project Description," for a detailed description of the project.

1.2 PURPOSE AND INTENDED USES OF THIS DRAFT EIR

According to CEQA, preparation of an EIR is required whenever it can be fairly argued, based on substantial evidence, that implementing a proposed project may result in a significant environmental impact. An EIR is an informational document used to inform public-agency decision makers and the general public of the significant environmental impacts of a project, identify possible ways to minimize the significant impacts, and describe reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.

This Draft EIR has been prepared to meet the requirements of a project EIR as defined by Section 15161 of the State CEQA Guidelines. A project EIR focuses on the changes in the physical environment that would result from implementation of a project, including its planning, construction, and operation.

1.3 SCOPE OF THIS DRAFT EIR

This Draft EIR includes an evaluation of the following environmental issue areas, as well as other CEQA-mandated issues (e.g., cumulative impacts, growth-inducing impacts, significant and unavoidable impacts, alternatives):

- aesthetics;
- air quality;
- archaeological and historical cultural resources;
- biological resources;
- energy;
- geology, soils, and paleontological resources;
- greenhouse gas emissions and climate change;
- hazards and hazardous materials;
- hydrology and water quality;
- land use and planning;
- noise and vibration;
- population and housing;
- public services and recreation;
- transportation;
- tribal cultural resources; and
- utilities and service systems;
- wildfire and evacuation.

Under CEQA and the State CEQA Guidelines, a lead agency may limit an EIR's discussion of environmental effects to those effects that the lead agency has determined would or may be significant (CEQA Section 21002.1[e]; State CEQA Guidelines Sections 15128, 15143). Information used to determine which impacts would or may be significant was derived from review of the project; review of applicable planning documents and CEQA documentation; information gathered during fieldwork; feedback from public and agency consultation; comments received during a public scoping meeting held on March 10, 2025; and comments received on the notice of preparation (NOP) (see Appendix A of this Draft EIR).

The NOP was distributed on February 25, 2025, to responsible agencies, interested parties and organizations, and private organizations and individuals that may have an interest in the project. Further information on the NOP and scoping process is provided below in Section 1.5, "CEQA Public Review Process."

1.4 AGENCY ROLES AND RESPONSIBILITIES

1.4.1 Lead Agency

As lead agency, El Dorado County is responsible for completion of the environmental review requirements under CEQA and considering whether to approve the project.

1.4.2 Trustee and Responsible Agencies

A trustee agency is a state agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California. The only trustee agency that has jurisdiction over resources potentially affected by the project is the California Department of Fish and Wildlife.

Responsible agencies are public agencies other than the lead agency that have discretionary-approval responsibility for reviewing, carrying out, or approving elements of a project. Responsible agencies should participate in the lead agency's CEQA process, review the lead agency's CEQA document, and use the document when making a decision on project elements.

The following agencies may have responsibility for, or jurisdiction over, implementation of project elements.

STATE AGENCIES

- California Department of Fish and Wildlife
- Central Valley Regional Water Quality Control Board

REGIONAL AND LOCAL AGENCIES

- El Dorado County Air Quality Management District
- El Dorado Local Agency Formation Commission
- El Dorado Hills County Water District (also known as the El Dorado Hills Fire Department)
- El Dorado Irrigation District

1.5 CEQA PUBLIC REVIEW PROCESS

As identified above in Section 1.3, "Scope of This Draft EIR," in accordance with CEQA regulations, an NOP was distributed to responsible agencies, interested parties and organizations, and private organizations and individuals that could have interest in the project.

The purpose of the NOP was to provide notification that an EIR for the project was being prepared and to solicit input on the scope and content of the document. The NOP and responses to the NOP are included in Appendix A of this Draft EIR.

This Draft EIR is being circulated for public review and comment for a period of 60 days. During this period, comments from the general public, as well as from organizations and agencies, on environmental issues may be submitted to the lead agency.

Upon completion of the public review and comment period, a Final EIR will be prepared that will include both written and oral comments on the Draft EIR received during the public review period, responses to those comments, and any revisions to the Draft EIR made in response to public comments. Together, the Draft EIR and Final EIR make up the EIR for the project.

1.6 DRAFT EIR ORGANIZATION

This Draft EIR is organized into chapters, as identified and briefly described below. Chapters are further divided into sections (e.g., Chapter 3, "Environmental Impacts and Mitigation Measures," and Section 3.5, "Energy"):

- The "Executive Summary": This chapter introduces the El Dorado Hills Costco Project; provides a summary of the project description and lists significant impacts and mitigation measures to reduce significant impacts to a less-

than-significant level, if feasible; describes alternatives to the project; and identifies areas of controversy and issues to be resolved.

- Chapter 1, "Introduction": This chapter provides a synopsis of the project; a description of the purpose and intended uses of this Draft EIR; a description of the scope of this EIR; a description of the lead, trustee, and responsible agencies; a summary of the public review process; a description of the organization of this EIR; and definitions of standard terminology used in this EIR.
- Chapter 2, "Project Description": This chapter describes the location, background, goals, and objectives for the project and describes the project elements in detail.
- Chapter 3, "Environmental Impacts and Mitigation Measures": The sections in this chapter evaluate the environmental impacts that would be generated by implementing the project, arranged by subject area (e.g., land use, hydrology and water quality). In each section of Chapter 3, the regulatory background, existing conditions, analysis methodology, and thresholds of significance are described. The anticipated changes to the existing conditions during and after development of the project are then evaluated for each subject area. For any significant or potentially significant impact that would result from project implementation, mitigation measures are presented, and the level of impact significance after mitigation is identified. Environmental impacts are numbered sequentially in each section (e.g., Impact 3.2-1, Impact 3.2-2, etc.). Any required mitigation measures are numbered to correspond to the impact numbering; therefore, the mitigation measure for Impact 3.2-2 would be Mitigation Measure 3.2-2.
- Chapter 4, "Cumulative Impacts": This chapter provides information required by CEQA regarding cumulative impacts that would result from implementation of the El Dorado Hills Costco Project, as well as other past, present, and probable future projects.
- Chapter 5, "Alternatives": This chapter evaluates alternatives to the project, including alternatives considered but eliminated from further consideration, the No Project Alternative, and alternative development options. It also identifies the environmentally superior alternative.
- Chapter 6, "Other CEQA Sections": This chapter evaluates growth-inducing impacts and discloses any significant and unavoidable adverse impacts.
- Chapter 7, "Report Preparers": This chapter identifies the preparers of this document.
- Chapter 8, "References": This chapter identifies the documents and individuals used as sources for the analysis.

1.7 STANDARD TERMINOLOGY

This Draft EIR uses the following standard terminology:

- "No impact" means no change from existing conditions (no mitigation is needed).
- "Less-than-significant impact" means no substantial adverse change in the physical environment (no mitigation is needed).
- "Potentially significant impact" means a substantial adverse change in the physical environment that might occur (mitigation is identified because potentially significant impacts are treated as significant).
- "Significant impact" means a substantial adverse change in the physical environment that would occur (mitigation is identified).
- "Significant and unavoidable impact" means a substantial adverse change in the physical environment that would occur and that cannot be avoided, even with the implementation of all feasible mitigation.

2 PROJECT DESCRIPTION

Costco Wholesale ("Costco") proposes to construct a membership-only Costco Member Warehouse retail store (warehouse retail building) and related site improvements, including a members-only fuel facility, in unincorporated El Dorado County, near the Silva Valley Parkway interchange on U.S. Highway 50 (US 50). The project site encompasses multiple parcels that together total approximately 43.26 acres of undeveloped land (Figure 2-1 shows regional location and Figure 2-2 shows the project site). This chapter describes the project's location, existing site conditions, project objectives, proposed development elements, construction schedule, operations, and requested entitlements.

2.1 PROJECT LOCATION

The proposed EDH Costco Project (project) is located north of the Silva Valley Parkway/US 50 interchange in the El Dorado Hills community area of unincorporated El Dorado County. The project is bisected by Silva Valley Parkway and consists of the North Site (approximately 24.83 acres) and the South Site (approximately 18.42 acres). The project site includes a 1.38-acre area "silver parcel" located west of Clarksville Crossing (as shown in Figure 2-2). No development is proposed for this parcel. The project site consists of Assessor's Parcel Numbers (APNs) 122-720-002, -003, -018, -019, -020, and -021. Roadways providing local access include Silva Valley Parkway (traverses north-south) and Clarksville Crossing (traverses along the western property boundary). Regional access is provided via US 50 south of the site.

2.1.1 Existing Conditions

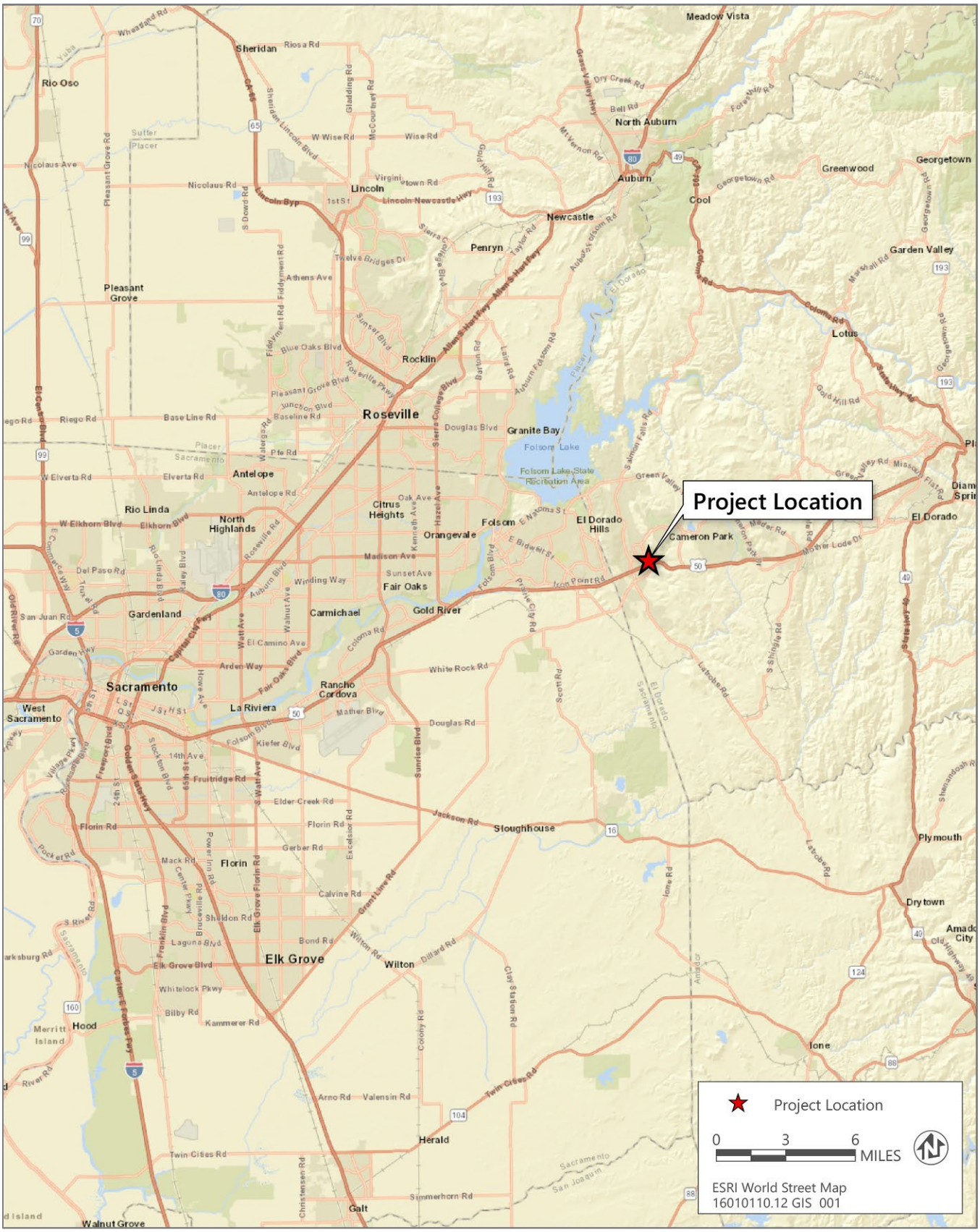
The project site is currently vacant grassland with scattered oak trees and seasonal drainage features. There are no permanent structures on the project site. The reader is referred to Section 3.3, "Biological Resources," for a detailed description of natural resources on the project site. The southern edge of the property directly abuts the US 50 right-of-way, while the western boundary is adjacent to Clarksville Crossing. An approximate 7.75-acre portion of the northern site is reserved for a planned future extension of Country Club Drive, which is not part of the proposed project.

Surrounding land uses include:

- North: Single-family residential uses and Oak Meadow Elementary School
- East: Vacant land, Tong Road, and single-family residential uses
- South: U.S. Highway 50 and Tong Road
- West: Clarksville Crossing roadway, open space, and undeveloped land

EL DORADO COUNTY GENERAL PLAN DESIGNATIONS AND ZONING

El Dorado County's General Plan designates the project site as Commercial (C). Zoning includes Commercial Regional–Planned Development (CR-PD), with smaller areas of the South site designated as Commercial Limited (CL) and Transportation Corridor (TC). Because the site carries a PD overlay, a Planned Development Permit (PD) is required to establish site-specific development standards.



Source: Adapted by Ascent in 2021.

Figure 2-1 Regional Location



Source: Adapted by Ascent in 2021.

Figure 2-2 Project Site

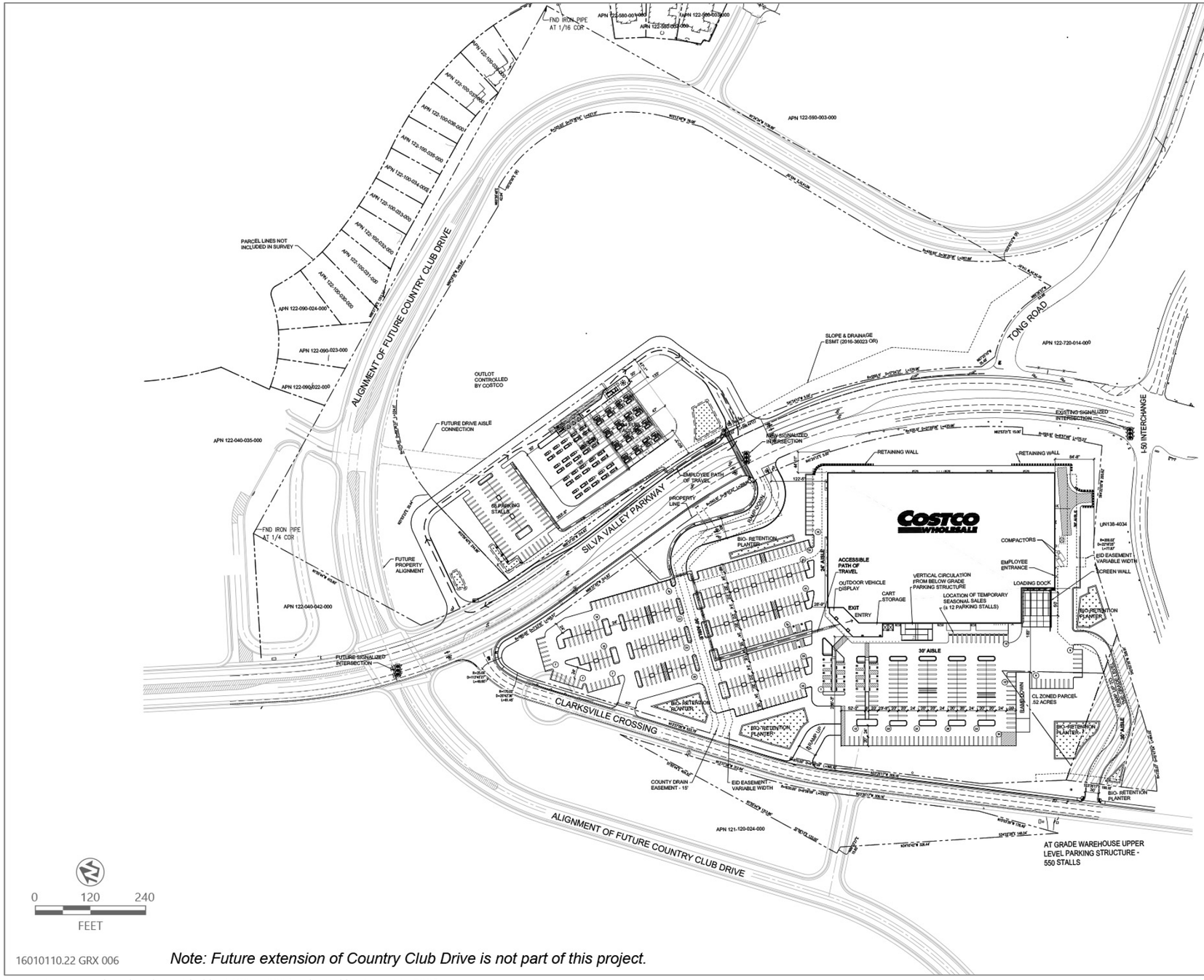
2.2 PROJECT OBJECTIVES

The following project objectives have been identified by the applicant:

- Develop a high-quality commercial development on currently vacant and underutilized land adjacent to US 50 that is adequately served by existing infrastructure including roadways and utilities.
- Promote economic growth, new employment, and retail/service opportunities for County residents.
- Increase the number of employees in the El Dorado Hills area and contribute to the local jobs/housing balance.
- Construct and operate a new Costco warehouse retail building that serves the local community with goods and services from both nationally known businesses and also more regional and local businesses.
- Reduce energy consumption by incorporating sustainable design features and systems with enhanced energy efficiencies meeting State and federal code requirements.
- Provide a Costco warehouse retail building in a location that is convenient for its members, the community, and employees to travel to shop and work.
- Provide a state-of-the-art Costco warehouse retail building to better serve the membership in the greater El Dorado Hills area.
- Enhance the area with a warehouse retail building that is architecturally appealing, responsive to the El Dorado Hills area design context, sensitive to the adjacent community and future development(s), and compatible with the need for a new Costco in this market area.
- Continue and increase contribution to the County's tax base by Costco.
- Expand the space available for integrated retail sales of goods and services in the El Dorado Hills market.
- Minimize circulation conflicts between automobiles and pedestrians.
- Develop a Costco warehouse retail building that is large enough to accommodate all of the uses and services Costco provides to its members elsewhere.
- Meet member demand for high-quality gasoline at a fair price via a new Fuel Facility developed in conjunction with the proposed warehouse retail building.

2.3 PROPOSED PROJECT

The 43.26-acre project site is separated into two components: the North Site of approximately 24.83 acres and the South Site of approximately 18.43 acres. Figure 2-3 depicts the overall layout of the entire project on both sites. A membership-only Costco fuel facility and employee parking would occupy part of the North Site, while the South Site would accommodate the main Costco warehouse retail building and a partially below-grade parking structure. The majority of the North Site is not proposed to include any development as part of the Costco project but is assumed to be developed at some point in the future. A variance for building-attached signage area is included to address the signage proposed for the warehouse retail building.



16010110.22 GRX 006

Note: Future extension of Country Club Drive is not part of this project.

PROJECT DATA

CLIENT: COSTCO WHOLESALE
999 LAKE DRIVE
ISSAQUAH, WA 98027

PROJECT ADDRESS: SILVA VALLEY PARKWAY
EL DORADO HILLS, CA

SITE DATA:

COSTCO WHSE SITE AREA:	17.05 ACRES (742,689 SF)
INCLUDES:	
CL ZONED PARCEL:	0.52 ACRES
EDH NORTH SITE AREA:	24.83 ACRES (1,081,692)
INCLUDES:	
COSTCO FUEL SITE AREA:	3.29 ACRES (143,261)
COSTCO OUT PARCEL:	13.79 ACRES (600,563)
FUTURE COUNTRY CLUB LANE PARCEL:	7.75 ACRES (337,868)
JURISDICTION:	EL DORADO COUNTY
ZONING:	CR-PD, CL

CR-PD SETBACKS:

REQUIRED	NORTH	SOUTH
FRONT:	20'	20'
SIDE:	30'	5'
REAR:	30'	5'

ACTUAL	NORTH	SOUTH
FRONT:	60'-3"	44'-11"
SIDE:	133'	N/A
REAR:	47'-1"	N/A

MAXIMUM ALLOWABLE BUILDING HEIGHT;	50'
MAXIMUM ALLOWABLE FLOOR AREA RATIO (FAR);	0.85

BUILDING DATA:

TOTAL BUILDING FOOTPRINT AREA:	165,000 SF
INCLUDES:	
WAREHOUSE	155,000 SF
TIRE CENTER	3,000 SF
BUILDING ENVELOPE	2,000 SF
NET OPEN CANOPY	5,000 SF
BELOW GRADE PARKING STRUCTURE:	100,000 SF

PARKING DATA:

TOTAL PARKING:	831 STALLS
INCLUDES:	
MAIN LEVEL PARKING PROVIDED:	
10' WIDE STALLS	530 STALLS
ACCESSIBLE STALLS	19 STALLS
BELOW GRADE STRUCTURE PARKING PROVIDED:	
10' WIDE STALLS	214 STALLS
FUEL PARCEL PARKING PROVIDED:	
10' WIDE STALLS	68 STALLS
NUMBER OF STALLS PER 1000 SF OF BUILDING AREA:	5.23 STALLS

NOTES:
EXISTING CONDITIONS TO BE FIELD VERIFIED.
SOLAR PANELS WILL BE INCLUDED AS PART OF THE PROJECT. IT HAS YET TO BE DETERMINED AT THIS TIME IF THE SOLAR PANELS WILL BE ROOFTOP, A SEPARATE STRUCTURE, OR A COMBINATION OF BOTH.

Source: Image produced and provided by MG2 in 2024; adapted by Ascent in 2025.

Figure 2-3 Site Plan

2.3.1 North Site

On the North Site, approximately 3.29 acres would be developed with a Costco members-only fuel facility and an employee parking area. The remainder of the North Site would include an approximately 13.79-acre out-parcel that would remain undeveloped at this time (North Site Remainder Area). The Costco project proposes no development for the North Site Remainder Area. However, future development of the North Site Remainder Area would be made more reasonably foreseeable by the proposed annexation of the entire North Site into the El Dorado Irrigation District and the El Dorado Hills Fire Department service areas (described further below). Since such annexations are assumed to facilitate possible future development of the North Site Remainder Area, even though there is not even a conceptual or contemplated plan for build out of that land, this EIR conservatively assumes that such land would be developed consistent with the General Plan and zoning designations and density. The assumed potential commercial development of the North Site Remainder Area is approximately 138,000 square feet and 316 employees. The future extension of Country Club Drive (County Capital Improvement Project No. 36105008), when constructed by the County, would occupy a portion of the North Site near its northern edge, though the future extension is an independent project proposed by, and to be undertaken by, the County and is not analyzed as a part of the project for purposes of this EIR.

As shown on Figure 2-3, the fuel facility would occupy a generally rectangular footprint near Silva Valley Parkway, and the employee parking would be situated immediately west of the canopy, separated by drive aisles and landscaping.

SITE ACCESS AND ROADWAY IMPROVEMENTS

As shown in Figure 2-3, primary access to the North Site would be provided via a new signalized intersection on Silva Valley Parkway, shared with the South Site's main driveway. A secondary right-in/right-out driveway north of that intersection would separate fueling operations from primary traffic flows. Fuel delivery trucks would enter the northern driveway and exit at the signal to allow safe left turns. Sidewalks, bike lanes, and pedestrian connections would be provided along the North Site's frontage, north of the signalized intersection.

ARCHITECTURE

The proposed fuel facility includes a steel canopy structure of up to 13,000 square feet, covering four fueling bays with four two-sided dispensers each (32 fueling positions total) (Figure 2-4). A small, up to 200-square-foot controller enclosure would house operational equipment. The canopy design features neutral colors with corporate striping to align with Costco's brand, and recessed LED lighting directing illumination downward.

LANDSCAPING

A preliminary landscape plan for the project site (Figure 2-5) includes shade trees and drought-tolerant shrubs in the parking lot and along property edges. Evergreen trees, shrubs, and groundcover would be planted along the frontage and property boundaries to buffer adjacent land uses. As shown in Figure 2-6, development of the fuel facility would require the removal of three oak trees. The project would comply with the County's Oak Resources Management Plan through payment of the in-lieu fee for impacts on oak woodlands and oak trees.

LIGHTING

LED fixtures mounted on poles of varying heights (between 25 to 37 feet) would have cutoff fixtures to limit overspill (Figure 2-7). Parking lot light standards are designed to provide even light distribution for vehicle and pedestrian safety, with lighting fixtures of a "shoe-box" style. Under-canopy lighting at the fuel facility would be recessed into the canopy. Parking and site lighting would incorporate the use of cutoff lenses to keep light from overflowing beyond the fuel facility boundaries.

SIGNAGE

Fuel facility signage, comprised of four signs of 21 square feet each, totaling 84 square feet, is proposed on the fuel facility canopy as shown in Figure 2-8. A variance for the entire Costco project for exceeding the square-footage amount of building-attached sign area as allowed by the El Dorado County Zoning Code would cover the canopy signage. No separate pylon or monument signage is proposed for the North Site.

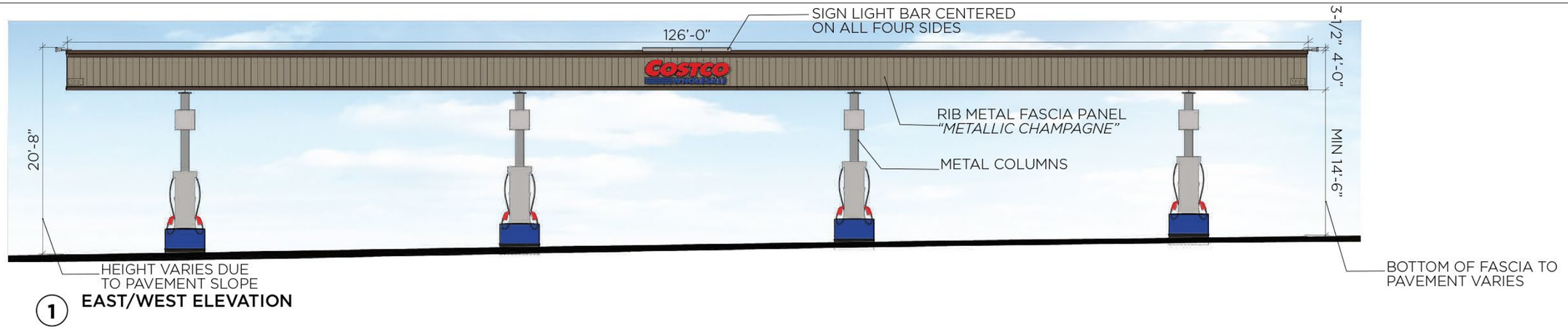
INFRASTRUCTURE

As shown in Figure 2-9 new water/sewer laterals would connect to the existing El Dorado Irrigation District's (EID's) 18-inch water pipeline under Silva Valley Parkway and an 8-inch sewer pipeline linking with the South Site system. Drainage would utilize underground pipes (12–18 inches) leading to on-site bioretention basins, ultimately tying into County storm drain facilities near Clarksville Crossing. Electric and gas pipelines, extended from Pacific Gas and Electric (PG&E) services in Clarksville Crossing or Silva Valley Parkway, would be installed underground. The North Site would require approval to annex into EID's service area to obtain water and wastewater services and into the El Dorado Hills Fire Department (also known as the El Dorado Hills County Water District) service area to obtain fire protection services.

CONSTRUCTION

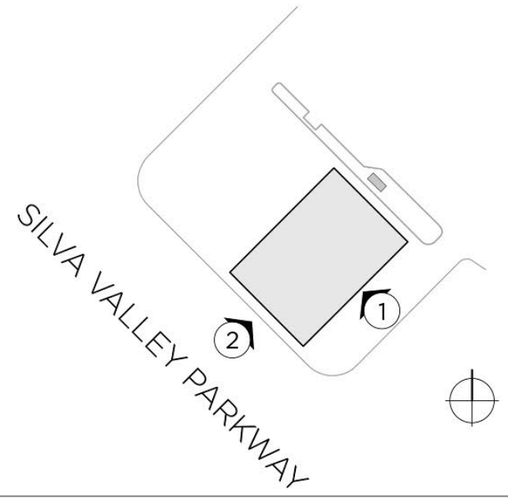
Construction for the North Site is anticipated to last approximately 11 months once construction begins, which is currently estimated to be July of 2026. Figure 2-10 identifies the proposed grading plan. North Site grading would import approximately 43,218 cubic yards of fill to form the fueling pad and parking area. The Geotechnical Study for the Proposed Costco Fuel Facility identifies the following recommendations summarized below that would be implemented as part of site development consistent with the requirements for soil stability and foundations in the California Building Code. The reader is referred to Appendix E for the complete Geotechnical Study.

- Site Preparation
  - Removal of abandoned utilities, existing pavements, foundations, and other existing improvements within the proposed fuel facility area and the excavation(s) backfilled with engineered fill.
  - Removal of soft and wet soils and replaced with structural fill. Prior to filling in the seasonal creek, install subdrains within the creek bottom.
  - Exposed subgrade be proof-rolled with heavy construction equipment (e.g., loader or smooth-drum roller) to disclose areas of soft and yielding material. Where soft and yielding material is observed, excavate and replace as structural fill. After proof-rolling and/or prior to placement of fill, the subgrade should be scarified to a depth of 8 to 12 inches, moisture conditioned, and compacted. The proof-rolling should extend beyond the proposed improvements a horizontal distance of at least 2 feet.
  - The construction contractor should anticipate that pumping subgrade conditions may be encountered during site grading activities due to shallow perched groundwater, and the subgrade may need to be stabilized with geotextiles and crushed rock.
- Permanent Slopes
  - Permanent slopes should be constructed at 2:1 (horizontal to vertical) or flatter. Slopes will be subject to erosion and should be planted as soon as practicable. Where new fill slopes are to be constructed on hillsides or existing slopes, the topsoil, colluvial soils, and other materials considered unsuitable should be removed.
  - Where the exposed slope is steeper, the original ground on which fill is to be placed be keyed and benched. The benches should extend in the underlying bedrock.









16010110.22 GRX 007

Source: Image produced and provided by MG2 in 2024; adapted by Ascent in 2025.

Figure 2-4 North Site Elevations



Plant Legend

Symbols	Botanical / Common Name	Size	WUCOLS (Water Use Classification of Landscape Species)	Qty.	Comments
	Trees				
	Acer platanoides 'Crimson King' / Crimson King Norway Maple	24" box	M	77	Matched Standards
	Acer rubrum 'Redpointe' / Redpointe Red Maple	24" box	M	85	Matched Standards
	Lagerstroemia hyb. 'Muskogee' / Muskogee (Lavender) Crape Myrtle	24" box	L	30	Matched Standards
	Lagerstroemia hyb. 'Tuscarora' / Pink/Red Flowering Crape Myrtle	24" box	L	9	Matched Standards
	Zelkova serrata 'Green Vase' / Green Vase Zelkova	24" box	L	58	Matched Standards
	Quercus ilex / Holly Oak	24" box	L	29	Matched Standards
	Quercus lobata / Valley Oak	24" box	L	36	Matched Standards
	Cedrus deodora / Deodar Cedar	24" box	L	37	Matched in Size
	Shrubs, Perennials, Ornamental Grasses, Ground Covers and Vine				
	Arbutus unedo 'Compacta' / Compact Strawberry Tree	15 gal.	L	Rosa banksiae 'Lutea' / Yellow Lady Banks Climbing Rose	15 gal. M
	Ceanothus 'Concha' / Concha Ceanothus	5 gal.	L	Salvia leucantha 'Santa Barbara' / Santa Barbara Sage	5 gal. L
	Cotoneaster dammeri 'Lowfast' / Lowfast Bearberry Cotoneaster	1 gal.	M	Rosmarinus o. 'Huntington Blue' / Huntington Blue Rosemary	1 gal. L
	Dietes grandiflora 'Variegata' / Striped Fortnight Lily	1 gal.	L		
	Dianella revolute 'Little Rev' / Little Rev Dianella	1 gal.	L		
	Eleagnus x ebbingei 'Gilt Edge' / Gilt Edge Silver Berry	15 gal.	L		
	Festuca mairei / Atlas Fescue	1 gal.	L		
	Muhlenbergia capillaris 'Regal Mist' / Regal Mist Muhly Grass	1 gal.	L		
	Muhlenbergia rigens / Deer Grass	1 gal.	L		
	Pennisetum orientale / Oriental Fountain Grass	1 gal.	L		
	Juniperus chinensis 'Mint Julep' / Mint Julep Juniper	5 gal.	L		
	Juniperus horizontalis 'Blue Chip' / Blue Chip Juniper	1 gal.	L		
	Phlomis fruticosa / Jerusalem Sage	1 gal.	L		
	Rosa 'Meidrifora' / Coral Drift Rose	5 gal.	M		

Stormwater Treatment Planter

	Tree				
	Quercus virginiana 'Sky Climber' / Sky Climber Live Oak	24" box	L	13	Matched Standards
	Perennials and Grasses				
	Chondropetalum tectorum / Cape Rush	5 gal.	L		
	Epilobium septentrionale 'Select mattole' / Select Mattole California Fuchsia	1 gal.	L		On slope embankment only
	Juncus patens 'Elk Blue' / Elk Blue Gray Rush	1 gal.	M		
	Muhlenbergia rigens / Deer Grass	1 gal.	L		
	Nepeta racemosa 'Walker's Low' / Walker's Low Catmint	1 gal.	L		On slope embankment only
	Verbena lilacina 'Del La Mina' / Purple Cedros Island Verbena	1 gal.	L		On slope embankment only

IRRIGATION DESIGN STATEMENT:

The irrigation system will be a water efficient low flow, point source system designed to provide adequate watering to support plant growth and insure deeply rooted plant material while avoiding excess water application. The system will be programmable, allowing operation during late night and or early morning hours, with multiple start times and cycles. The system will interface with a weather based sensor that will adjust the amount of water applied to the plant material based on daily weather conditions. Irrigation materials specified for the site will be selected on the basis of durability and ease of maintenance. Landscape irrigation will comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO).

Note: All landscape areas will be irrigated.

LANDSCAPE DATA:

Costco Site Coverage

Costco Warehouse Site Area:	17.04 AC	(742,262 SF)
Costco Fuel Site Area:	3.29 AC	(143,261 SF)
Total Costco Site Area:	20.33 AC	(885,523 SF)
Landscape Area Provided:	318,349 SF (35.95%)	

Shading Requirements:
Required: 50% parking lot shading at 15 years
Provided: 55.6%

Upper Level Parking:
Provides 100% shading of lower level parking

WUCOLS LEGEND:

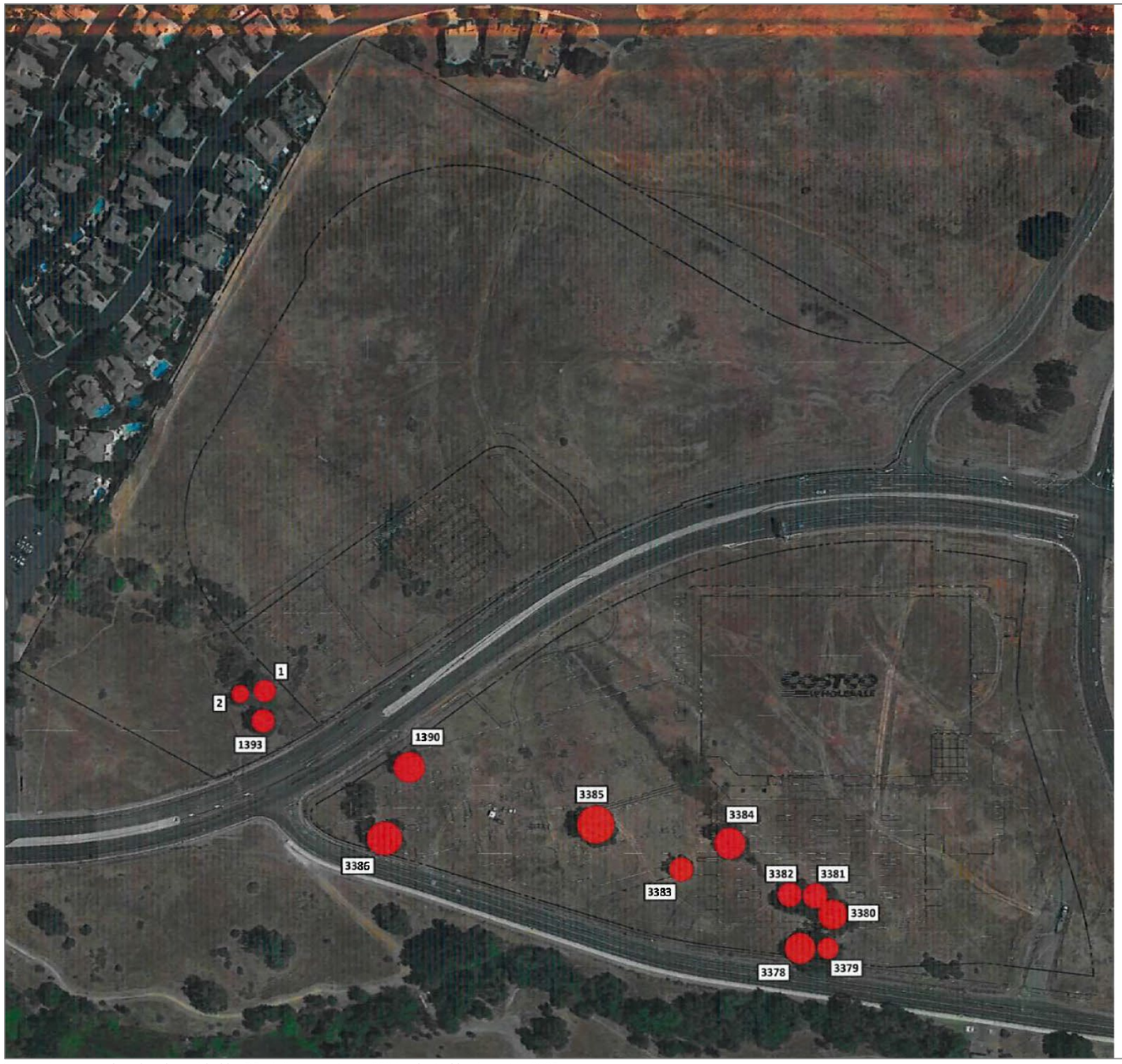
L Low Water Use

M Moderate Water Use

16010110.22 GRX 008

Source: Image produced and provided by DB+A & Associates in 2024; adapted by Ascent in 2025.

Figure 2-5 Proposed Landscape Plan



Tree Data Table

	Tree #	Species	DBH (inches)	DLR (feet)	Height (feet)	Health	Structure	Comment
	1	Valley Oak	9, 8	15	40	Fair	Fair	No tag, heavy blackberry, codominant
	2	Interior Live Oak	9, 8, 8	16	27	Fair-Good	Fair	No tag, heavy blackberry, codominant
*	1390	Valley Oak	47	21	60	Poor-Fair	Poor	Deadwood, limb failure, acorn woodpecker granary tree
	1393	Valley Oak	21	20	50	Fair-Good	Fair-Good	Existing tag, minor dieback
	3378	Valley Oak	35	30	40	Good	Fair-Good	Deadwood
	3379	Valley Oak	18	24	40	Good	Fair-Good	Asymmetrical canopy, suppressed growing environment
	3380	Valley Oak	33	38	40	Good	Good	
	3381	Valley Oak	27	30	40	Good	Good	
	3382	Valley Oak	27	25	40	Good	Fair	Codominant
	3383	Valley Oak	26	23	40	Fair-Good	Fair	Asymmetrical canopy
	3384	Valley Oak	10	13	15	Fair	Fair	Codominant, small leaves
*	3385	Blue Oak	48	40	60	Fair-Good	Fair	Asymmetrical canopy, pruning wound, 1 trunk removed
*	3386	Valley Oak	42	38	60	Fair-Good	Fair	Deadwood, dieback

* Heritage tree

Note: Tree data table information taken from the oak tree resources survey prepared for the El Dorado Hills 52 Oak Resources Technical Report dated 11/10/20 by Helix Environmental Planning (Project #AKT - 20)

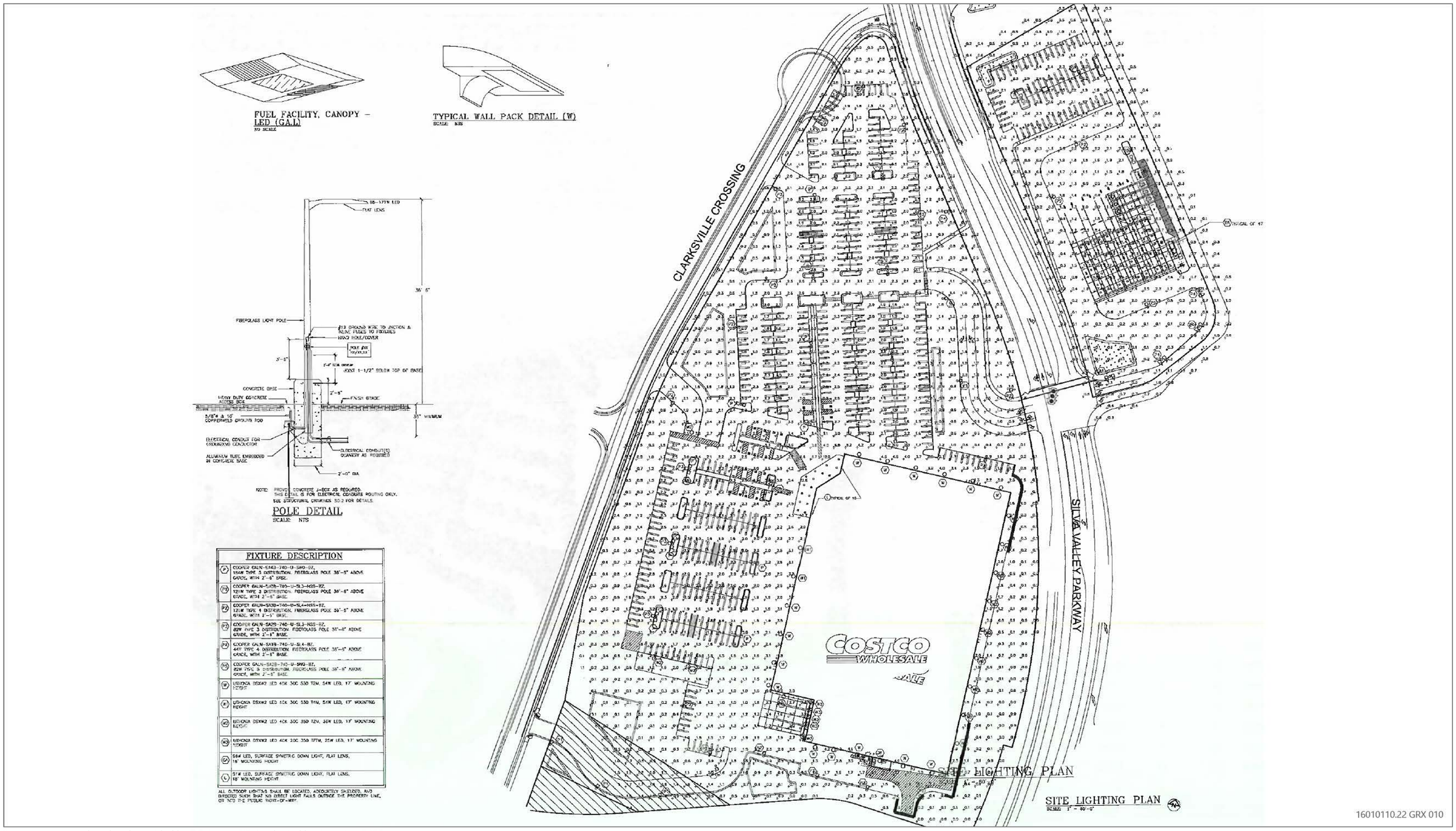
Trees to be Removed

0 110 220
FEET

16010110.22 GRX 009

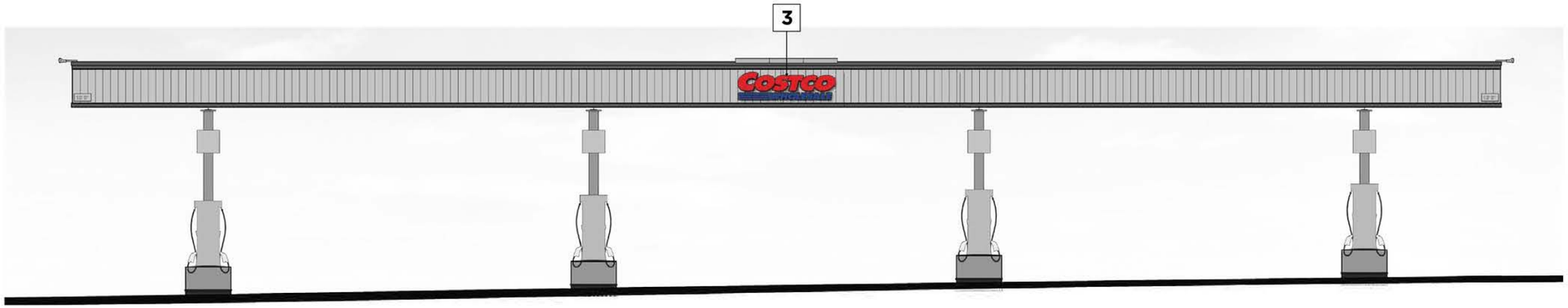
Source: Image produced and provided by DB+A & Associates in 2024; adapted by Ascent in 2025.

Figure 2-6 Proposed Tree Removal



Source: Image produced and provided by T.E. Inc. in 2024; adapted by Ascent in 2025.

Figure 2-7 Proposed Lighting Plan



1 EAST/WEST ELEVATION



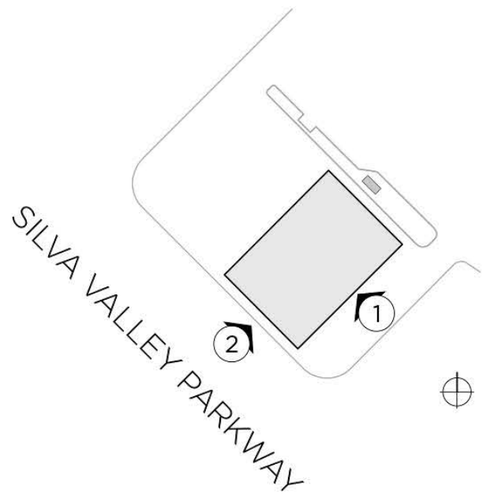
2 NORTH/SOUTH ELEVATION



3 CANOPY SIGN

SIGN TABLE

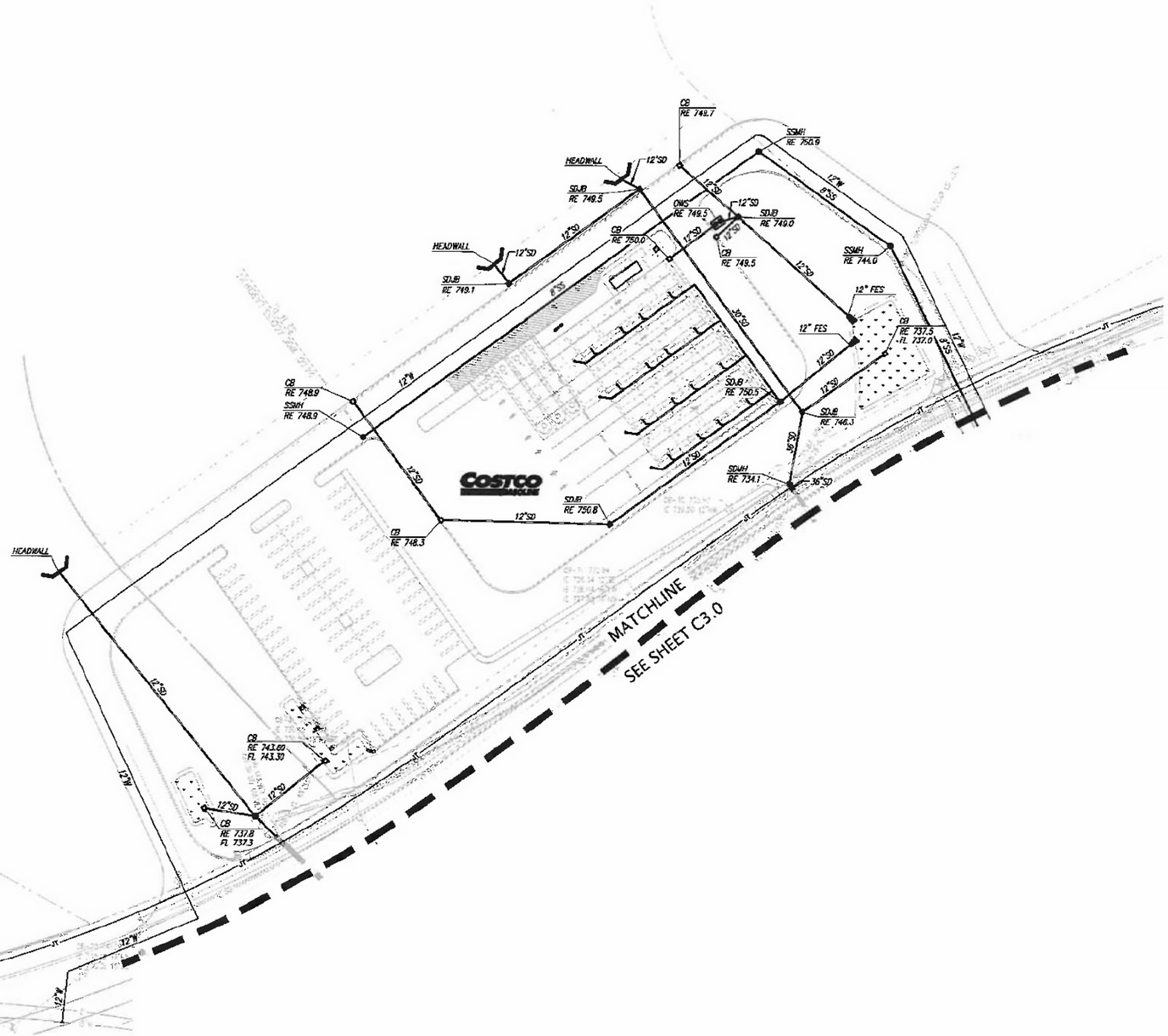
IDENTITY	QUANTITY	SIGN	SIZE	AREA (EACH)	TOTAL SF
A	4	COSTCO WHOLESALE	2'-6" X 8'-6"	21 SF	***84 SF***
				TOTAL SIGN AREA:	**84 SF**

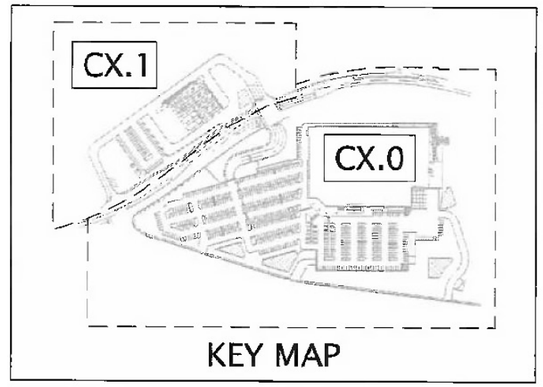


16010110.22 GRX 011

Source: Image produced and provided by MG2 in 2024; adapted by Ascent in 2025.

Figure 2-8 North Site Signage





LEGEND

ASR	AUTOMATIC SPRINKLER RISER
RE	RIM ELEVATION
TC	TOP OF CURB
WS	WATER SERVICE
-X-X-	EXISTING UTILITY TO BE ABANDONDED BY REMOVAL
FS	FIRE SERVICE
SS	SANITARY SEWER
COTG	CLEANOUT TO GRADE
	STORM DRAIN LINE
	STORM DRAIN CATCH BASIN
	STORM DRAIN JUNCTION BOX
	STORM DRAIN MANHOLE
	BACK FLOW PREVENTION DEVICE
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT & VALVE
	POST INDICATOR VALVE
SSMH	SANITARY SEWER MANHOLE
	SINGLE CHECK VALVE
SDMH	STORM DRAIN MANHOLE
	WATER METER
	GREASE INTERCEPTOR
	SAND OIL SEPARATOR

Source: Image produced and provided by Kier+Wright in 2024; adapted by Ascent in 2025.

Figure 2-9 North Site Infrastructure Improvements



Source: Image produced and provided by Kier+Wright in 2024; adapted by Ascent in 2025.

Figure 2-10 North Site Preliminary Grading Plan

- Groundwater
  - If encountered, excavations which encounter perched groundwater will need to be temporarily dewatered.
- Foundation Excavations
  - If unsatisfactory material, such as soft or disturbed soil, debris or otherwise unsuitable soil is present at the base of footing excavations, then unsuitable materials should be over excavated and replaced to the depth and extent determined by the geotechnical engineer.
  - Drilling of the pile shafts should be accomplished using conventional heavy-duty excavation equipment maintained in good condition. Concrete should be placed immediately after drilling of the hole is complete. The concrete should be pumped to the bottom of the drilled shaft using a down-hole tremie. If steel casing is used, the casing should be removed as the concrete is placed, but the bottom of the casing should be kept at least 5 feet below the top of the concrete.
- Fill Material and Compaction Criteria
  - Materials placed below pavement or structures should be structural fill. The on-site soils, minus any debris, organic matter, or other deleterious materials may be used as structural fill. Rock or other soil fragments greater than 6 inches in size should not be used in the fills.
  - Moisture reduction processing of on-site soil may be required prior to placement as structural fill.
- Trenches
  - All trench excavations should be braced and shored in accordance with good construction practice and all applicable safety ordinances and codes.
  - Pipe zone backfill (i.e., material beneath and in the immediate vicinity of the pipe) should consist of imported soil less than ¾-inch in maximum dimension. Trench zone backfill (i.e., material placed between the pipe zone backfill and finished subgrade) may consist of onsite soil or imported fill that meets the requirements for engineered fill provided above. If imported material is used for trench zone backfill, recommended to consist of silty sand. In general, gravel and cobble should not be used for trench zone backfill due to the potential for soil migration into the relatively large void spaces present in this type of material and water seepage along trenches backfilled with coarse-grained sand and/or gravel.
- Unstable Subgrade Conditions
  - Subgrade may need to be stabilized with geotextiles and crushed rock or chemical treatment. Additionally, should grading be performed during or following periods of rainfall, the moisture content of the near-surface soils will also be significantly above the optimum moisture content. Typical remedial measures include drying, removal and replacement with crushed rock and geotextile fabric, and chemical treatment.
- Exterior Flatwork
  - Subgrade soils should be moisture conditioned and recompacted or over excavated.
  - Exterior concrete slabs for pedestrian traffic or landscape should be at least four inches thick. Weakened plane joints should be located at intervals of about 6 feet.
- Pavements
  - Subgrade soils should be stable at the time the aggregate base materials are placed and compacted.
  - Aggregate base materials should be moisture conditioned to at least the optimum moisture content and compacted to at least 95 percent relative compaction.
  - Adequate drainage (both surface and subsurface) should be provided such that the subgrade soils and aggregate base materials are not allowed to become wet.

Construction would occur 7 days per week, with construction occurring 7:00 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on weekends.

OPERATIONS

Fuel facility hours would generally be from 5:00 a.m. to 10:00 p.m. The facility is expected to receive approximately four to five fuel truck deliveries per day. These deliveries would be staged in a striped area north of the canopy. Approximately 70 employee parking spaces would serve Costco employees; circulation is designed to keep fuel facility traffic and employee parking separate.

2.3.2 South Site

The South Site would include up to approximately 165,000 square feet of building area planned to be constructed as a Costco Wholesale Member Warehouse retail store with up to 300 employees. Within the store, Costco would offer, among other product and services, optical exams and optical sales, hearing aid testing and sales, food service preparation and sales, meat preparation and sales, bakery and sales of baked goods, alcohol sales, and tire sales and installation. Temporary outdoor sales may occur within the portion of the parking area adjacent to the warehouse retail building for seasonal sales, such as Christmas tree sales during the months of November and December. The warehouse retail building is proposed to include one customer entrance to the main Costco store, which would be located at the northwest corner of the building. The tire center would have bay doors accessible from outside of the warehouse retail building, though the tire center sales area would be accessible through the building. A promotional vehicle may be on display near the customer entrance to the building. This vehicle would be used to promote online or off-site vehicle sales; no vehicles are proposed to be sold on site. The South Site would also include a parking structure and surface parking, which are further described below. Development on the South Site would exclude the 1.38-acre area located west of Clarksville Crossing where no development is proposed.

The South Site has been designed to use the existing slope of the site by locating the Costco warehouse retail building in the southeast corner of the site, where the elevation of existing streets adjacent to the site are the highest. Parking would be provided in two at-grade parking lots and one subterranean (below-grade) parking lot structure beneath one of the at-grade lots. Vehicle access to this lower-level parking structure would be provided by a ramp on the north side of the structure from Clarksville Crossing and a ramp on the west side of the structure from the above at-grade parking lot. The below-grade parking structure would include approximately 200 to 230 spaces. A pedestrian ramp and elevators would provide pedestrian access from the below-grade level up to the at-grade parking and entry to the warehouse retail building. The below-grade parking structure and at grade parking lots together would include approximately 750 to 780 spaces in total parking to serve the South Site.

SITE ACCESS AND ROADWAY IMPROVEMENTS

The primary entrance to the South Site would be from the new signalized intersection with Silva Valley Parkway (shared with the North Site). Northbound traffic on Silva Valley Parkway would have a left-turn pocket into Clarksville Crossing, and three driveways off Clarksville Crossing would provide direct access to the South Site. A traffic signal would be installed at the intersection of Silva Valley Parkway and Clarksville Crossing. In the future, when Country Club Drive is extended by the County, Clarksville Crossing's connection to Silva Valley Parkway and the traffic signal would be removed. A public access road would be developed on the South Site within the remainder parcel that was taken by the County in connection with the development of Tong Road. A maintenance agreement between the County and Costco would be created to address the maintenance of the new public access road.

Delivery truck access would be allowed at all driveway locations depending on the size of the delivery truck and direction of travel for both the North Site and South Site. Most trucks delivering to the warehouse retail building would access the site at the southwest driveway on Clarksville Crossing near the receiving docks.

ARCHITECTURE

The warehouse retail building design for the South Site is proposed to be contemporary and would include a variety of massing and appropriate materials for the building, as shown in Figure 2-11. By combining concrete masonry block

and architectural metal panels, Costco intends to create a scale and architectural interest to minimize the visual impact of a large retail warehouse retail building. By use of design techniques such as the location of building materials, landscaping, and the incorporation of varying parapet cap heights, Costco proposes to break the long elevations both horizontally and vertically at the appropriate height to conceal roof top mounted mechanical equipment. The proposed colors are warm natural earth tones. The tire center would be integrated into the main building, with exterior bay doors and interior retail access for sales and service. Pedestrian entries (main and employee) would be oriented to the northwest for customer convenience and the tire center from the other warehouse retail building operational areas.

The South Site truck loading dock is proposed to be located at the southwest corner of the building adjacent to US 50. The bay doors would be equipped with sealed gaskets to limit noise impacts. A smaller on-grade door would also be located on the south side of the building. This door is to receive bread deliveries and small delivery vans/trucks. A transformer and two trash compactors would also be located along the south edge of the building proposed for the South Site. Landscape material would provide screening of this area

PARKING, CIRCULATION, AND LOADING

Two at-grade lots and one below-grade lot together provide approximately 750 to 780 parking stalls. As shown in Figure 2-3, access to the South Site would consist of a signalized intersection on Silva Valley Parkway, as well as driveways provided along Clarksville Road. These driveways would provide customer access to both at-grade and below grade parking stalls. Delivery trucks would access sealed loading docks at the building's southwest corner as shown in Figure 2-3.

LANDSCAPING

As shown in Figure 2-5, landscaping would be designed to integrate multiple bioretention basins, large shade trees, and ornamental plantings. A perimeter buffer of evergreen and deciduous trees would help screen the parking area and building from adjacent roads and properties. 10 oak trees (including 3 Heritage Trees) would be removed as part of site development. The project would comply with the County's Oak Resources Management Plan through payment of the in-lieu fee for impacts on oak woodlands and oak trees.

Individual landscaping areas around parking structure ramps would be planted with shrubs and ornamental grasses, while rows of shade trees would line both the north and west edges of the main surface lot.

LIGHTING

LED parking lot and building-mounted fixtures would be used, generally on light poles up to 36.6 feet in height with cutoff fixtures to limit overspill (Figure 2-7). Parking lot light standards are designed to provide even light distribution for vehicle and pedestrian safety, with lighting fixtures of a "shoe-box" style. The parking lot lights would be timer controlled to limit lighting after the warehouse retail building has closed for the day and most employees are gone from the building. Parking lot lighting would then only remain on to provide security and emergency lighting. Lighting fixtures would also be located on the exterior of the building approximately every 40 feet to provide safety and security. Parking and site lighting would incorporate the use of cutoff lenses to keep light from overflowing beyond the South Site boundaries. The covered lower-level parking structure would have ceiling-mounted fixtures for safety and visibility.

SIGNAGE

The total area of the Costco warehouse retail building signage includes one (1) 175-square-foot sign on the building entry canopy and four (4) signs of either 280 or 251 square feet each on the building elevations, for a total of 1,210 square feet (Figure 2-12). A variance for the entire Costco project signage for exceeding the square-footage amount of building-attached sign area as allowed by the El Dorado County Zoning Code has been requested.

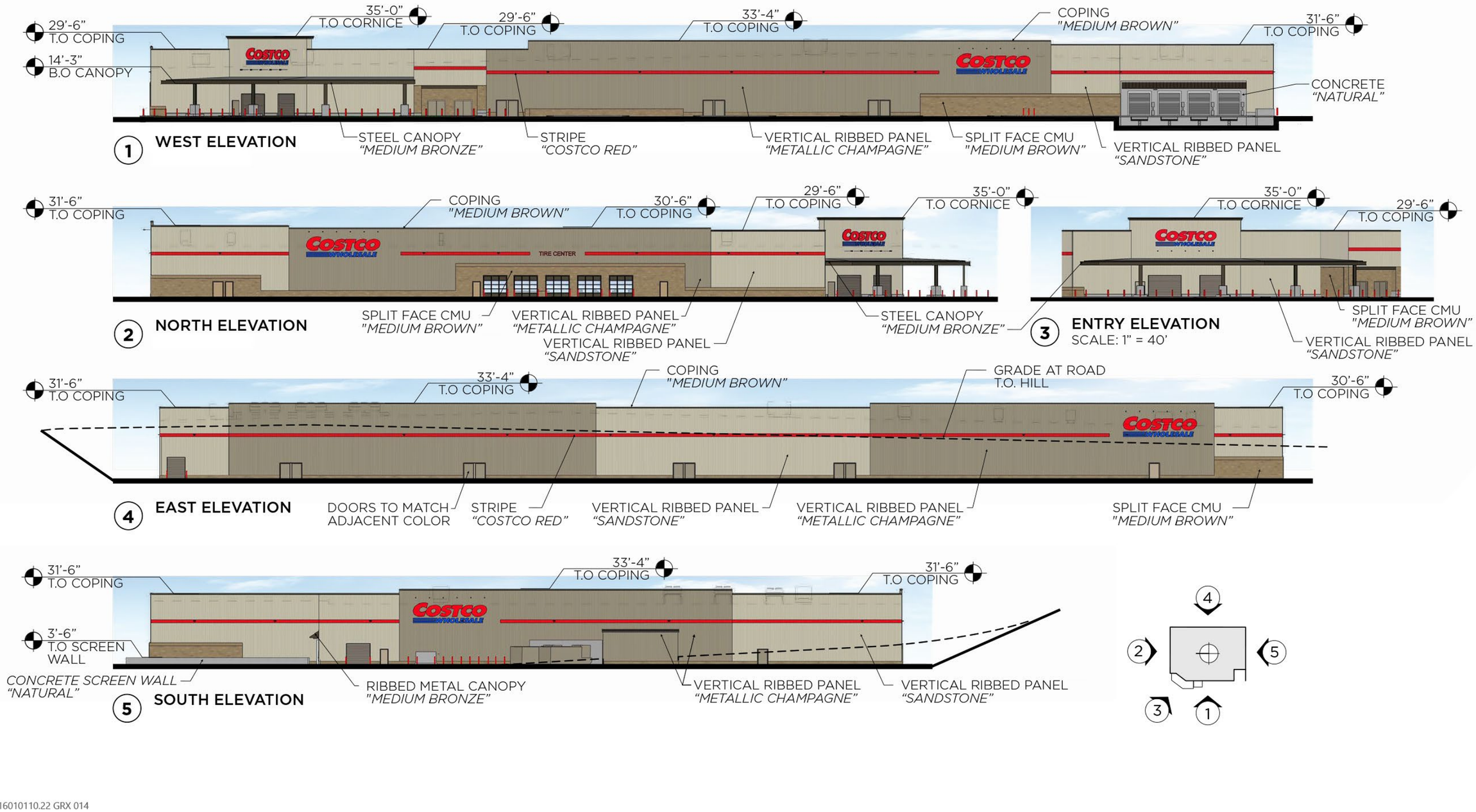
INFRASTRUCTURE

Water and sewer lines would connect to EID's system (Figure 2-13). A 10-inch water pipeline would tie into Clarksville Crossing. Sewer would be tied into existing EID sewer lines at two locations; an 8-inch public sewer connection would be made to an existing manhole on the west side of Clarksville Crossing, and a 6-inch private connection would be made to an existing manhole in Clarksville Crossing near the southerly driveway. The 8-inch public sewer line would be extended through the South Site to provide a sewer connection for the North Site at the signalized intersection on Silva Valley Parkway. Easements would be provided to EID for on-site water and sewer infrastructure.. Storm drainage (12–36-inch pipelines) would route runoff to multiple on-site bioretention basins, eventually discharging into County drainage facilities. PG&E electric and natural gas pipelines would be extended down from Silva Valley Parkway from existing services. The South Site would require approval to annex into EID's service area to obtain water and wastewater services and into the El Dorado Hills Fire Department service area to obtain fire protection services.

CONSTRUCTION

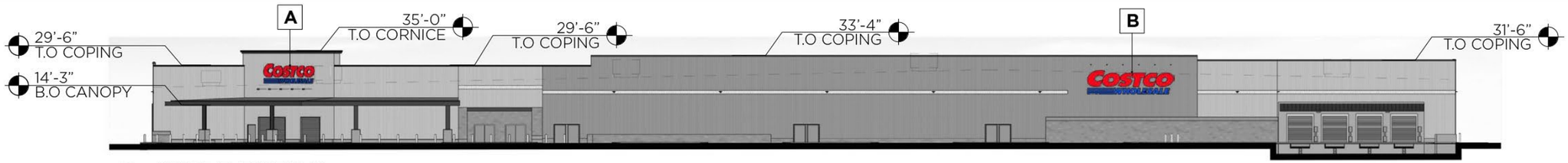
As with the North Site, construction for the South Site is anticipated to last approximately 11 months once construction begins, which is currently estimated to be July of 2026. Figure 2-14 identifies proposed grading plan. Grading of the South Site would involve approximately 67,227 cubic yards of cut and 85,900 cubic yards of fill, with up to 18,673 cubic yards imported. The Draft Geotechnical Study Proposed Costco Wholesale Warehouse and Fuel Facility identifies the following recommendations summarized below that would be implemented as part of site development consistent with the requirements for soil stability and foundations in the California Building Code. The reader is referred to Appendix E for the complete Geotechnical Study.

- Site Preparation
  - Removal of abandoned utilities, existing pavements, foundations, and other existing improvements within the proposed fuel facility area and the excavation(s) backfilled with engineered fill.
  - Roots and vegetative matter in excess of one inch should be removed by screening or raking soils to a minimum depth of 12 inches.
  - To provide uniform support for the proposed warehouse retail building and to reduce the adverse effects of abrupt differential settlement due the cut/fill transition and variability in fill thickness across the building pad, it is recommended that the bedrock should be undercut by at least 6 feet below the finished floor elevation and backfilled with structural fill. In addition, cut/fill transitions are situated below small area of the parking structure's lower level. Beneath the parking structure, it is recommended that the bedrock should be undercut by at least 4 feet below the finished floor elevation and backfilled with structural fill.
  - The construction contractor should anticipate that pumping subgrade conditions may be encountered during site grading activities due to shallow perched groundwater, and the subgrade may need to be stabilized with geotextiles and crushed rock.
- Permanent Slopes
  - Permanent slopes should be constructed at 2:1 (horizontal to vertical) or flatter. Slopes will be subject to erosion and should be planted as soon as practicable. Where new fill slopes are to be constructed on hillsides or existing slopes, the topsoil, colluvial soils, and other materials considered unsuitable should be removed.
  - Where the exposed slope is steeper, the original ground on which fill is to be placed be keyed and benched. The benches should extend in the underlying bedrock.



Source: Image produced and provided by MG2 in 2024; adapted by Ascent in 2025.

Figure 2-11 South Site Elevations



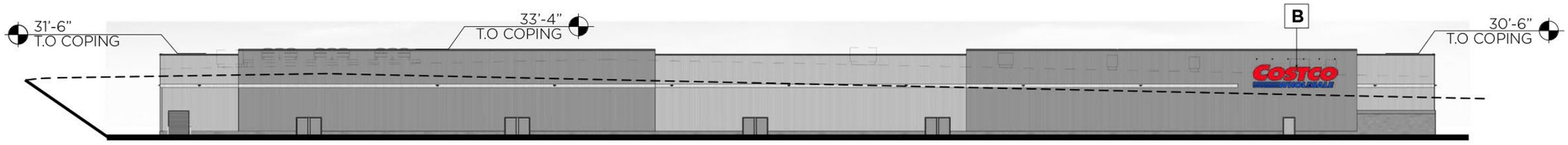
1 WEST ELEVATION



2 NORTH ELEVATION



3 ENTRY ELEVATION
SCALE: 1" = 40'



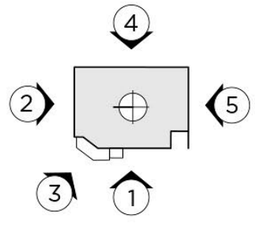
4 EAST ELEVATION



5 SOUTH ELEVATION



6 SIGN PACKAGE



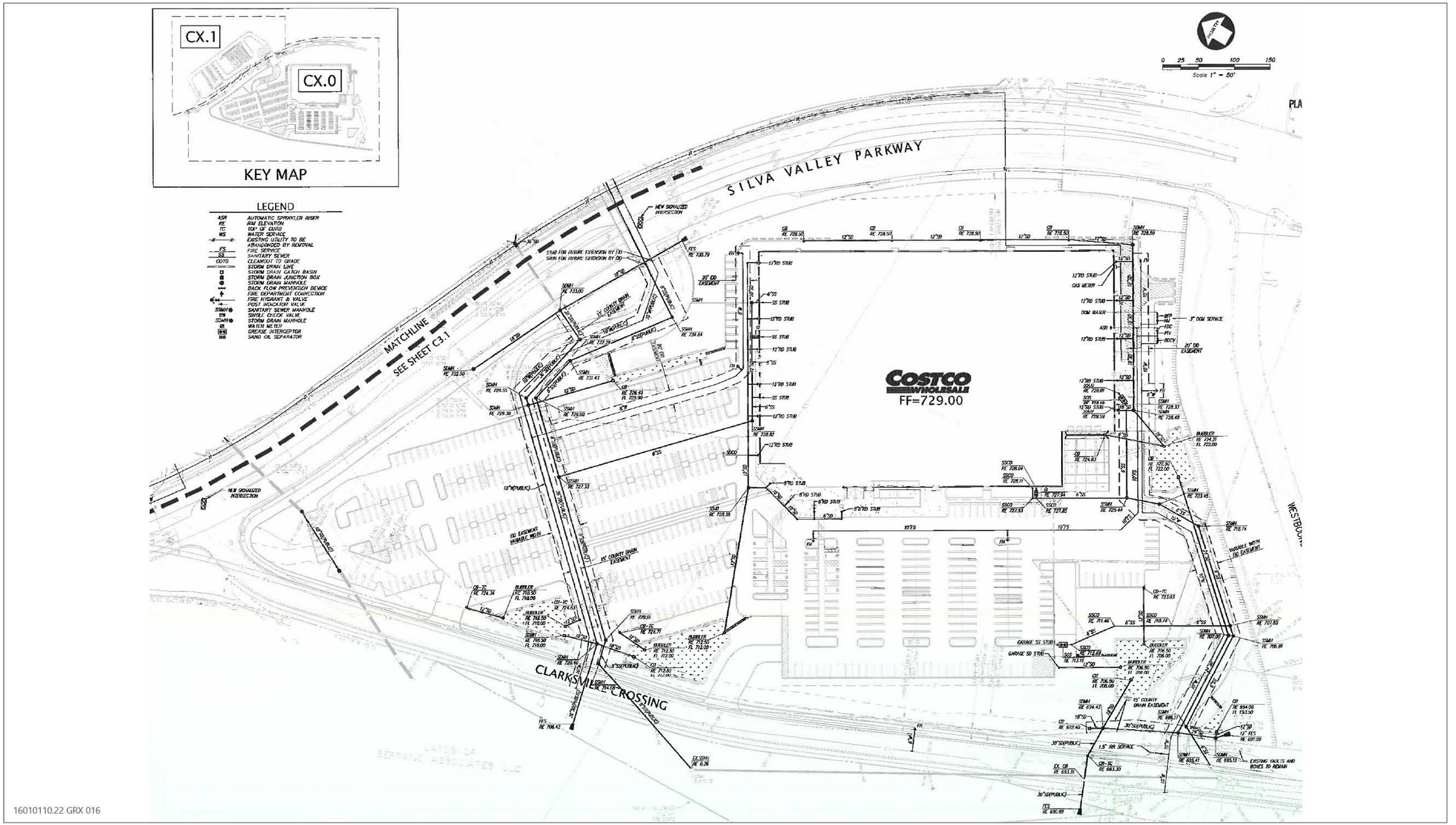
SIGN TABLE

IDENTITY	*QUANTITY*	*SIGN*	*SIZE*	*AREA (EACH)*	*TOTAL SF*
A	1	COSTCO WHOLESALE	5'-0" C/7'-4" X 26'-8"	175 SF	***175 SF***
B	4	COSTCO WHOLESALE	6'-0" C/8'-9" X 32'-0"	251 SF	***1,004 SF***
C	1	TIRE CENTER	17'-4" X 21"	31 SF	***31 SF***
			TOTAL SIGN AREA:		**1,210 SF**

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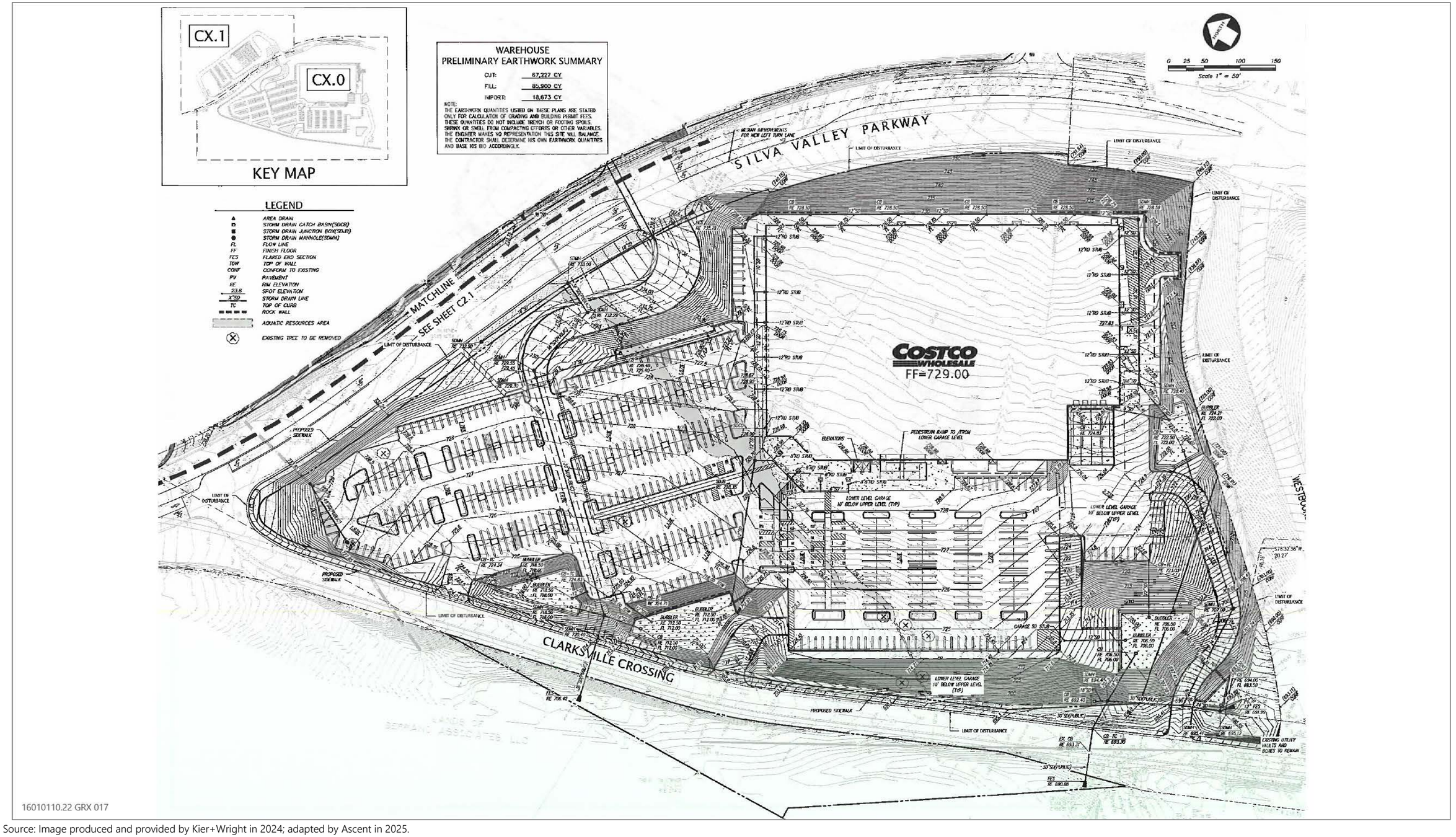
Source: Image produced and provided by MG2 in 2024; adapted by Ascent in 2025.

Figure 2-12 North Site Signage



Source: Image produced and provided by Kier+Wright in 2024; adapted by Ascent in 2025.

Figure 2-13 North Site Infrastructure Improvements



Source: Image produced and provided by Kier+Wright in 2024; adapted by Ascent in 2025.

Figure 2-14 South Site Preliminary Grading Plan

- Foundation Excavations
  - If unsatisfactory material, such as soft or disturbed soil, debris or otherwise unsuitable soil is present at the base of footing excavations, then unsuitable materials should be over excavated and replaced to the depth and extent determined by the geotechnical engineer.
  - Drilling of the pile shafts should be accomplished using conventional heavy-duty excavation equipment maintained in good condition. Concrete should be placed immediately after drilling of the hole is complete. The concrete should be pumped to the bottom of the drilled shaft using a down-hole tremie. If steel casing is used, the casing should be removed as the concrete is placed, but the bottom of the casing should be kept at least 5 feet below the top of the concrete.
- Fill Material and Compaction Criteria
  - The on-site soils, minus debris, organic matter, or other deleterious materials may be used as structural fill. The bedrock material may be crushed, processed, and re-used onsite as structural fill.
  - Periodic test pits should be excavated into each compacted lift to confirm the rock fill is being placed in a uniform, dense manner with no nesting or voids.
  - Compaction of rocky fill should be performed by at least 8 to 10 passes of either a self-propelled, vibratory roller applying at least 20 tons force (dynamic) or a sheepsfoot roller weighing at least 30 tons (static) where at least 90 percent relative compaction is specified. Verification of consolidated material by pot holing during fill/backfill activities should be performed for each lift of compacted rocky fill to confirm a dense fill with no void being achieved. Disking, cross ripping, and/or blending may be required to uniformly moisture-condition soils used for engineered fill.
  - The moisture content of the fill should be maintained at around optimum for sandy soils and at least above optimum for clayey soils during compaction.
- Groundwater
  - If encountered, excavations which encounter perched groundwater will need to be temporarily dewatered.
- Trenches
  - All trench excavations should be braced and shored in accordance with good construction practice and all applicable safety ordinances and codes.
  - Pipe zone backfill (i.e., material beneath and in the immediate vicinity of the pipe) should consist of imported soil less than ¾-inch in maximum dimension. Trench zone backfill (i.e., material placed between the pipe zone backfill and finished subgrade) may consist of onsite soil or imported fill that meets the requirements for engineered fill provided above. If imported material is used for trench zone backfill, recommended to consist of silty sand. In general, gravel and cobble should not be used for trench zone backfill due to the potential for soil migration into the relatively large void spaces present in this type of material and water seepage along trenches backfilled with coarse-grained sand and/or gravel.
- Unstable Subgrade Conditions
  - Subgrade may need to be stabilized with geotextiles and crushed rock or chemical treatment. Additionally, should grading be performed during or following periods of rainfall, the moisture content of the near-surface soils will also be significantly above the optimum moisture content. Typical remedial measures include drying, removal and replacement with crushed rock and geotextile fabric, and chemical treatment.
- Exterior Flatwork
  - Subgrade soils should be moisture conditioned and recompacted or over excavated.
- Pavements
  - Subgrade soils should be in a stable at the time the aggregate base materials are placed and compacted.

- Aggregate base materials should be moisture conditioned to at least the optimum moisture content and compacted to at least 95 percent relative compaction.
- Adequate drainage (both surface and subsurface) should be provided such that the subgrade soils and aggregate base materials are not allowed to become wet.

Construction would occur 7 days per week, with construction occurring 7:00 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on weekends. In addition to these construction hours, it is anticipated that there would be up to 8 days of nighttime construction activities involving concrete pours for the building foundation.

OPERATIONS

The warehouse retail building is proposed to include one member entrance to the main Costco store, which would be located at the northwest corner. The El Dorado Hills Costco is expected to include, among other features, a bakery and sales of baked goods, meat preparation and sales, alcohol sales, food service preparation and sales, pharmacy, optical center with optical exams and retail optical sales, hearing aid testing center, and food court, along with the sales of approximately 4,000 products. The warehouse retail building would include a five-bay tire center with member access via the inside of the main Costco building, which would include tire sales and a tire installation facility.

It is anticipated that the El Dorado Hills Costco project (warehouse retail building and fuel facility) would employ approximately 250 to 300 employees combined. The warehouse retail building would in general be open from 9:00 a.m. to 8:30 p.m. on weekdays and 9:00 a.m. to 7:00 p.m. on weekends. Costco anticipates an average of about 10 to 12 trucks delivering goods per day. The trucks range in size from 26 feet long for single-axle trailers to 70 feet long for double-axle trailers. Receiving time would be from 2:00 a.m. to 1:00 p.m., averaging 2 to 3 trucks per hour, with most of the deliveries completed before 10:00 a.m. Deliveries to the warehouse retail building are made primarily in Costco trucks from its freight consolidation facility in Tracy, California, coming to the site from eastbound US 50. Truck travel routes would use Silva Valley Parkway (from US 50 to Clarksville Road), Clarksville Road (from White Rock Road to Silva Valley Parkway), future Country Club Drive extension west of the South Site to access Clarksville Road, and White Rock Road (from Clarksville Road to US 50).

The tire center receives shipments of tires once or twice a week, with old tires transported off-site for recycling. Seasonal outdoor sales of items such as Christmas trees may occur in the parking area. In addition, promotional vehicle displays may appear outside, but no on-site vehicle sales would occur.

ENERGY EFFICIENCY FEATURES

As noted above, the South Site would obtain electrical and natural gas services from PG&E. The development would comply with energy efficiency standards under California Code of Regulations Title 24. Additional energy efficiency and sustainability measures incorporated into the Costco project are noted below. The reader is referred to Section 3.5, "Energy," for a further discussion of project energy demands.

- Parking lot light standards would be designed in order to provide even light distribution, and utilize less energy compared to a greater number of fixtures at lower heights. The use of LED lamps can provide a higher level of perceived brightness with less energy than other lamps such as high-pressure sodium.
- New and renewable building materials would typically be extracted and manufactured within the region. When masonry and concrete are used, the materials purchased would be local to the project, minimizing the transportation distances and impact to local road networks.
- The use of pre-manufactured building components, including structural framing and metal panels, would help to minimize waste during construction.
- Pre-manufactured metal wall panels with insulation carry a higher R-Value and greater solar reflectivity to help conserve energy as compared to other materials. Building heat absorption would be further reduced by a decrease in the thermal mass of the metal wall when compared to a typical masonry block wall.

- A substantial amount of the proposed landscaping material for the North Site and South Site is climate adapted to the region and would use less water than other common landscape species.
- The irrigation system proposes to include the use of deep root watering bubblers for parking lot trees to minimize usage and ensure that water goes directly to the intended planting areas.
- Storm water management plans are designed to maintain water quality, minimize erosion, and manage storm water discharge rates based on the County requirements.
- High-efficiency restroom fixtures would be installed.
- Commissioning of mechanical systems would occur to ensure that the HVAC systems are performing as designed. HVAC comfort systems would be controlled by a computerized building management system to maximize efficiency.
- HVAC units planned for the South Site are high efficiency direct ducted units, which have phased out the use of HCFC's completely.
- Parking lot and exterior lights would be controlled by a photo sensor and time clock.
- 10 electric vehicle (EV) chargers with DC fast chargers would be installed.
- Lighting would be controlled by the overall project energy management system.
- Energy efficient Transformers (i.e., Square D Type EE transformers) would be used.
- Variable speed motors would be used on make-up air units and booster pumps.
- Gas water heaters would be direct vent and 94 percent efficient or greater.
- Reclaim tanks would be used to capture heat released by refrigeration equipment to heat domestic water in lieu of venting heat to the outside.
- The building structure would be a pre-engineered system that uses 100 percent recycled steel materials and would be designed to minimize the amount of material used.
- Construction waste would be recycled whenever possible.
- Floor sealant would be No-VOC and would represent over 80 percent of the floor area.
- CO_2 would be monitored throughout the warehouse.
- Extensive recycling/reuse program would be implemented including tires, cardboard, grease, plastics, and electronic waste.
- Use of plastic shopping bags would be avoided.
- Suppliers would be required to reduce packaging and consider alternative packaging solutions.
- Distribution facilities would be strategically located to minimize miles traveled for delivery.
- Deliveries would be made in full trucks.
- All Costco trucks would be equipped with an engine idle shut off timers.
- 100 percent renewable electrical power will be supplied by Pacific Gas & Electric (PG&E), as Costco has a Clean Energy Contract with PG&E.

2.4 REQUIRED OFFSITE TRANSPORTATION IMPROVEMENTS

Based on the results of the 2025 El Dorado Hills Costco Warehouse Transportation Impact Analysis prepared by Kittelson & Associates to address consistency with the El Dorado County General Plan Transportation and Circulation Element, the following transportation operational improvements would be constructed by the project in coordination

with the County to address compliance with the El Dorado County Transportation and Circulation Element policies TC-Xd, TC-Xe, and TC-Xf.

- Install 150-foot dual northbound left turn lanes at the proposed signalized intersection of Silva Valley Parkway and the project driveway.
- The addition of a northbound right turn lane, change the right turn phase to be permissive and overlap, and increase the westbound left turn storage length at the intersection of White Rock Road and Valley View Parkway-Vine Street.

2.5 POTENTIAL PERMITS AND APPROVALS REQUIRED

Approvals and permits required for the project would include, but may not be limited to, the following:

2.5.1 El Dorado County (Lead Agency)

- Certification of the Final EIR.
- Planned Development Permit (PD15-0001) - Covers site plan, building design, preliminary landscape plan, storm drainage, and grading.
- Conditional Use Permit - Allows the tire center, outdoor vehicle display, and seasonal outdoor sales (e.g., Christmas trees). Could authorize nighttime construction hours (e.g., concrete pours) if needed.
- Variance for Building-Attached Signage Area - Allows building-attached signage area to exceed standard zoning regulations. This includes signage on all four sides of the fueling canopy of 84 square feet and multiple signs on the warehouse retail building elevations totaling 1,210 square feet (Figures 2-8 and 2-12). The total project signage area of 1,294 square feet exceeds the maximum area normally permitted for large commercial projects in the CR zone.
- Tree Permit - Required for removal of up to 13 protected oak trees, including three Heritage Trees, with in-lieu fees or replanting to mitigate losses.
- Lot Line Adjustment - Finalize boundary lines for parcels on the North and South Sites.

2.5.2 Federal

- Wetland fill permitting by the US Army Corps of Engineers under Section 404 of the federal Clean Water Act.
- US Bureau of Reclamation approval of a change in place of use for EID's federally contracted water supply from Folsom Lake.

2.5.3 State

- Water quality certification by the Central Valley Regional Water Quality Control Board under Section 401 of the federal Clean Water Act.
- Streambed alteration agreement by the California Department of Fish and Wildlife under Section 1602 of the California Fish and Game Code.
- Coverage under Statewide National Pollutant Discharge Elimination System Construction General Permit for Stormwater Discharges (Construction General Permit Order 2022-0057-DWQ).

2.5.4 Local

- El Dorado Local Agency Formation Commission approval of annexation of the entire 43.26-acre site (North Site and South Site) to EID, and El Dorado Hills Fire Department.
- EID annexation approval and approval of water and wastewater improvements.
- EID (associated US Bureau of Reclamation action) for water supply service and wastewater service for both North Site and South Site.
- El Dorado Hills Fire Department annexation approval and approval of the project's Wildfire Safe Plan.
- El Dorado Air Quality Management District permitting approval for the North Site fuel facility.

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3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

APPROACH TO THE ENVIRONMENTAL ANALYSIS

This Draft EIR evaluates and discloses the environmental impacts associated with the proposed EDH Costco Project, in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulation, Title 14, Chapter 3, Section 1500, et seq.). Sections 3.1 through 3.17 of this Draft EIR present a discussion of regulatory background, existing conditions, environmental impacts associated with construction and operation of the project, mitigation measures to reduce the level of impact, and residual level of significance (i.e., after application of mitigation, including impacts that would remain significant and unavoidable after application of all feasible mitigation measures). Issues evaluated in these sections consist of the environmental topics identified for review in the notice of preparation (NOP) prepared for the project (see Appendix A of this Draft EIR). Chapter 4 of this Draft EIR, "Cumulative Impacts," presents an analysis of the project's impacts considered together with those of other past, present, and probable future projects producing related impacts, as required by Section 15130 of the State CEQA Guidelines. Chapter 5, "Alternatives," presents a reasonable range of alternatives and evaluates the environmental effects of those alternatives relative to those of the proposed project, as required by Section 15126.6 of the State CEQA Guidelines. Chapter 6, "Other CEQA Sections," includes an analysis of the project's growth inducing impacts, as required by Section 21100(b)(5) of CEQA.

"Baseline" is the time and conditions used as the point of comparison for determining the significance of a proposed project's environmental effects. The EIR uses February 2025 as the baseline to reflect existing environmental conditions, unless otherwise specified and explained in relation to a specific topic addressed in the EIR. This is consistent with State CEQA Guidelines recommendation that the date of issuance of the revised notice of preparation (NOP) (February 28, 2025) should normally constitute the baseline conditions upon which comparison of the project should be based (CEQA Guidelines, Section 15125(a)).

Sections 3.1 through 3.17 of this Draft EIR each include the following components.

Regulatory Setting: This subsection presents information on the laws, regulations, plans, and policies that relate to the issue area being discussed. Regulations originating from the federal, state, and local levels are each discussed as appropriate.

Environmental Setting: This subsection presents the existing environmental conditions on the project site and in the surrounding area as appropriate, in accordance with State CEQA Guidelines Section 15125. The discussions of the environmental setting focus on information relevant to the issue under evaluation. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the locations where impacts would be expected to occur.

Environmental Impacts and Mitigation Measures: This subsection presents thresholds of significance and discusses significant and potentially significant effects of the project on the existing environment, including the environment beyond the project boundaries, in accordance with State CEQA Guidelines Section 15126.2. The methodology for impact analysis is described, including technical studies upon which the analyses rely. The thresholds of significance are defined and thresholds for which the project would have no impact are disclosed and dismissed from further evaluation. Project impacts and mitigation measures are numbered sequentially in each subsection (Impact 3.2-1, Impact 3.2-2, Impact 3.2-3, etc.) and includes subsection impact discussions associated with the proposed Costco project and the future development of the North Site Remainder Area that is addressed in the Draft EIR as a result of proposed annexation of the entire North Site into the El Dorado Irrigation District and the El Dorado Hills Fire Department service areas. A summary impact statement precedes a more detailed discussion of each environmental impact. The discussion includes the analysis, rationale, and substantial evidence on which conclusions are based. The determination of level of significance of the impact is presented in bold text. A "less-than-significant" impact is one that would not result in a substantial adverse change in the physical environment. A "potentially significant" impact or "significant" impact is one that would result in a substantial adverse change in the physical environment; both are

treated the same under CEQA in terms of procedural requirements and the need to identify feasible mitigation. Mitigation measures are identified, as feasible, to avoid, minimize, rectify, reduce, or compensate for significant or potentially significant impacts, in accordance with the State CEQA Guidelines Section 15126.4. Unless otherwise noted, the mitigation measures presented are recommended in the EIR for consideration by the State to adopt as conditions of approval.

Where an existing law, regulation, or permit specifies mandatory and prescriptive actions about how to fulfill the regulatory requirement as part of the project definition, leaving little discretion in its implementation, and would avoid an impact or maintain it at a less-than-significant level, the environmental protection afforded by the regulation is considered before determining impact significance. Where existing laws or regulations specify a mandatory permit process for future projects, performance standards without prescriptive actions to accomplish them, or other requirements that allow substantial discretion in how they are accomplished, or have a substantial compensatory component, the level of significance is determined before applying the influence of the regulatory requirements. In this circumstance, the impact would be potentially significant or significant, and the regulatory requirements would be included as a mitigation measure.

This subsection also describes whether mitigation measures would reduce project impacts to less- than-significant levels. Significant-and-unavoidable impacts are identified as appropriate in accordance with State CEQA Guidelines Section 15126.2(b). Significant and unavoidable impacts are also summarized in Chapter 6, "Other CEQA Sections."

References: The full references associated with the references cited in Sections 3.1 through 3.17 are presented in Chapter 8, "References," organized by chapter or section number.

3.1 AESTHETICS

This section provides a description of existing visual conditions, meaning the physical features that make up the visible landscape, and an assessment of changes to those conditions that would occur from implementation of the project. The effects of the project on the visual environment are generally defined in terms of the project's physical characteristics and potential visibility, the extent to which the project's presence would change the perceived visual character and quality of the environment, and the expected level of sensitivity that the viewing public may have where the project would alter existing views. The "Methodology" discussion, below, provides further detail on the approach used in this evaluation.

Comments received on the Notice of Preparation (NOP) expressed concerns regarding changes to views from neighboring properties, visibility of project components from existing residences, potential changes to the community character, architectural style and design consistency with the surrounding community, tree removal on the project site, and potential light pollution caused by the project. These comments are addressed where appropriate throughout this section. The NOP and comments submitted in response to it are included in Appendix A.

3.1.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to aesthetics, light, and glare are applicable to the Project.

STATE

California Scenic Highway Program

California's Scenic Highway Program, which was created by the California Legislature in 1963, is managed by the California Department of Transportation. The goal of this program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to highways. A highway may be designated "scenic" depending on how much of the natural landscape travelers can see, the scenic quality of the landscape, and the extent to which development intrudes on travelers' enjoyment of the view. The project site is not located within view of a state scenic highway (Caltrans 2025).

LOCAL

El Dorado County General Plan

The El Dorado County General Plan (El Dorado County 2019) includes policies related to visual resources. The following objectives and policies from the El Dorado County General Plan are relevant to the project:

- **Objective 2.3.1:** Topography and Native Vegetation - Provide for the retention of distinct topographical features and conservation of the native vegetation of the County.
  - **Policy 2.3.1.2:** The Zoning Ordinance shall include consideration of a standard for parking lot shading and provision of street trees in all new development Projects.
- **Objective 2.5.1:** Physical and Visual Separation - Provision for the visual and physical separation of communities from new development.
  - **Policy 2.5.1.1:** Low intensity land uses shall be incorporated into new development Projects to provide for the physical and visual separation of communities. Low intensity land uses may include any one or a combination of the following: parks and natural open space areas, special setbacks, parkways, landscaped roadway buffers, natural landscape features, and transitional development densities.

- **Objective 2.5.2:** Commercial Facilities - Designate lands to provide greater opportunities for El Dorado County residents to shop within the County.
  - **Policy 2.5.2.1:** Neighborhood commercial centers shall be oriented to serve the needs of the surrounding area, grouped as a clustered, contiguous center where possible, and should incorporate but not be limited to the following design concepts as further defined in the Zoning Ordinance:
    - Maximum first floor building size should be sized to be suitable for the site;
    - Allow for mixed use developments;
    - No outdoor sales or automotive repair facilities;
    - Reduced setback with landscaping and walkways;
    - Interior parking, or the use of parking structure;
    - Bicycle access with safe and convenient bicycle storage area;
    - On-street parking to reduce the amount of on-site parking;
    - Community bulletin boards/computer kiosks;
    - Outdoor artwork, statues, etc., in prominent places; and
    - Pedestrian circulation to adjacent commercial centers.
  - **Policy 2.5.2.2:** New commercial development should be located nearby existing commercial facilities to strengthen existing shopping locations and avoid strip commercial.
  - **Policy 2.5.2.3:** New community shopping centers should also contain the applicable design features of Policy 2.5.2.1.
- **Objective 2.8.1:** Lighting Standards - Provide standards, consistent with prudent safety practices, for the elimination of high intensity lighting and glare.
  - **Policy 2.8.1.1:** Development shall limit excess nighttime light and glare from parking area lighting, signage, and buildings. Consideration will be given to design features, namely directional shielding for street lighting, parking lot lighting, sport field lighting, and other significant light sources, that could reduce effects from nighttime lighting. In addition, consideration will be given to the use of automatic shutoffs or motion sensors for lighting features in rural areas to further reduce excess nighttime light.

El Dorado County Zoning Ordinance

The County Zoning Ordinance (Title 130 of the County Code) regulates land development and includes standards related to aesthetics. Section 130.22.030 establishes height standards and restricts buildings to 50 feet in height with the exception of accessory/architectural features that may be up to 20 percent higher than the height requirements (Section 130.30.060[C]). Outdoor lighting is required to be located, adequately shielded, and directed such that no direct light falls outside the property line, or into the public right-of-way (Section 130.34.020).

El Dorado County Interim Design Standards and Guidelines for Multi-Family, Mixed Use and Commercial Development

The El Dorado County Interim Design Standards and Guidelines (IDSG) was adopted and approved by the Board of Supervisors in December 2024. The IDSG provides specific performance-based standards and guidelines to facilitate the development of high-quality, distinct, and cohesive multi-family, mixed use, and commercial development in El Dorado County that considers and integrates with the built and natural environments. The IDSG provides key design requirements and incorporates architectural style requirements stemming from the County's historical development patterns (El Dorado County 2024).

3.1.2 Environmental Setting

VISUAL CHARACTER OF THE PROJECT SITE

The overall project site is located on approximately 43.26 acres in an unincorporated area of El Dorado County, in the southeastern portion of the El Dorado Hills community. The project site is currently undeveloped and dominated by non-native annual grassland and scattered oak trees (Helix 2025a; 2025b). The trees and other more-visually prominent vegetation are concentrated on the west side of the South Site and the northwestern area of the North Site. The site is visibly sloped downward from the northeast to the southwest, and drainages are visible as vegetated linear depressions. There is a paved portion of Tong Road leading from Clarksville Road into the South Site. There are also wood post and barbed wire fencing and foundations, landscaping, wells, and walls associated with a house (Helix 2025c).

The project site and immediate area lack distinctive scenic resources and distinguishable topographic, geologic, or other natural features. Existing roadways (e.g., Silva Valley Parkway, Clarksville Crossing, and Tong Road), single family homes, and the Capital Korean Presbyterian Church are noticeable features in project area views.

Prominent public viewpoints of the site are shown in Figure 3.1-1. As shown in Figures 3.1-2 through 3.1-6, the project site is predominately visible from Silva Valley Parkway which divides the North and South sites. Other public views of the site included from to Clarksville Crossing, which is adjacent to the western project boundary of the South Site. Clarksville Crossing is a public roadway approximately 0.3 miles in length from US 50 to the Clarksville Crossing/Silva Valley Parkway intersection, and has no public land uses (e.g., parks) or residents along its corridor. Public views from Clarksville Crossing into the project site are partially obstructed by existing vegetation, oak woodlands, and topography. The project site is visible from a public trail west of the project site as shown in Figure 3.1-2.

Motorists traveling along Silva Valley Parkway have views of the project site for a distance of approximately 0.50 miles between US-50 and Oak Meadow Elementary School. This viewshed along this segment of Silva Valley Parkway provides for a 40 second duration of views of the project site (assuming a vehicle is traveling the posted speed limit of 45 miles per hour). These public views along Silva Valley Parkway are partially obstructed by native vegetation, such as oak woodland conditions, and intervening topography. Public views of the project site from Tong Road are also obstructed due to the existing landscape including a steep berm on either side of the road. Additionally, the project site is marginally visible from US 50, the nearest major highway, as existing development, and a steep berm alongside the highway obscure views of the project site. There are public views from Oak Meadow Elementary along the northern border of the North Site.

Private views of the project site are available from existing residential lots along the project's northern boundary. These private views vary from open view conditions to obstructed view conditions due to onsite oak woodland conditions.



Source: Ascent in 2025.

Figure 3.1-1 Viewpoints Locations



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-2 View 1 from Trail West of Project Site



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-3 View 2 North of Project Site from Silva Valley Parkway West of the Project Site



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-4 View 3 from Single Family-Residential Subdivision and Oak Meadow Elementary North of North Site



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-5 View 4 from Eastbound US 50 West of the Project Site



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-6 View 5 from Westbound US 50 East of the Project Site

VISUAL CHARACTER OF THE SURROUNDING AREA

The project site is located in a suburban area of the El Dorado Hills community. Existing commercial and residential development is located along the US 50 corridor from the Sacramento/El Dorado County boundary to the Silva Valley Parkway/US 50 interchange. Large-scale commercial development visible along the US 50 corridor include Town Center and the Raley's O-N-E Market shopping center. Single-family residential uses and undeveloped hillsides make up the visual character surrounding the project site. The Silva Valley Parkway/US 50 interchange is also a substantial visual feature in the project area. Additionally, power poles and power lines are located to the south of the project site, leading to the substation south of US 50. These poles, as well as lighting and signage associated with the Silva Valley Parkway/US 50 Interchange, visually encroach into the skyline.

LIGHT AND GLARE CONDITIONS

No sources of light or glare are present on the project site. Sources of nighttime lighting around the site are minimal. Residential neighborhoods and units north and west of the project site create nighttime light from interior and exterior lights that can be seen from the site. Additionally, occasional glare and light are created by vehicles accessing roads surrounding the project site, as well as limited street lighting along Silva Valley Parkway. However, there are no reported occurrences of excessive daytime or nighttime glare in the project vicinity. The overall levels of nighttime lighting in the area are low.

3.1.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The methodology used for this assessment of impacts on aesthetics, light, and glare compares the existing built and natural environment to the future built and natural environment and addresses the visual changes that would result from implementation of the proposed project. Key public view corridors were examined, and existing views to project site were compared to those that would be expected to occur in the future with implementation of the proposed project. Pursuant State CEQA Guidelines Appendix G, Section I (Aesthetics), the analysis of the alteration of the visual character of a project area is limited to impacts on public views. The California Court of Appeal's decision for Mira Mar Mobile Community v. City of Oceanside (119 Cal.App.4th 477) confirmed within the context of CEQA, impacts related to visual character or quality shall consider the protection of public views.

Figures 3.1-7 through 3.1-11 provide simulations of the proposed Costco project from public views along surrounding roadways. These visual simulations are used to determine if the project would have a significant visual effect.

THRESHOLDS OF SIGNIFICANCE

An impact on aesthetics, light, and glare is considered significant if implementation of the project would do any of the following:

- have a substantial adverse effect on a scenic vista;
- damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of public views of the site and its surroundings;
- conflict with applicable zoning and other regulations governing scenic quality; and/or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

ISSUES NOT DISCUSSED FURTHER

Scenic Vistas

A scenic vista is considered a view of an area that has remarkable scenery or a natural or cultural resource that is indigenous to the area. The project site is currently vacant and is located in a semi-developed, suburban setting. The project site and surrounding areas do not contain remarkable scenery or views of natural areas that would be considered a scenic vista. There would be no impact. This issue is not discussed further.

Scenic Highways

No designated or eligible state scenic highways are in the vicinity of the project site, and the site is not visible from any officially designated or eligible state scenic highway. The nearest highway subject to this program, State Route 49, an eligible state scenic highway, is located approximately 10.8 miles east of the project site. Impacts on scenic highways are not discussed further in this EIR.



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-7 Visual Simulation 1 from Trail West of the Project Site



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-8 Visual Simulation 2 from Silva Valley Parkway West of Project Site



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-9 Visual Simulation 3 of Proposed Fuel Facility from Single Family-Residential Subdivision and Oak Meadow Elementary from North of the North Site



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-10 Visual Simulation 4 of Project Site from Eastbound US 50



Source: Image produced and provided by MG2 in 2025; adapted by Ascent in 2025.

Figure 3.1-11 Visual Simulation 5 of Project Site from Westbound US 50

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings

Development of the proposed project would result in a membership-only Costco warehouse retail building and related site improvements, including a member-only fuel facility, an employee parking lot, and a below-grade parking structure. Implementation of the project would alter views by adding built-environment elements onto undeveloped land. However, these elements would not substantially alter the existing urban and suburban visual character of the surrounding area. Elements of the project's design, including building height, color palette, architectural massing and detailing, landscaping, and setbacks have been designed to blend with the visual character of the surrounding environment. This impact would be **less than significant**.

Implementation of the project would result in the conversion of the project site from an undeveloped condition to developed with commercial buildings, parking areas, ornamental landscaping, and exterior lighting.

Costco Project

Development of the Costco project would include a Costco fuel facility and employee parking lot on the North Site, while the South Site would include the Costco warehouse retail building and associated parking area. The Costco project would introduce commercial buildings, parking areas, and new landscaped features to a site that currently appears primarily as grassland, but it is within the developed urban and suburban area of the El Dorado Hills community. As such, the change would be visually consistent with the urban and suburban setting of the El Dorado Hills community.

The Costco warehouse retail building would be situated in the southeast corner of the South Site, where the surrounding street elevations are higher, thereby helping to reduce its apparent height from nearby viewpoints. Architectural massing would be softened through the use of vertical and horizontal articulation, multiple façade materials (including split-face concrete masonry units (CMU), and ribbed metal panels in muted earth tones), and a neutral color palette as shown in Figure 2-11. The warehouse retail building would also be buffered from single-family residential uses to the north by intervening open space areas and distance consistent with General Plan Objective 2.5.1 and associated Policy 2.5.1.1. The South Site design would also provide a parking structure, pedestrian facilities, and would prohibit permanent outdoor sales consistent with General Plan Policy 2.5.2.1 and 2.5.2.3.

Landscaping on the South Site would include evergreen trees, shrub rows, and ornamental plantings throughout the site and along project boundaries. Substantial perimeter landscaping would be provided along Silva Valley Parkway and Clarksville Crossing to screen parking areas and soften views of structures. Approximately 36 percent of the site would be landscaped, and 56 percent of the parking area would be shaded by trees after 15 years, exceeding the County's 50 percent standard under General Plan Policy 2.3.1.2. Loading and utility areas would be screened with landscaping, walls, and fencing to reduce visual clutter.

Landscaping on the North Site would also include perimeter planting designed to screen the fueling facility and employee parking, and would include evergreen trees, shade trees of varying species, and layered shrubs, particularly along Silva Valley Parkway, to create a landscaped buffer between the site and the roadway. Equipment, utility boxes, and other non-architectural features would be screened using landscaping walls, and/or fences. The fueling facility would also be buffered from single-family residential uses, Oak Meadow Elementary School, and Capital Korean Presbyterian Church by intervening open space areas and/or distance consistent with General Plan Objective 2.5.1 and associated Policy 2.5.1.1.

As illustrated in Figures 3.1-7 through 3.1-10, portions of the project would be visible from nearby public views and roadways such as Clarksville Crossing and Silva Valley Parkway. However, public views from more distant vantage points, including U.S. 50, are largely obstructed by existing development, infrastructure, topography, and proposed landscaping. Project structures would not be prominent features in the local landscape and would be perceived as part of the existing suburban context. Given the brief duration of motorists' views, and the project's low profile, landscaping, and architectural features, the visual change would not substantially affect the existing landscape

character of the project area and the El Dorado Hills community or degrade public views. Off-site transportation improvements identified in Chapter 2, "Project Description," would consist of the turn-lane improvements at existing intersections that would visually appear similar to existing roadway facilities in the El Dorado Hills community. This impact would be **less than significant**.

It is acknowledged that site development would alter the visual character of private views for single-family residences to the north and west of the project site. However, changes to private views are not considered a significant environmental impact under CEQA.

North Site Remainder Area

As detailed in Chapter 2, "Project Description," the North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development. As site specific development plans have not been proposed for this site, development on the North Site Remainder Area has not been included in the visual simulations prepared for the EIR., As noted above, the North Site Remainder Area is located within urban and suburban areas of the El Dorado Hills community. Existing commercial and residential development is located along the US 50 corridor from the Sacramento/El Dorado County boundary to the Silva Valley Parkway/US 50 interchange that includes large-scale commercial development visible along the US 50 corridor such as the Town Center and the Raley's shopping center. Any development within this area would be subject to County design review and applicable zoning and General Plan requirements, which would ensure consistency with the visual character of the surrounding area. This impact would be **less than significant**.

Conclusions

Development of the Costco Project and the North Site Remainder Area would convert a primarily grassland landscape into developed commercial. While this change would be noticeable from nearby public roads and public viewpoints, the project's siting, building design, landscaping, and integration with surrounding urban and suburban development in the area would ensure that it does not substantially degrade public views or visual character. The project would comply with applicable El Dorado County General Plan policy provisions, the County Zoning Ordinance, and the 2024 Interim Design Standards. Therefore, impacts related to visual character and quality would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.1-2: Effects of Light and Glare

The project would introduce new sources of light onto the existing, vacant project site. Light spillover onto adjacent land uses would be reduced by using less powerful lights on fixtures at the edge of a property. Reflective, glare causing materials would not be used. All fixtures would be downcast and include cutoff lenses which would reduce light spillover onto residential areas. Therefore, this impact would be **less than significant**.

Implementation of the overall project would introduce new lighting and glare potential from commercial buildings and parking areas.

Costco Project

The project site is currently vacant and is devoid of existing light and glare sources. However, the adjacent residential areas, roadways, and commercial areas located in proximity to the project site include interior and exterior lighting around buildings, facilities, and surface parking lots, which introduce lighting onto the parcel and the surrounding areas. Development of the proposed project would add new nighttime lighting, which would increase nighttime illumination on the site where none currently exists. It would also contribute to areawide nighttime lighting because this lighting could spillover on adjacent areas and residences north and west of the site, resulting in adverse nighttime lighting impacts. However, the project is designed to comply with Title 130, Chapter 130.34 (Outdoor Lighting) of County Code, which requires that outdoor lighting be located, shielded, and directed such that no direct light falls outside the property line or into the public right-of-way. Additionally, the project would use non-reflective

materials and low-glare finishes, such as ribbed metal panels in muted colors, split-face CMU, and natural concrete, to eliminate glare. This would be consistent with General Plan Objective 2.8.1 and associated Policy 2.8.1.1. These features would prevent the introduction of substantial light or glare that could adversely affect adjacent land uses.

As shown in Figure 3.1-12 identifies the proposed lighting plan and projected illumination levels on the North Site and South Site in foot-candles.[1] Project lighting fixtures would be designed to minimize spillover and skyglow as shown in Figure 3.1-12. The Costco parking lot would be illuminated with full cutoff LED fixtures on poles (shoebox style), designed to provide even light distribution for vehicle and pedestrian safety. The parking lot lights would be time-controlled to limit illumination after the warehouse retail building has closed, with only security and emergency lighting remaining active during nighttime hours. Lighting fixtures would also be mounted on the building exterior approximately every 40 feet to provide safety and security lighting. Cutoff lenses would be used on all parking and site lighting to prevent light overflow beyond the site boundaries. Lights on the Fuel Facility would be recessed into the canopy to provide both lighting during business hours and reduced-level lighting for security after hours. This impact would be **less than significant**.

North Site Remainder Area

As detailed in Chapter 2, "Project Description," the North Site Remainder Area is designated for commercial uses and is assumed to include 138,000 square feet of future development. Future development within this area would be subject to County lighting standards described above which would ensure that any proposed development would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. This impact would be **less than significant**.

Conclusions

As detailed above, the Costco project and future development within the North Site Remainder Area would be designed and constructed in accordance with applicable County lighting standards. Costco project features such as downcast, fully shielded LED fixtures, recessed canopy lighting, and the use of non-reflective exterior materials would minimize light spillover and glare. As a result, the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. This impact would be **less than significant**.

Mitigation Measures

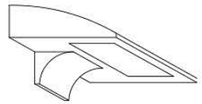
No mitigation is required for this impact.

[1] A footcandle is a measurement of light intensity in an area. One foot candle is defined as the illumination on a one-square-foot surface from a consistent light source. One foot candle is enough light to saturate a one-foot square with one lumen of light.

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FUEL FACILITY, CANOPY – LED (GAL)
NO SCALE



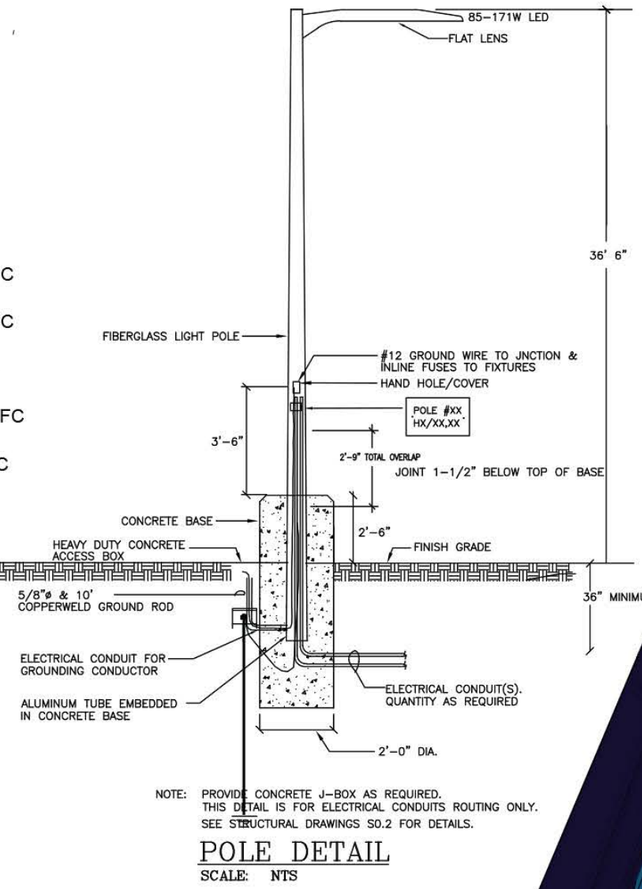
TYPICAL WALL PACK DETAIL (W)
SCALE: NTS

5.0 + FC
2.5 FC - 5.0 FC
1.0 FC - 2.5 FC
0.5 FC - 1 FC
0.25 FC - 0.5 FC
0 FC - 0.25 FC

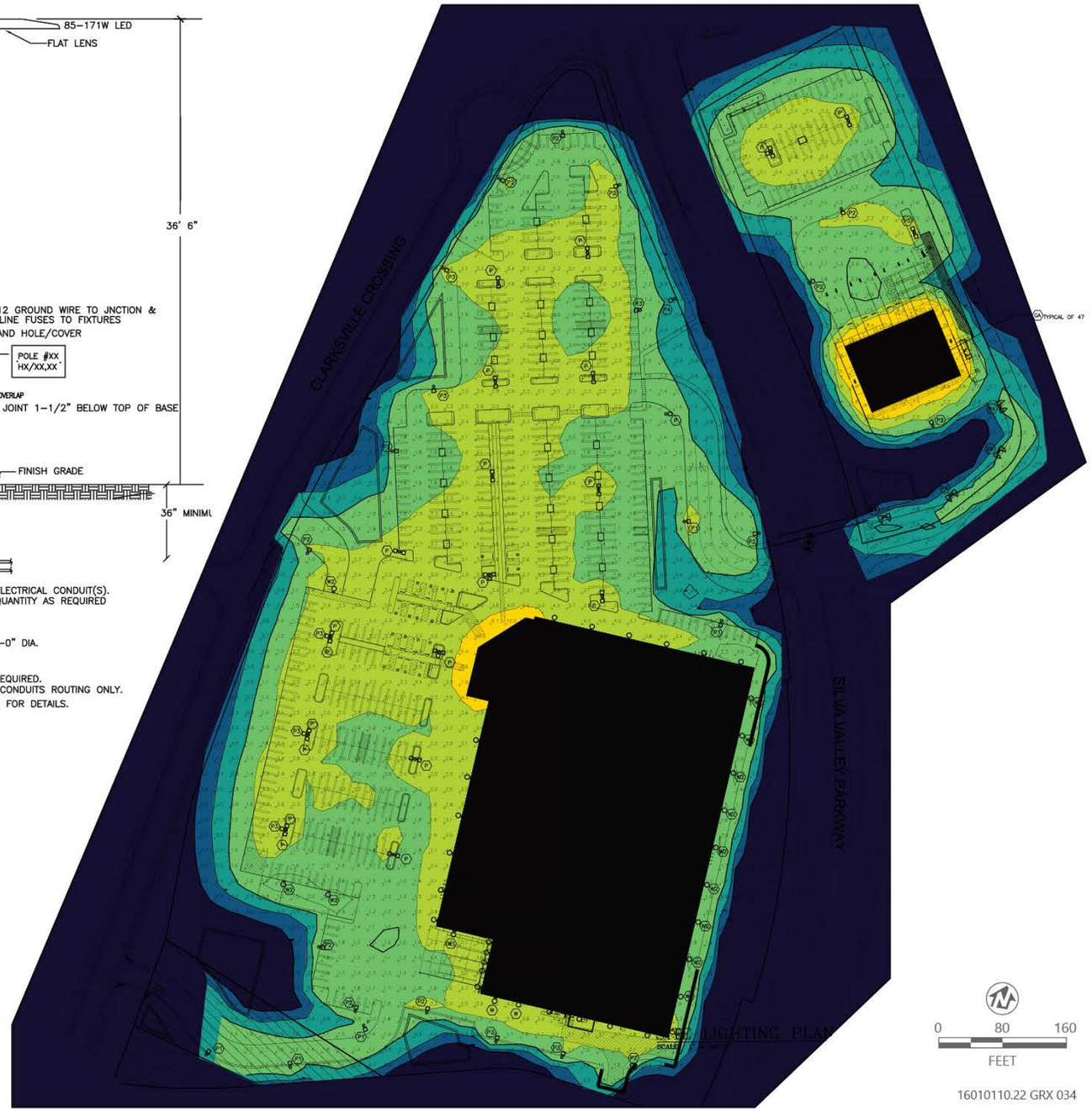
FIXTURE DESCRIPTION

P	COOPER GALN–SA4B–740–U–5WQ–BZ, 164W TYPE 5 DISTRIBUTION. FIBERGLASS POLE 36'–6" ABOVE GRADE, WITH 2'–6" BASE.
P1	COOPER GALN–SA3B–740–U–SL3–HSS–BZ, 121W TYPE 3 DISTRIBUTION. FIBERGLASS POLE 36'–6" ABOVE GRADE, WITH 2'–6" BASE.
P2	COOPER GALN–SA3B–740–U–SL4–HSS–BZ, 121W TYPE 4 DISTRIBUTION. FIBERGLASS POLE 36'–6" ABOVE GRADE, WITH 2'–6" BASE.
P3	COOPER GALN–SA2B–740–U–SL3–HSS–BZ, 82W TYPE 3 DISTRIBUTION. FIBERGLASS POLE 36'–6" ABOVE GRADE, WITH 2'–6" BASE.
P4	COOPER GALN–SA1B–740–U–SL4–BZ, 44W TYPE 4 DISTRIBUTION. FIBERGLASS POLE 36'–6" ABOVE GRADE, WITH 2'–6" BASE.
P5	COOPER GALN–SA2B–740–U–5NQ–BZ, 82W TYPE 5 DISTRIBUTION. FIBERGLASS POLE 36'–6" ABOVE GRADE, WITH 2'–6" BASE.
W	LITHONIA DSXW2 LED 40K 30C 530 T2M, 54W LED, 17' MOUNTING HEIGHT
W1	LITHONIA DSXW2 LED 40K 30C 530 T4M, 54W LED, 17' MOUNTING HEIGHT
W2	LITHONIA DSXW2 LED 40K 30C 350 T2M, 36W LED, 17' MOUNTING HEIGHT
W3	LITHONIA DSXW2 LED 40K 20C 350 TFTM, 25W LED, 17' MOUNTING HEIGHT
GA	96W LED, SURFACE SYMETRIC DOWN LIGHT, FLAT LENS, 18' MOUNTING HEIGHT
L	91W LED, SURFACE SYMETRIC DOWN LIGHT, FLAT LENS, 18' MOUNTING HEIGHT

ALL OUTDOOR LIGHTING SHALL BE LOCATED, ADEQUATELY SHIELDED, AND DIRECTED SUCH THAT NO DIRECT LIGHT FALLS OUTSIDE THE PROPERTY LINE, OR INTO THE PUBLIC RIGHT–OF–WAY.



POLE DETAIL
SCALE: NTS



Source: Image produced and provided by TE Inc. in 2025; adapted by Ascent in 2025.

Figure 3.1-12 Proposed Lighting Plan and Extent of Illumination

3.2 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable regulations, and an analysis of potential construction and operational air quality impacts caused by proposed development of the EDH 52-Costco Commercial Center Project (referred to as "project"). Mitigation is developed as necessary to reduce significant air quality impacts to the extent feasible. The analysis in this section is based on the EDH Costco Project Air Quality Technical Report and the EDH Costco Project North Site Remainder Area Technical Report prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) provided in Appendix B.

Comments received on the notice of preparation (NOP) regarding air quality included concerns regarding the potential for naturally-occurring asbestos (NOA) to be disturbed during project construction and potential exposure of sensitive receptors (i.e., nearby Oak Meadow Elementary School and residential uses) to operational pollutant emissions from additional project-generated traffic and the proposed gas station. NOP comments are provided in Appendix A. The analysis below addresses these comments.

3.2.1 Regulatory Setting

Air quality in the project area is regulated through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policymaking, education, and a variety of programs. The agencies responsible for improving the air quality within the air basins are discussed below.

FEDERAL

In March 2025, the current administration announced that the US Environmental Protection Agency (EPA) will undertake 31 actions, focusing primarily on reconsidering actions adopted by previous administrations, including numerous actions and regulations related to air quality and the reduction of greenhouse gas (GHG) emissions (which often have the co-benefit of reducing air pollutant emissions). These include, but are not limited to, reconsideration of Air Toxics Standards that target coal-fired power plants, the revised fine particulate matter ($PM_{2.5}$) National Ambient Air Quality Standards (NAAQS), and fuel economy standards, among others. As of the writing of this Draft EIR, none of these regulations have been repealed or replaced with newly adopted regulations. Therefore, these regulations are discussed below.

Federal Clean Air Act

The federal Clean Air Act (CAA), as amended, is the primary federal law that governs air quality nationwide. The CAA was first enacted in 1963 and has been amended numerous times in subsequent years (1967, 1970, 1977, and 1990). The CAA establishes the NAAQS and specifies future dates for achieving compliance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards (42 United States Code (USC) Ch. 85 Section 179 [d][1]). The plans must include pollution control measures that demonstrate how the standards will be met.

The federal CAA Amendments of 1990 (amendments made to Section 107 (d) of the CAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution (EPA 2024a). EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, it may prepare a federal implementation plan that imposes additional control measures. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources.

Title I provisions were established with the goal of attaining the NAAQS for criteria pollutants. Table 3.2-1 shows the NAAQS currently in effect for each criteria pollutant.

Table 3.2-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS)[a,b]	National (NAAQS)[c] Primary[b,d]	National (NAAQS)[c] Secondary[b,e]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	–[e]	Same as primary standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
	8-hour	9 ppm[f] (10 mg/m^3)	9 ppm (10 mg/m^3)	—
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
Sulfur dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	—	—
	3-hour	—	—	0.5 ppm (1,300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	—	Same as primary standard
	24-hour	50 µg/m^3	150 µg/m^3	
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	9.0 µg/m^3 [g]	15.0 µg/m^3
	24-hour	—	35 µg/m^3	Same as primary standard
Lead [f]	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
	30-day	1.5 µg/m^3	—	—
	Rolling 3-month	—	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	No national standards	
Sulfates	24-hour	25 µg/m^3		
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m^3 = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standards; km = kilometers; mg/m^3 = milligrams per cubic meter; NAAQS = National Ambient Air Quality Standards; ppb = parts per billion; ppm = parts per million.

[a] California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[c] National standards (other than the standards for ozone and particulate matter and those based on annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the US Environmental Protection Agency for further clarification and current federal policies.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect public health.

[e] National secondary standards: The levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant.

[f] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This was done to allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants, as this was the only means available at that time to regulate vinyl chloride and lead emissions. While vinyl chloride and lead have since been identified as toxic air contaminants under the Air Toxics Program CAAQS remains in force, current regulatory efforts are under CARB's Air Toxics Program.

[g] On February 7, 2024, EPA promulgated a revised primary annual $PM_{2.5}$ NAAQS, strengthening the standard from 12.0 micrograms per cubic meter (µg/m^3) to 9.0 µg/m^3. As of May 2025, EPA has not made final designation determinations for the 2024 $PM_{2.5}$ standard.

Source: CARB 2024.

The NAAQS were amended in July 1997 to include an 8-hour standard for ozone and adopt a standard for $PM_{2.5}$. The 8-hour ozone NAAQS was further amended in October 2015 to lower the standard to 0.070 parts per million. Additionally, EPA amended the $PM_{2.5}$ annual arithmetic mean standard to 9 $\mu g/m^3$ in 2024 (down from 12.0 $\mu g/m^3$previously). In accordance with the requirements of CAA Section 107 (d), states were expected to submit initial recommendations of areas that do not attain this standard to the EPA by February 2025, and EPA is expected to finalize area designations by February 2026 (40 Code of Federal Regulations [CFR] 51). $PM_{2.5}$ SIPs will be due 18 months after the effective date of designations, with attainment required at the end of the calendar year six years after designations, unless an area is reclassified to Serious - Nonattainment.

California's SIP is updated periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The 2022 State SIP Strategy, adopted on September 22, 2022, is the most current SIP and is a compilation of plans and regulations that govern how the state and regions will comply with the CAA requirements to attain and maintain the NAAQS for ozone and $PM_{2.5}$.

California's CAA Preemption Waiver

The California Clean Air Act (CCAA) allows California to seek authorization to enforce its own standards for new nonroad engines and vehicles, despite the preemption which prohibits states from enacting emission standards for new nonroad engines and vehicles. According to the CCAA Section 209 - State Standards, EPA shall grant an authorization under section 209(e)(2), unless the Administrator finds that California (EPA 2025a):

- was arbitrary and capricious in its finding that its standards are, in the aggregate, at least as protective of public health and welfare as applicable federal standards;
- does not need such standards to meet compelling and extraordinary conditions; or
- California's standards and accompanying enforcement procedures are not consistent with this section.

The CCAA also allows other states to adopt California's motor vehicle emission standards under section 177. Section 177 requires, among other things, that such standards be identical to the California standards for which a waiver has been granted. States are not required to seek EPA approval under the terms of section 177.

The CCAA also allows other states to adopt California's nonroad vehicle or engine emission standards under section 209(e)(2)(B). Section 209(e)(2)(B) requires, among other things, that such standards be identical to the California standards for which an authorization has been granted. States are not required to seek EPA approval under the terms of section 209(e)(2)(B).

As of the writing of this Draft EIR, there is ongoing litigation related to the federal disapproval of several of the state's waivers for mobile-source emissions standards. Please see the "Fuel Economy and Emissions Standards" section below regarding recent legal developments affecting some of the recent California CAA waivers.

Title III of the CAA

The 1990 Amendments to the CAA included the addition of Title III, a provision to address air toxics. Under Title III of the CAA, EPA establishes and enforces National Emission Standards for Hazardous Air Pollutants (NESHAPs), which are nationally uniform standards oriented toward controlling particular HAPs. Section 112(b) of the CAA identifies 189 "Air Toxics" (HAPs, since modified to 187 pollutants), directs EPA to identify sources of the HAPs, and establishes a 10-year time period for EPA to issue technology-based emissions standards for each source category. Emission standards have been developed for all of the stationary source categories under 40 CFR Part 63. The purpose of Title III of the CAA provides for a second phase under which EPA is to assess residual risk after the implementation of the first phase of standards and to impose new standards, when appropriate, to protect public health.

Fuel Economy and Emission Standards

EPA has adopted regulations to improve fuel economy and limit emissions from all sources of pollutants. EPA regulates the emissions from mobile sources by setting standards for the specific pollutants being emitted. Emissions standards set limits on the amount of pollution a vehicle or engine can emit. Mobile source emission standards have been established for light-duty vehicles, trucks, and motorcycles; heavy duty trucks; and non-road engines, including

aircraft, locomotives, marine vessels, and recreational engines and vehicles. The EPA has also established gasoline and diesel fuel standards.

A description of emission standards for sources analyzed in this EIR are included herein.

The Corporate Average Fuel Economy Standards (CAFE) were first enacted in 1975 to improve the average fuel economy of cars and light duty trucks. In 2024, CAFE standards were finalized for model years (MYs) 2027 through 2031. The final rule establishes standards that require an industry-wide fleet average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks. The final rule establishes standards that would require an industry-wide fleet average of approximately 50.4 mpg in MY 2031 for passenger cars and light trucks and an industry fleet-wide average for heavy-duty pickup trucks and vans (HDPUVs) of roughly 2.851 gallons per 100 miles in MY 2035. The final CAFE standards increase at a rate of 2 percent per year for passenger cars in MYs 2027–2031 and 2 percent per year for light trucks in model years 2029–2031. The final HDPUV fuel efficiency standards increase at a rate of 10 percent per year in MYs 2030–2032 and 8 percent per year in MYs 2033–2035 (NHTSA 2024).

The EPA has established a series of increasingly strict emission standards for new light-duty vehicle engines. These standards were phased-in over four tiers:

- Tier 1 standards were published as a final rule on June 5, 1991, and phased-in progressively between 1994 and 1997 (40 CFR Part 86).
- Tier 2 standards were adopted on December 21, 1999, with a phase-in implementation schedule from 2004 to 2009 (40 CFR Part 80).
- Tier 3 standards were finalized on March 3, 2014, to be phased-in between 2017 and 2025 (40 CFR Parts 79, 80, 85, 86, 600, 1036, 1037, 1039, 1042, 1048, 1054, 1065, and 1066).
- Tier 4 standards were finalized on March 20, 2024, with a phase-in schedule from 2027 through 2033 (40 CFR Parts 85, 86, 600, 1036, 1037, 1066, and 1068).

Tier 1 standards applied to all new light-duty vehicles (LDV) of less than 8,500-pound gross vehicle weight rating (GVWR). The Tier 2 rule extended the applicability of the light-duty emission standards to medium-duty passenger with GVWR between 8,500 and 10,000 pounds. Tier 3 and Tier 4 regulations additionally include emission standards for chassis-certified heavy-duty vehicles up to 14,000 pounds (Class 2b and Class 3). The successive tiers of emission regulations do not begin with a sharp cut-off date. Rather, each new tier of emission standards is phased-in over a number of years. During the phase-in period, manufacturers are required to certify an increasing percentage of their new vehicle fleet to the new standards, with the remaining vehicles still certified to the preceding tier of emission regulations (EPA 2024b).

On August 5, 2021, EPA announced plans to reduce GHG emissions and other harmful air pollutants from heavy-duty trucks through a series of rulemakings over the next three years. The first rulemaking of this Clean Trucks Plan was the Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards, signed on December 20, 2022, which focuses on reducing emissions that form smog and soot and will apply to heavy-duty engines and vehicles beginning in model year 2027. Two additional rulemakings, the Phase 3 GHG rule for heavy-duty engines and the multi-pollutant emissions standards for light-duty and medium-duty vehicles were signed in March 2024, marking the completion of the Clean Trucks Plan. On January 20, 2025, President Trump issued EO 14148, revoking EO 14037 that directed the EPA and the Secretary of Transportation to consider beginning work on rulemakings to establish vehicle emissions standards and fuel economy standards for vehicles with model years 2027 and later. EO 14148 directed NHTSA to commence review and reconsideration of all existing fuel economy standards for vehicle model years 2022 and later (NHTSA 2025).

EPA established a series of increasingly strict emission standards for new non-road diesel engines. Tier 1 standards were phased in on newly manufactured equipment from 1996 through 2000 (year of manufacture), depending on the engine horsepower category (40 CFR part 89). Tier 2 standards were phased in on newly manufactured equipment from 2001 through 2006 (40 CFR part 89). Tier 3 standards were phased in on newly manufactured equipment from 2006 through 2008 (40 CFR part 89). Tier 4 standards, which require advanced emission control technology to attain them, were phased in between 2008 and 2015 (40 CFR Part 1039).

Public Law No. 119-15

On June 12, 2025, Public Law 119-15, enacting House Joint Resolution 87, was signed into law. The law utilized the Congressional Review Act (CRA) to disapprove EPA's rule that had granted California a waiver to enforce stricter emissions standards for heavy-duty vehicles under the Clean Air Act. The disapproved rule included programs such as the Advanced Clean Trucks (ACT) regulation and zero-emission requirements for airport shuttles. Passed under the Congressional Review Act, the law prevents EPA from implementing or reissuing the same or similar rules without new congressional authorization. This effectively blocks California, and other states that follow its standards, from enforcing these specific vehicle emission and warranty regulations. The implications of this law on the state's capability to enforce its independent heavy-duty vehicle regulations are uncertain at this time, as the California Attorney General filed a lawsuit challenging P.L. No. 119-15 on June 12, 2025. Whether this action will be successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the heavy-duty vehicle regulations during the legal process.

Public Law No. 119-16

Similarly on June 12, 2025, Public Law No. 119-16, enacting House Joint Resolution 88, became law. The law also relied on the Congressional Review Act to disapprove the EPA's December 2024 waiver under the CAA that allowed California to implement and enforce the Advanced Clean Cars II (ACC II) regulation. ACC II included a zero-emission vehicle (ZEV) mandate targeting 100% new light-duty ZEV sales by 2035. P.L. No. 119-16 marks the first ever occurrence that waivers under the CAA have been revoked under the Congressional Review Act. The implications of this law on the state's capability to enforce its independent fuel economy standards are uncertain at this time, as the California Attorney filed a lawsuit challenging P.L. No. 119-16 on June 12, 2025. Whether this action will be successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the ACC II regulation during the legal process.

Public Law No. 119-17

Public Law 119–17, enacted on June 12, 2025, disapproves, under the Congressional Review Act, of the EPA's rule titled "California State Motor Vehicle and Engine and Nonroad Engine Pollution Control Standards; The 'Omnibus' Low oxides of nitrogen (NO_X) Regulation; Waiver of Preemption; Notice of Decision." The law disapproves the EPA's January 6, 2025, Low-NO_X rule that would have granted California a waiver to enforce stricter emissions standards for both on-road and non-road heavy-duty engines. Similar to the other CRA resolutions listed above targeting emissions waivers, this law prohibits the EPA from reissuing the same or substantially similar rule without new authorization from Congress. The law effectively blocks California, and any states following its standards, from implementing this omnibus Low-NO_X regulatory package. The implications of this law on the state's capability to enforce its low NO_X rule are uncertain at this time, as the California Attorney filed a lawsuit challenging P.L. No. 119-17 on June 12, 2025. The case is pending trial.

Hazardous Air Pollutants

Toxic air contaminants (TACs), or, in federal terms, hazardous air pollutants (HAPs), are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. A substance that is listed as a HAP pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Section 7412[b]) is considered a TAC. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

For evaluation purposes, TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants, for which acceptable levels of exposure can be determined and for which ambient standards have been established. Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

The EPA regulates TACs through statutes (i.e., 42 United States Code Section 7412[b]) and regulations that generally require the use of the MACT or best available control technology (BACT) for toxics to limit emissions. The emissions standards enumerated above also have a measurable effect on emissions of TACs, particularly diesel PM.

STATE

The State of California has adopted numerous laws addressing various aspects of air quality. The California Air Resources Board (CARB) is the primary agency, whose mission is to reduce air pollution and protect. CARB establishes state regulations to reduce emissions from all major sources of emissions air pollution. Major regulations are discussed below.

California Clean Air Act and Ambient Air Quality Standards

Mulford-Carrel Act

CARB was established when the California Legislature passed the Mulford-Carrell Act in 1967, which combined two bureaus within the Department of Health: the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board. CARB's mission is to promote and protect public health, welfare, and ecological resources through the effective and efficient reduction of air pollutants, while recognizing and considering the effects on the state's economy. CARB also oversees the activities of 35 local and regional air pollution control districts. These districts regulate industrial pollution sources. They also issue permits, develop local plans to attain healthy air quality, and ensure that industrial operations in their area adhere to air quality mandates.

California Clean Air Act

In 1988, the state legislature adopted the CCAA, which established a statewide air pollution control program. CCAA requires all air districts in the state to endeavor to meet the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. Unlike the federal CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfate, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The CAAQS and NAAQS are listed together in Table 3.2-1.

CARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that are incorporated into the SIP. In California, the EPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies (Health and Safety Code [HSC] Sections 40000 and 40001), requires air districts to prepare air quality plans (HSC Section 40918), and grants air districts authority to implement transportation control measures (HSC Section 40717[a]). The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

California Health and Safety Code Section 41700

This section of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Executive Order N-79-20

Under EO N-79-20, 100 percent of in-state sales of new passenger cars and trucks are to be zero-emission by 2035; 100 percent of in-state sales of medium- and heavy-duty trucks and busses are to be zero-emission by 2045 for all operations, where feasible, and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment sales are to be zero-emission by 2035 where feasible.

On-Road Vehicle Standards

California's Pavley Standards

Assembly Bill (AB 1493) of 2002 (known as Pavley I, Chapter 200, Statutes of 2002) provided the nation's first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that lowered GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards referred to as the Advanced Clean Cars (ACC) Program's Low Emission Vehicle (LEV) III Regulation) was adopted for vehicle model years 2017–2025 in 2012 (13 California Code of Regulations [CCR] Section 1900 et seq.). The Advanced Clean Cars II (ACC II) Program was adopted by CARB in August 2022 and provides the regulatory framework for ensuring the sales requirement goal of EO N-79-20 to ultimately reach 100 percent ZEV sales in the state by 2035. As identified above, Public Law 119-16 was signed to formally rescind the state's ability to enforce the ACC II regulation. While the implications of this federal resolution on the state's capability to enforce independent fuel economy standards are uncertain at this time, a lawsuit has been filed against the federal government challenging House Joint Resolution 88. Whether this action will be successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the ACC II regulation during the legal process.

Advanced Clean Fleets

CARB's 2022 Advanced Clean Fleets regulation was developed to reduce diesel PM through the transition of medium- and heavy-duty trucks to become fully electric by 2045. California has withdrawn its request for a waiver and authorization for the addition of the Advanced Clean Fleets regulation to its emissions control program (CARB 2025a). CARB is not enforcing the existing portions of the Advanced Clean Fleets regulation that require a federal waiver or authorization, such as the portions of the regulation that apply to high priority and drayage fleets. However, not all elements of the regulation require a federal waiver or authorization. The state and local government fleets portion of the Advanced Clean Fleets Regulation requires that, starting January 1, 2024, 50 percent of the total number of vehicles purchased for government fleets be zero emission vehicles (ZEVs), and 100 percent of the total number of vehicle purchases for the state and local fleets be ZEVs starting January 1, 2027 (13 CCR Section 2013-2013.4). This portion of the Advanced Clean Fleets Regulation remains unaffected (CARB 2025a). On September 25, 2025, CARB held a board meeting during which it considered amendments to the Advanced Clean Fleets regulation, including a repeal of requirements affecting federal and private fleets, and an amendment to the Low Carbon Fuel Standard regulation. At this meeting, CARB proposed Resolution 25-9 "*Proposed Amendments to the Advanced Clean Fleets and Low Carbon Fuel Standard Regulations,*" At the time of the writing of this EIR, a final decision has not been made in regard to this proposal.

Advanced Clean Trucks

The Advanced Clean Trucks Regulation was adopted by CARB on April 28, 2023. The Advanced Clean Trucks Regulation sets requirements for the transition of diesel trucks and vans to zero-emission trucks, which began in 2024. Per the Advanced Clean Trucks Regulation, manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales are required to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales (EPA 2024c). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced. As identified above, Public Law 119-15was signed into law to disapprove EPA's rule that had granted California a waiver to enforce stricter emissions standards for heavy-duty vehicles under the Clean Air Act. The implications of this law on the state's capability to enforce its independent heavy-duty vehicle regulations are uncertain at this time, as the California Attorney General filed a lawsuit challenging P.L. No. 119-15 on June 12, 2025. Whether this action will be successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the heavy-duty vehicle regulations during the legal process.

Omnibus Regulation

The Omnibus regulation was adopted by the Board in September 2021, and amended in December 2023. The primary goal of the regulation is to reduce NO_X emissions from medium- and heavy-duty engines and vehicles beginning in 2024 model year (MY). Highlights of the regulation include: The Omnibus NO_X emission standard for

2024 through 2026 MY engines represent a 75 percent reduction of the 2010 MY standard, from 0.20 to 0.050 grams per brake horsepower hour (g/bhp-hr). In addition, a lower PM standard of 0.005 g/bhp-hr, that is 50 percent lower than the 2010 MY emission standard, was established. More stringent NO_x emission standards were also established for 2027 and subsequent MYs.

As discussed above, Public Law 119–17 disapproves, under the Congressional Review Act, of the EPA's rule titled "California State Motor Vehicle and Engine and Nonroad Engine Pollution Control Standards; The 'Omnibus' Low NO_X Regulation; Waiver of Preemption; Notice of Decision." The law disapproves the EPA's January 6, 2025, Low-NO_X rule that would have granted California a waiver to enforce stricter emissions standards for both on-road and non-road heavy-duty engines. The implications of this law on the state's capability to enforce its low NO_X rule are uncertain at this time, as the California Attorney filed a lawsuit challenging P.L. No. 119-17 on June 12, 2025. The case is pending trial.

Heavy-Duty Vehicle Inspection and Maintenance Program

CARB developed the Heavy-Duty Vehicle Inspection and Maintenance (HD I/M) Program to regulate the maintenance and proper function of vehicle emission control systems, which was approved by the CARB Board on December 9, 2021. The program is designed to reduce smog-forming and toxic air pollutant emissions as a result of malfunctioning aftertreatment systems. The following program strategies ensure heavy-duty vehicles are well-maintained, repaired rapidly, and are functioning properly:

- Roadside emissions monitoring to screen for high-emitting vehicles;
- Improved emissions testing procedures using on-board diagnostics data;
- Emissions checks and data reporting at required intervals; and
- Compliance verification requirements for freight contractors, seaports, and railyards.

Innovative Clean Transit

The Innovative Clean Transit (ICT) regulation was adopted in 2018 and requires all public transit agencies to incrementally reduce fleet vehicle tailpipe emissions and prioritizes innovative first and last-mile connectivity and improved mobility for transit riders. Additionally, the ICT regulation provides various exemptions and compliance options to provide safeguards and flexibility for transit agencies through this emission reduction schedule.

The ICT regulation was developed to align with other state policies, including the Sustainable Communities and Climate Protection Program (SB 375), and SB 350. SB 375 creates initiatives for increased development of transit-oriented communities, better-connected transportation, and active transportation. SB 350 provides an opportunity of transportation electrification including wide use of zero-emission buses. Under SB 350, the California Public Utilities Commission is collaborating with CARB and the California Energy Commission to implement requirements set forth by SB 350 to support widespread transportation electrification.

Through the deployment of zero-emission technologies, the ICT regulation will provide significant benefits across the state, including:

- Reduce NO_x and GHG emissions for all Californians, especially transit-dependent and disadvantaged communities. The majority of these benefits will be in the state's most populated and impacted areas where transit buses are most prevalent.
- Increase penetration of the first wave of zero-emission heavy-duty technologies into applications that are well suited to their use to further achieve emission reduction benefits.
- Save energy and reduce dependency on petroleum and other fossil fuels.
- Expand zero-emission vehicle industry to bring high quality green jobs to local communities and trained workforce to California.
- Provide other societal benefits by encouraging improved mobility and connectivity with zero-emission transportation modes and reduced growth in light-duty vehicle miles traveled (VMT).

The goal of this program is to continue its partnership with transit agencies to maximize these benefits, while providing flexibility and sufficient time for transit agencies to address potential challenges and utilize available funds. This regulation strives to not just maintain but enhance transit service through increased mobility options and has built in technological and financial safeguards to ensure transit service or fares are not adversely impacted by the regulation (13 CCR 2023).

Off-Road and Heavy-Duty Emission Standards

CARB established a series of emissions standards for new off-road diesel equipment (Small Off-Road Engines [13 CCR Sections 2403–2407] and Tier 4 Off-Road Compression Ignition Engine Regulations and Exhaust Emission Certification Test Fuel for Off-Road Spark-Ignition Engines, Equipment, and Vehicles [13 CCR Sections 2421–2427]), on-road diesel trucks (California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles [13 CCR Section 1956]).

The In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) applies to all existing self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles (except on-road two-engine sweepers). This includes vehicles that are rented or leased (rental or leased fleets) (13 CCR Section 2449). The Off-Road Regulation primarily targets air pollutant reductions by imposing limits on equipment idling; requiring all vehicles to be reported to CARB through the online reporting system; requiring fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies; and implementing a phase-out schedule for older, high-emissions engines.

The Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles (referred to as the Truck and Bus Regulation) (13 CCR Section 2025) requires fleet owners to upgrade their vehicles to meet specific performance standards for oxides of nitrogen (NO_X) and PM. The regulation applies to diesel-fueled trucks and buses that are privately owned, federally owned, and to publicly and privately owned school buses, that have a manufacturer's gross vehicle weight rating (GVWR) greater than 14,000 pounds. Nearly all of the vehicles affected by the regulation are on-road vehicles, however, the regulation also applies to yard trucks with off-road engines used for agricultural operations and two-engine street sweepers with such engines. The Truck and Bus Regulation targets emissions reductions through 2010 Model Year Emissions Equivalent Engine requirements, PM BACT requirements, and Verified Diesel Emission Control Strategy (VDECS) requirements. EPA approved the revision to the SIP to include the Truck and Bus Regulation on April 4, 2012 (40 CFR 52).

CARB Zero-Emission Forklift Regulation

In June 2024, CARB approved for adoption the Zero-Emission Forklift Regulation. The measure was identified in CARB's Mobile Source Strategy, SIP, and Sustainable Freight Action Plan as one of several near-term actions intended to help California meet its air quality and climate goals through zero-emission technology. The regulation requires California fleets to phase out forklifts that utilize large spark-ignition (LSI) engines with a lift capacity of up to 12,000 pounds over time. The regulation implements a restriction on the purchase of LSI forklifts starting on January 1, 2026, and phase-out requirements starting on January 1, 2028, for existing LSI forklifts.

Toxic Air Contaminants

Toxic Air Contaminant Identification and Control Act of 1983 and Air Toxics "Hot Spots" Information and Assessment Act of 1987

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("Hot Spots" Act). In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Act created California's program to reduce exposure to air toxics. The "Hot Spots" Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people who were exposed to a significant health risk, and facility plans to reduce these risks. The "Hot Spots" Act requires the California Office of Environmental Health Hazard Assessment (OEHHA) to develop an approach for health risk assessments that can be used to determine the "likelihood of risks." The resultant guidance manual is titled Air Toxics Hot-Spots Program Guidance Manual for the Preparation of Health Risk Assessments (OEHHA 2015).

Diesel Risk Reduction Plan

In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles (CARB 2000). As an ongoing process, CARB reviews air contaminants and identifies those that are classified as TACs. CARB also continues to establish new programs and regulations for the control of TACs. CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). These regulations include the Advanced Clean Fleets Regulation, the Advanced Clean Trucks Regulation, and the Innovative Clean Transit (ICT) Regulation, discussed separately in this section. Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan and other regulatory programs, it is estimated that by 2035, emissions of diesel PM will be less than half of those in 2010 (CARB 2023a).

Air Toxics Control Measures (Health and Safety Code Division 26)

Under HSC Division 26 (Air Resources), CARB is authorized to adopt regulations to protect public health and the environment through the reduction of TACs and other air pollutants with adverse health effects. As such, CARB has promulgated several mobile and stationary source airborne toxic control measures (ATCM) that identify specific measures designed to reduce emissions and therefore the exposure of individuals to TACs emitted from a variety of sources.

Transport Refrigeration Units

CARB's 2022 amendments to the 2004 Transport Refrigeration Unit (TRU) Airborne Toxic Control Measure (2022 TRU Amendments) increases the stringency of TRU $PM_{2.5}$ standards and requires the electrification of diesel-powered TRU trucks by 2029. On January 3, 2025, US EPA granted CCAA authorization of elements of its TRU Regulation (90 FR 2000). In its action, US EPA did not act on the Regulation's requirements for the turnover of at least 15 percent of diesel-fueled truck TRU fleet to zero emissions by December 31, 2023, (and each year thereafter) within the 2022 TRU Amendments (EPA 2025b). As of January 2025, CARB has withdrawn its request for the portions of the TRU Regulation on which EPA did not take action in its authorization decision on January 3, 2025 (CARB 2025b).

Diesel-Fueled Commercial Motor Vehicle Idling

This ATCM applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. The measure limits idling of trucks to a maximum of 5 minutes, except when the vehicle is queuing (13 CCR 2485). While this ATCM focuses on the reduction of diesel particulate emissions as a toxic, this regulation would also help reduce air pollutant emissions.

ATCM: Stationary Compression-Ignition Engines

This ATCM establishes emission standards and fuel use requirements for new and in-use stationary engines used in prime and emergency back-up applications (non-agricultural) and for new stationary engines used in agricultural applications (17 CCR 93115). While this ATCM focuses on the reduction of diesel particulate emissions as a toxic, this regulation would also help reduce CAP emissions.

Senate Bill 535 and Assembly Bill 1532 of 2012

Senate Bill (SB) 535 requires the California Environmental Protection Agency to identify disadvantaged communities based on geographic, socioeconomic, public health, and environmental hazard criteria. It also requires that the investment plan developed and submitted to the Legislature pursuant to AB 1532 allocate no less than 25 percent of available proceeds from the carbon auctions held under AB 32 to projects that will benefit these disadvantaged communities. At least 10 percent of the available funds from these auctions must be directly invested in such communities. The CalEnviroScreen tool has been developed to identify areas disproportionately affected by pollution and those areas whose populations are socioeconomically disadvantaged. The most current version of the tool is CalEnviroScreen 4.0, released in October 2021 (OEHHA 2023).

Air Quality and Land Use Handbook (2005) and Technical Advisory (2017)

CARB prepared a guidance document that includes recommendations for siting of sensitive receptors in proximity of emission sources. The Air Quality and Land Use Handbook: A Community Health Perspective (Land Use Handbook) provides guidance to the public and decision-makers to provide information on the siting of "sensitive land uses" near specific sources of air pollution (CARB 2005); namely:

- high traffic freeways and roads,
- distribution centers,
- rail yards,
- ports,
- refineries,
- chrome plating facilities,
- dry cleaners, and
- large gas dispensing facilities.

The Land Use Handbook includes various limitations, and notes that the recommendations are advisory and that land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

Senate Bill 656 (Health and Safety Code Section 39614)

SB 656 (HSC Section 39614) of 2003 required CARB, in consultation with local air districts, to develop and adopt, by January 1, 2005, a list of the most readily available, feasible, and cost-effective control measures that could be employed by CARB and the air districts to reduce PM_{10} and $PM_{2.5}$ (collectively referred to as PM). Measures adopted as part of SB 656 complement and support those required for federal $PM_{2.5}$ attainment plans, as well as for state ozone plans. This will ensure continuing focus on PM reduction and progress toward attaining California's more health protective standards. The list of air district control measures was adopted by CARB on November 18, 2004. Examples of implementation of these measures include the adoption of rules and emissions limits to control secondary PM precursors NO_x, VOC, and sulfur oxides (SO_x) from combustion and coating sources, rules to control directly emitted PM from incinerators and fuel burning equipment, and state PM control measures for mobile and stationary sources, including measures for adoption as part of CARB's Diesel Risk Reduction Plan (discussed above).

LOCAL

El Dorado County Air Quality Management District

Criteria Air Pollutants

The El Dorado County Air Quality Management District (EDCAQMD) attains and maintains air quality conditions in El Dorado County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean-air strategy of EDCAQMD includes preparing plans for the attainment of ambient air quality standards, adopting, and enforcing rules and regulations concerning sources of air pollution, and issuing permits for stationary sources of air pollution. EDCAQMD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the CAA, CAA Amendments, and CCAA.

EDCAQMD works with other local air districts in the Sacramento region to maintain the region's portion of the SIP for ozone. The Sacramento region, which includes the western portion of El Dorado County, has been designated as a "moderate" 2015 8-hour ozone nonattainment area (EPA 2025c). The 2018 Sacramento Regional 2008 8-Hour Ozone Attainment and Further Reasonable Progress Plan was approved by CARB on November 16, 2017. The previous (2013) Update to the 8-Hour Ozone Attainment and Reasonable Further Progress Plan was approved and promulgated by

EPA for the 1997 8-Hour Ozone Standard. At a public meeting held on October 26, 2023, CARB voted to approve the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2023 Ozone Plan). The 2023 Ozone Plan was prepared by the five local air districts of the Sacramento Federal Non-attainment Area (Sacramento Region, or SFNA) with the support of CARB. The SFNA requested a reclassification to "severe" with an attainment deadline of August 3, 2033. The 2023 Ozone Plan addresses the CAA requirements associated with the "severe" classification and how the SFNA can attain the standard by the attainment date.

The Sacramento $PM_{2.5}$ planning region, which includes Sacramento County, eastern Yolo County, the western portions of El Dorado and Placer counties, and the northeast portion of Solano County, was classified as attainment for the 2012 annual average $PM_{2.5}$ NAAQS of 12 micrograms per cubic meter ($\mu g/m^3$) and classified as nonattainment in 2009 for the 2006 24-hour $PM_{2.5}$ NAAQS of 35 $\mu g/m^3$. In 2013, the region prepared the *$PM_{2.5}$ Maintenance Plan and Redesignation Request* to address how the region attained and would continue to attain the 24-hour $PM_{2.5}$ standard.

On May 10, 2017, EPA found that the area attained the 2006 24-hour $PM_{2.5}$ NAAQS by the attainment date of December 31, 2015 (82 FR 21711). The $PM_{2.5}$ Maintenance Plan and Redesignation Request will be updated and submitted in the future based on the clean data finding made by the EPA.

In October 2016, the EPA revised the Treatment of Data Influenced by Exceptional Events rule (81 FR 68216) and determined Sacramento $PM_{2.5}$ Nonattainment Area is one of the areas in the nation subjected to mitigation plan requirements due to wildfires. In September 2018, the air districts in the nonattainment area adopted the *Wildfire Mitigation Plan for the Sacramento Federal Nonattainment Area for $PM_{2.5}$* in response to EPA's determination, with the most recent updates to the plan occurring in 2023. EPA promulgated the 9.0 $\mu g/m^3$ standard on February 7, 2024 which prompted CARB staff to submit the *$PM_{2.5}$ Area Designation Recommendations for the 2024 Annual $PM_{2.5}$ National Ambient Air Quality Standard*. As of March 2025, EPA has not assigned any attainment designations for the 2024 $PM_{2.5}$ annual standard. Also notably, no air district within the Sacramento federal nonattainment area has prepared an air quality plan that addresses attainment of EPA's most recent update to the NAAQS that revised the $PM_{2.5}$ standard to 9 $\mu g/m^3$.

All projects in El Dorado County are subject to adopted EDCAQMD rules and regulations in effect at the time of construction. The following specific rules may apply to construction of the project:

- EDCAQMD Rule 202, Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated as number 1 on the Ringelmann Chart, as published by the US Bureau of Mines.
- EDCAQMD Rule 205, Nuisance. Prohibits discharge of air contaminants or other material that 1) cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; 2) endanger the comfort, repose, health, or safety of any such persons or the public; or 3) cause, or have a natural tendency to cause, injury, or damage to business or property.
- EDCAQMD Rule 207, Particulate Matter. Limits particulate matter emissions in excess of 0.1 grains per cubic foot of dry exhaust gas.
- EDCAQMD Rule 215, Application of Architectural Coatings. No person shall: (i) manufacture, blend, or repackage for sale within EDCAQMD; (ii) supply, sell, or offer for sale within EDCAQMD; or (iii) solicit for application or apply within EDCAQMD, any architectural coating with a volatile organic compound (VOC) content in excess of the corresponding specified manufacturer's maximum recommendation. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the coating container.
- EDCAQMD Rule 223-1, Fugitive Dust.
    - Visible Emissions Not Allowed Beyond the Boundary Line: A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area (including disturbance as a result of the raising and/or keeping of animals or by vehicle use), such that the presence of such dust remains visible in the atmosphere beyond the boundary line of the emission source.

- Visible Emissions from Active Operations: In addition to the requirements of Rule 202, Visible Emissions, a person shall not cause or allow fugitive dust generated by active operations, an open storage pile, or a disturbed surface area, such that the fugitive dust is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke as dark or darker in shade as that designated as number 2 on the Ringelmann Chart, as published by the US Bureau of Mines.
- Concentration Limit: A person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter (24-hour average) when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other EPA-approved equivalent method for PM_{10} monitoring.
- Track-Out onto Paved Public Roadways: Visible roadway dust as a result of active operations, spillage from transport trucks, and the track-out of bulk material onto public paved roadways shall be minimized and removed. The track-out of bulk material onto public paved roadways as a result of operations, or erosion, shall be minimized by the use of track-out and erosion control, minimization, and preventative measures, and removed within 1 hour from adjacent streets any time track-out extends for a cumulative distance of greater than 50 feet onto any paved public road during active operations. All visible roadway dust tracked-out upon public paved roadways as a result of active operations shall be removed at the conclusion of each workday when active operations cease, or every 24 hours for continuous operations. Wet sweeping or a High Efficiency Particulate Air filter equipped vacuum device shall be used for roadway dust removal. Any material tracked-out, or carried by erosion, and clean-up water, shall be prevented from entering waterways or storm water inlets as required to comply water quality control requirements. Minimum Dust Control Requirements: The following dust mitigation measures are to be initiated at the start and maintained throughout the duration of the construction or grading activity, including any construction or grading for road construction or maintenance.
- Unpaved areas subject to vehicle traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered.
- The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 mph unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 mph from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.
- Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.
- Prior to any ground disturbance, including grading, excavating, and land clearing, sufficient water must be applied to the area to be disturbed to prevent emitting dust exceeding Ringelmann 2 and to minimize visible emissions from crossing the boundary line.
- Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt, from being released or tracked offsite.
- When wind speeds are high enough to result in dust emissions crossing the boundary line, despite the application of dust mitigation measures, grading and earthmoving operations shall be suspended. No trucks are allowed to transport excavated material offsite unless the trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments, and loads are either covered with tarps; or wetted and loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than 6 inches from the top and that no point of the load extends above the top of the cargo compartment.
- Wind-Driven Fugitive Dust Control: A person shall take action(s), such as surface stabilization, establishment of a vegetative cover, or paving, to minimize wind-driven dust from inactive disturbed surface areas.

- EDCAQMD Rule 223-2, Asbestos Hazard Mitigation. Requires that an asbestos dust mitigation plan must be prepared, submitted, approved, and implemented when more than 20 cubic yards of earth will be moved at all

sites identified as being in an Asbestos Review Area as shown on the El Dorado County Naturally Occurring Asbestos Review Map maintained by EDCAQMD.

- EDCAQMD Rule 224, Cutback and Emulsified Asphalt Paving Materials. Specifies content limits for cutback asphalt.
- EDCAQMD Rule 238, Gasoline Transfer and Dispensing. Regulates the transfer of gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or mobile fueler and from any stationary storage tank or mobile fueler into any mobile fueler or motor vehicle fuel tank.

Toxic Air Contaminants

At the local level, air pollution control or management districts may adopt and enforce CARB's control measures. All stationary sources with the potential to emit TACs are required to obtain permits from EDCAQMD under Rule 501, General Permit Requirements; Rule 523, New Source Review; and Rule 522, Federal Operating Permit.

Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new source review standards and air toxics control measures.

Sources that require a permit are analyzed by EDCAQMD (e.g., health risk assessment) based on their potential to emit TACs. If it is determined that the project would emit toxics in excess of EDCAQMD's threshold of significance for TACs (identified below), sources have to implement the BACT for TACs to reduce emissions. If a source cannot reduce the risk below the threshold of significance even after the BACT has been implemented, the air district will deny the permit required by the source.

EDCAQMD is also responsible for implementing and enforcing asbestos-related regulations and programs. This includes implementation of Title 17, Sections 93105 and 93106 of the CCR (Asbestos Airborne Toxic Control Measure: Asbestos-Containing Serpentine) and the County's Naturally Occurring Asbestos and Dust Protection Ordinance. Regulated activities include construction or digging on a site containing naturally occurring asbestos (NOA) in rock or soils and the sale and use of serpentine material or rock containing asbestos materials for surfacing (El Dorado County 2004).

In addition to addressing fugitive dust, EDCAQMD's Rule 223 also addresses NOA emissions during construction activities. The County's Air Pollution Control Officer may provide an exemption from Rule 223-2 if a Professional Geologist has conducted a geologic evaluation of the property and determined that no serpentine or ultramafic rock, or asbestos, is likely to be found in the area to be disturbed.

Odors

EDCAQMD has determined some common types of facilities that have been known to produce odors: wastewater treatment facilities, chemical manufacturing plants, painting/coating operations, feed lots/dairies, composting facilities, landfills, and transfer stations. Because offensive odors rarely cause any physical harm, and federal and state air quality regulations do not contain any requirements for their control, EDCAQMD has no rules or standards related to odor emissions other than their nuisance Rule 205, included above. Any actions related to odors are based on citizen complaints to local governments and EDCAQMD. There are no major odor sources in the vicinity of the project or associated with the project.

El Dorado County General Plan

The Health, Safety, and Noise Element of the El Dorado County General Plan provides countywide goals and policies aimed at improving air quality. Goals and policies in this element parallel those identified in the state and federal plans applicable to El Dorado County. The following objectives and policies are applicable to the project:

- **Objective 6.3.1: Building and Site Standards.** Adopt and enforce development regulations, including building and site standards, to protect against seismic and geologic hazards.
    - **Policy 6.3.1.1:** The County shall require that all discretionary projects and all projects requiring a grading permit, or a building permit that would result in earth disturbance, that are located in areas likely to contain naturally occurring asbestos (based on mapping developed by the California Department of Conservation [DOC]) comply with the Air Quality Management District (AQMD) Rules 223, 223-1 and 223-2 requirements. The

Department of Transportation and the AQMD shall consider the requirement of posting a warning sign at the work site in areas likely to contain naturally occurring asbestos based on the mapping developed by the DOC.

- **Objective 6.7.2: Vehicular Emissions.** Reduce motor vehicle air pollution by developing programs aimed at minimizing congestion and reducing the number of vehicle trips made in the County and encouraging the use of clean fuels.
  - **Policy 6.7.2.3:** To improve traffic flow, synchronization of signalized intersections shall be encouraged to reduce congestion, conserve energy, and improve air quality.
- **Objective 6.7.7: Construction Related, Short-Term Emissions.** Reduce construction related, short-term emissions by adopting regulations which minimize their adverse effects.
  - **Policy 6.7.7.1:** The County shall consider air quality when planning the land uses and transportation systems to accommodate expected growth, and shall use the recommendations in the most recent version of the El Dorado County Air Quality Management (AQMD) Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act, to analyze potential air quality impacts (e.g., short-term construction, long-term operations, toxic and odor-related emissions) and to require feasible mitigation requirements for such impacts. The County shall also consider any new information or technology that becomes available before periodic updates of the Guide.

El Dorado County Regional Transportation Plan

The Regional Transportation Plan 2020–2040 (2040 RTP) for El Dorado County proactively links land use, air quality, and transportation needs. The plan is intended to identify a vision for sustainable land use planning that accommodates regional housing needs while reducing greenhouse gas emissions. EDCAQMD uses the growth and development patterns in the 2040 RTP when developing plans to meet NAAQS and CAAQS in El Dorado County.

El Dorado County Naturally Occurring Asbestos and Dust Protection Ordinance

The Naturally Occurring Asbestos and Dust Protection Ordinance, as codified in the El Dorado County Code of Ordinances (Chapter 8.44, Asbestos and Dust Protection), includes requirements for grading, excavation, and construction activities in areas known to have asbestos rock formations through the implementation of an asbestos hazard dust mitigation plan to protect public health.

3.2.2 Environmental Setting

CLIMATE, METEOROLOGY, AND TOPOGRAPHY

The project site is located in a portion of western El Dorado County that is part of the Mountain Counties Air Basin (MCAB). The MCAB comprises portions of Placer County and El Dorado County and all of Plumas, Sierra, Nevada, Amador, Calaveras, Tuolumne, and Mariposa Counties. It includes the central and northern Sierra Nevada. Elevations range from several hundred feet in the foothills to more than 10,000 feet above mean sea level along the Sierra crest.

Ambient concentrations of air pollutant emissions are determined by the amount of pollutants emitted and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, air quality conditions in the area are determined by such natural factors as climate, meteorology, and topography, in addition to the level of emissions by existing air pollutant sources.

The MCAB generally experiences warm, dry summers and wet winters. During summer, in the western portion of the MCAB where the project site is located, temperatures often exceed 85 degrees Fahrenheit (°F) coupled with clear sky conditions, which is favorable for ozone formation. Local climatology of the project site is best represented by ambient temperature measurements at the Western Regional Climate Center–operated Represa Station in El Dorado County. Maximum temperatures occur during July and reach 90°F on average. Minimum temperatures can be as low

as 38°F during winter months (WRCC 2016). Average annual precipitation of approximately 23 inches (0.3 inches of snowfall) occurs primarily from November through March. Average annual wind blows from the south (WRCC 2002).

Criteria Air Pollutants

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. A brief description of key criteria air pollutants in the MCAB is provided below. Emission source types and health effects are summarized in Table 3.2-2. El Dorado County's attainment status for the NAAQS and the CAAQS are shown in Table 3.2-3.

Ozone

Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and the primary component of smog. Ozone is not directly emitted into the air but is formed through complex chemical reactions between precursor emissions of reactive organic gases (ROG) and NOX in the presence of sunlight. ROG are VOC that are photochemically reactive. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_X are a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels.

Emissions of the ozone precursors ROG and NO_X have decreased over the past several years because of more stringent motor vehicle standards and cleaner-burning fuels. Emissions of ROG and NO_X decreased from 2000 to 2010 and are projected to continue decreasing from 2010 to 2035 (CARB 2013).

Nitrogen Dioxide

Nitrogen Dioxide (NO_2) is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NO_X and are reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO_2 concentration in a particular geographical area may not be representative of the local sources of NO_X emissions (EPA 2018).

Particulate Matter

PM_{10} consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust, as well as particulate matter formed in the atmosphere by reaction of gaseous precursors (CARB 2013). PM_{10} emissions in the MCAB are dominated by emissions from area sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, farming operations, and construction and demolition, as well as particles from residential fuel combustion. Direct emissions of PM_{10} are projected to remain relatively constant through 2035. Direct emissions of $PM_{2.5}$ steadily declined in the MCAB between 2000 and 2010 and are projected to increase slightly through 2035. Emissions of $PM_{2.5}$ in the MCAB are dominated by the same sources as emissions of PM_{10} (CARB 2013).

Table 3.2-2 Sources and Health Effects of Criteria Air Pollutants

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Ozone	Secondary pollutant resulting from reaction of ROG and NO_X in presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO_X results from the combustion of fuels	Increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	Permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	Incomplete combustion of fuels; motor vehicle exhaust	Headache, dizziness, fatigue, nausea, vomiting, death	Permanent heart and brain damage

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Nitrogen dioxide (NO_2)	Combustion devices (e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines)	Coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis, or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	Chronic bronchitis, decreased lung function
Sulfur dioxide (SO_2)	Coal and oil combustion, steel mills, refineries, and pulp and paper mills	Irritation of upper respiratory tract, increased asthma symptoms	Insufficient evidence linking SO_2 exposure to chronic health impacts
Respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$)	Fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO_2 and ROG	Breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	Alterations to the immune system, carcinogenesis
Lead	Metal processing	Reproductive/developmental effects (fetuses and children)	Numerous effects, including neurological, endocrine, and cardiovascular effects

Notes: NO_X = oxides of nitrogen; ROG = reactive organic gases; SO_2 = sulfur dioxide.

[1] "Acute health effects" refers to immediate illnesses caused by short-term exposures to criteria air pollutants at fairly high concentrations. An example of an acute health effect includes fatality resulting from short-term exposure to carbon monoxide levels in excess of 1,200 parts per million.

[2] "Chronic health effects" refers to cumulative effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations. An example of a chronic health effect includes the development of cancer from prolonged exposure to particulate matter at concentrations above the national ambient air quality standards.

Source: EPA 2025d.

Table 3.2-3 Attainment Status Designations for El Dorado County

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone	Attainment (1-hour)[1]	Nonattainment (1-hour) classification = Serious[2]
	Nonattainment (8-hour)[3] classification = Severe	Nonattainment (8-hour)
	Nonattainment (8-hour)[4] classification = Serious	
Respirable particulate matter (PM_{10})	Unclassified (24-hour)	Nonattainment (24-hour)
		Nonattainment (annual)
Fine particulate matter ($PM_{2.5}$)	Attainment[5]	(No State Standard for 24-Hour)
	Nonattainment (24-hour)	
	Nonattainment (annual)	Unclassified (annual)
Carbon monoxide (CO)	Attainment (1-hour)	Attainment (1-hour)
	Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO_2)	Unclassified/attainment (1-hour)	Attainment (1-hour)
	Unclassified/attainment (annual)	Attainment (annual)
Sulfur dioxide (SO_2)[5]	Unclassified/attainment (1-hour)	Attainment (1-hour)
		Attainment (24-hour)
Lead (particulate)	Unclassified/attainment (3-month rolling average)	Attainment (30-day average)
Hydrogen sulfide	No federal standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibility-reducing particles		Unclassified (8-hour)
Vinyl chloride		Unclassified (24-hour)

[1] Air quality meets federal 1-hour ozone standard (77 *Federal Register* 64036). EPA revoked this standard, but some associated requirements still apply.

[2] In accordance with Health and Safety Code Section 40921.5(c), the classification is based on 1989–1991 data and therefore does not change.

[3] 2008 standard.

[4] 2008 standard.

[5] 2012 standard.

[6] 2010 standard.

Sources: EPA 2025c; CARB 2023.

Local Air Quality Monitoring Data

The project is located within the EDCAQMD jurisdiction. The EDCAQMD consists of two municipalities: the City of South Lake Tahoe and the City of Placerville. The Folsom-Natoma Street monitoring station is the station closest to the project which monitors ambient concentrations of ozone, $PM_{2.5}$, and NO_2. The nearest monitoring stations to the project site that monitor ambient concentrations of PM_{10}, SO_2, and carbon monoxide (CO) are the Roseville-N Sunrise Ave monitoring station, the Sacramento-Del Paso Manor monitoring station, and the Sacramento-Bercut Drive monitoring station, respectively. The location of these monitoring stations can be viewed on the CARB air monitoring webpage map of air monitoring sites in operation (CARB 2025c). Table 3.2-4 provides a summary of the maximum concentration of various pollutants from 2021-2023 and compares them to the NAAQS and CAAQS.

Table 3.2-4 Local Ambient Air Quality Data for El Dorado County 2021-2023

Pollutant	Averaging Time	Monitoring Station	Maximum Concentration per Year 2021	Maximum Concentration per Year 2022	Maximum Concentration per Year 2023	Most Stringent Ambient Air Quality Standard for Pollutant[1]
Ozone	1 hour	Folsom-Natoma Street	0.108 ppm	0.085 ppm	0.088 ppm	0.09 ppm (CAAQS)
Ozone	8 hours	Folsom-Natoma Street	0.096 ppm	0.074 ppm	0.073 ppm	0.070 ppm (CAAQS/NAAQS)
PM_{10}	24 hours	Roseville-N Sunrise Ave	150.7 µg/m^3	78.0 µg/m^3	47.9 µg/m^3	50 µg/m^3 (CAAQS)
PM_{10}	Annual	Roseville-N Sunrise Ave	21.1 µg/m^3	17.8 µg/m^3	16.0 µg/m^3	20 µg/m^3 (CAAQS)
$PM_{2.5}$	24 hours	Folsom-Natoma Street	265.7 µg/m^3	73.0 µg/m^3	32.5 µg/m^3	35 µg/m^3 (NAAQS)
$PM_{2.5}$	Annual	Folsom-Natoma Street	10.3 µg/m^3	6.3 µg/m^3	6.6 µg/m^3	9 µg/m^3 (NAAQS)
SO_2	1 hour	Sacramento-Del Paso Manor	2.2 ppb	2.8 ppb	2.3 ppb	75 ppb (NAAQS)
SO_2	24 hours	Sacramento-Del Paso Manor	1 ppb	0.6 ppb	1.1 ppb	40 ppb (CAAQS)
NO_2	1 hour	Folsom-Natoma Street	14 ppb	23 ppb	21 ppb	100 ppb (NAAQS)
NO_2	Annual	Folsom-Natoma Street	1.29 * ppb	2.64 * ppb	2.34 * ppb	30 ppb (CAAQS)
CO	1 hour	Sacramento-Bercut Drive	2.2 ppm	2 ppm	1.9 ppm	20 ppm (CAAQS)
CO	8 hours	Sacramento-Bercut Drive	1.3 ppm	1.6 ppm	1.3 ppm	9 ppm (CAAQS/NAAQS)

Notes: ppm = parts per million; ppb = parts per billion; CAAQS = California ambient air quality standards; NAAQS = national ambient air quality standards; µg/m^3 = micrograms per cubic meter; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SO_2 = sulfur dioxide; NO_2 = nitrogen dioxide; CO = carbon dioxide.

Source: EPA 2025e.

Existing Emissions Sources

CARB's emissions inventory summarizes emissions of criteria air pollutants and ozone precursors in the MCAB for various source categories in 2017 (the year for which the most recent data are available). According to the emissions inventory, areawide sources in the MCAB account for the greatest contribution to the annual average for anthropogenic air pollutant levels of ROG, whereas mobile sources account for most of the NO_X emissions. Areawide sources are the greatest contributors of anthropogenic PM_{10} and $PM_{2.5}$ in the MCAB. In El Dorado County, mobile sources are the greatest contributor to the annual average for anthropogenic ROG and NO_x emissions. Areawide sources are the greatest contributor to the annual average for anthropogenic PM_{10} and $PM_{2.5}$ emissions. Overall, statewide emissions are forecasted to decline by 71 percent between 2000 and 2035 (CARB 2013: 3-8).

Toxic Air Contaminants

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), most of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being diesel PM. Diesel PM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method exists. However, CARB has made preliminary concentration estimates based on a PM exposure method. This method uses the CARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Overall, except for levels of para-dichlorobenzene and formaldehyde, levels of TACs have decreased since 1990 (CARB 2013).

Naturally Occurring Asbestos

Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. NOA, which was identified as a TAC by CARB in 1986, is located in many parts of California and is commonly associated with serpentine soils and rocks. Exposure to asbestos increases the risk of developing lung disease. In general, the greater the exposure to asbestos, the greater the chance of developing harmful health effects such as lung cancer, mesothelioma, and asbestosis (a long term, non-cancerous disease of the lungs) (EPA 2025d).

An asbestos map of western El Dorado County prepared by the County shows the location of individual parcels and areas in the following four categories that either contain NOA or are considered to be subject to elevated risk of containing NOA (El Dorado County 2018):

- Found Area of NOA,
- Quarter Mile Buffer for Found Area of NOA,
- More Likely to Contain Asbestos, and
- Quarter Mile Buffer for More Likely to Contain Asbestos or Fault Line.

A portion of the project site lies within a mapped NOA Review Area. Additionally, the geotechnical reports by Kleinfelder (2019 and 2024) evaluated NOA and gathered samples within the South Site for testing and the results were negative for NOA minerals. However, the report indicated that there are ultramafic rocks and faulting nearby, such that there remains a potential for NOA to occur in the area (Kleinfelder 2019 and 2024). Thus, Rule 223-2 would be applicable to the project.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory, and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition occurs only with an alteration in the intensity. EDCAQMD identifies the following uses as common sources of nuisance odors: wastewater treatment plants, chemical manufacturing facilities, sanitary landfills, fiberglass manufacturing facilities, transfer stations, painting/coating operations (e.g., auto body shop), composting facilities, food processing plants, petroleum refineries, rendering plants, asphalt batch plants, and coffee roasters. There are no sources of odors meeting these criteria within the vicinity of the project site.

Sensitive Receptors

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants.

Existing sensitive land uses near the project site include residential neighborhoods consisting of single-family homes and a school. The closest of these receptors are the multiple single-family homes located directly against the project site's northern and northeastern border, as well as the elementary school (Oak Meadow Elementary School) located directly against the project's northwestern border.

3.2.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The impact analysis and associated modeling summarized below is based on the EDH Costco Project Air Quality Technical Report and the EDH Costco North Site Remainder Area Technical Report provided in Appendix B. This includes the preparation of a Health Risk Assessment (HRA) for the Costco project.

Criteria Air Pollutants and Ozone Precursors

Construction

Short-term construction-generated air pollutant emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.29, as recommended by EDCAQMD and other air districts in California (CAPCOA 2023). Based on the anticipated land use types (i.e., discount club, enclosed parking with elevator, gasoline/service station, parking lot, and roadway widening) and construction activities (e.g., site preparation, grading, paving, building construction, architectural coating, excavation, and utilities) and phasing buildout, construction-related air pollutant emissions were estimated for each year that construction would occur. Construction was assumed to occur beginning in early July 2026 and ending in mid-May 2027, or approximately 11 months. Construction was assumed to occur 7 days per week. Notably, two scenarios are considered for the construction of the project that have different material movement amounts in the grading phase. Scenario 1 assumes that the excavated material from portions of the project site would be used as fill during grading. Scenario 2 conservatively assumes that all the excavated material would be exported offsite and soil would be imported for fill during grading. To provide a conservative analysis, the worst-case emissions scenario (i.e., Scenario 2) is used in the evaluation of construction-related emissions as this scenario would involve greater air pollutant emissions related to the increase in material hauling trips relative to Scenario 1.

On-road construction emissions (e.g., emissions from worker and vendor commuting, concrete trucks, and trucks used for construction debris and soil/material hauling) were calculated in CalEEMod based on model defaults for worker trips and vehicle miles traveled (VMT) and with emission factors from EMFAC2021. The number of haul trips was estimated by CalEEMod based on the volume of soil to be imported/exported, and the amount of demolition debris generated. The number of concrete truck trips were based on project-specific information. The entrained road dust emission factors in CalEEMod are based on the equations presented in the Paved Roads and Unpaved Roads chapters of EPA's AP-42 and are then multiplied by the total VMT for project-related trips. It was assumed that 0.10 percent of construction worker vehicle trips and 0.07 percent of construction trucks trips (vendor, hauling, and concrete trucks) occur on unpaved roads based on the GIS analysis prepared by Kittelson & Associates (Kittelson & Associates 2025).

Additionally, the emissions associated with on-site idling of concrete trucks during the building construction phase were estimated using concrete truck trip rates, idling duration per trip, and emission factors from EMFAC2021. Refer to Appendix B for additional construction modeling details.

The construction modeling includes the frontage and off-site roadway improvements associated with the Costco project identified in Chapter 2, "Project Description."

Maximum daily construction emissions for each time period with overlapping construction phases for the two construction scenarios were estimated by summing up the maximum daily emissions associated with each overlapping construction phase for the proposed project and the site access and roadway improvements in that scenario.

Regarding construction-related dust, implementation of twice-daily construction site watering was assumed in accordance with the EDCAQMD Rule 223-1 for fugitive dust control.

The North Site Remainder Area future development would occur on roughly 13.79 acres of land to the northeast of the Costco project and is assumed to include up to 138,000 square feet of commercial/retail development. Construction was assumed to occur over an approximately 12-month period, with construction activities commencing in May 2027 and concluding in May 2028. Because the material movement volumes required for construction within the North Site Remainder Area are currently unknown, excavation and hauling volumes were assumed to be the same as those used to estimate emissions from the Costco project's construction Scenario 2. Dust control measures were included in the model to reflect the required application of EDCAQMD's Rule 223-1.

Given that the construction of the North Site Remainder Area land uses coincides with the operational phase of the Costco project, this analysis conservatively compares the combined average daily emissions from these construction and operation phases to EDCAQMD's mass daily significance thresholds for construction.

Operation

Operation-related emissions for the Costco project were estimated using CalEEMod for the following sources: area sources (i.e., consumer products, architectural coatings, and landscape maintenance equipment), energy use (i.e., natural gas consumption), and stationary sources (i.e., emergency generators).

ROG emissions from consumer products were estimated using a county-specific ROG emission factor calculated using CARB's ROG consumer product inventory and projected total building square footage for El Dorado County in calendar year 2027[1]. This emission factor was estimated using CARB's ROG consumer product inventory and projected total building square footage for El Dorado County in calendar year 2027, consistent with CalEEMod methodologies. ROG emissions from evaporation of solvents contained in architectural coatings were estimated using VOC limits defined in EDCAQMD's Rule 215 for Architectural Coatings. Landscape maintenance equipment activity was based on model defaults.

CalEEMod default assumptions were used to calculate CAP emissions for natural gas usage for each of the proposed project's land uses except for the proposed fuel facility, which does not use natural gas in its operation. Criteria air pollutant emissions from two diesel-powered generators, each rated at 250 hp, were calculated assuming 50 hours per year or 1 hour on any given day of testing and maintenance.

Emissions from gasoline transfer and dispensing mainly occur during loading, breathing, refueling, spillage, and from hose permeation. Emission factors were obtained from the CARB and CAPCOA guidance for gasoline dispensing facilities (CARB and CAPCOA 2022). Emissions were calculated based on the anticipated permitted annual throughput of 23 million gallons per year.

Operation-related mobile-source CAP emissions for the Costco project were modeled based on a combination of off-model calculations using EMFAC2021, project-specific information, and data provided in the traffic study prepared for the project (CARB 2023b). Specifically, the estimated total trip generation rates and VMT of passenger vehicles (customer and employees), and idling durations for vehicles queuing at the fuel facility were provided in the traffic study (Kittelson & Associates 2025). The CalEEMod default fleet mix for passenger vehicles in El Dorado-Mountain County was adjusted using the default VMT distribution for passenger vehicle technology/fuel categories in EMFAC2021 to determine the project-specific fleet mix of the passenger vehicles visiting the project. Passenger vehicles visiting the proposed fuel facility represent vehicles used by patrons of the fuel facility and are assumed to only include plug-in hybrids and gasoline-fueled vehicles. The project would employ approximately 300 employees. EMFAC2021 does not

[1] Total building square footage in 2027 was estimated as the product of the countywide building square footage per person in 2020 multiplied by the population projection for El Dorado County in calendar Year 2027. Refer to Table 4-14 in Appendix B for further details.

incorporate the benefits associated with the Advanced Clean Cars II regulation. Hence, Public Law 119-16's disapproval of California's Clean Air Act (CAA) waiver for Advanced Clean Cars II does not impact this analysis.

Project-specific trip rate and trip length estimates were used for fuel delivery trucks and warehouse/tire center delivery trucks. The proposed fuel facility is expected to receive approximately five fuel truck deliveries per day. It is anticipated that the proposed warehouse would result in a maximum of 13 delivery truck trips per day. The VMT of delivery trucks was calculated as the product of trip rates and trip lengths (see Appendix B). The idle duration for delivery trucks was assumed to be 15 minutes for each round trip, consistent with CARB's Air Toxic Control to Limit Diesel-Fueled Commercial Motor Vehicle Idling.

EMFAC2021 does not incorporate reductions associated with ACC II and ACF regulations. Hence, Public Law 119-16's disapproval of California's CAA waiver for ACC II and CARB's repeal of the ACF regulation do not impact this analysis. While EMFAC2021 incorporates reductions associated with the ACT regulation, this analysis assumes that all project-related delivery trucks are diesel-fueled. Hence, Public Law No. 119-15's disapproval of California's CAA waiver for the ACT regulation does not impact this analysis.

EMFAC2021 also which incorporates the benefits of Heavy-Duty Omnibus regulation. However, EMFAC2021 does not account for the benefits associated with the implementation of CARB's HD I/M program, also known as the Clean Truck Check (CTC) program. Excluding the emission benefits of the Heavy-Duty Omnibus regulation from this analysis would slightly increase the CAP emissions from project-related delivery trucks by less than 4%. Nonetheless, this increase is expected to be offset by the benefits associated with the HD I/M program, which are anticipated to result in greater reductions (5-20%) of CAP emissions as compared to the Heavy-Duty Omnibus regulation. Therefore, this analysis remains unaffected by Public Law 119-17's disapproval of California's CAA waiver for the Heavy-Duty Omnibus regulation.

Similar to the Costco project, operational emissions related to future development within the North Site Remainder Area were estimated using CalEEMod for the following sources: area sources (e.g., landscape maintenance equipment), energy use (i.e., natural gas consumption), and mobile sources. The North Site Remainder Area developments' landscape equipment activity and energy use were based on model defaults. Operation-related mobile-source CAP emissions were modeled based on the estimated VMT within the North Site Remainder Area which were derived from the transportation analysis prepared for the project (Kittelson & Associates 2025). The reader is referred to Section 3.14, "Transportation," for a further discussion of the VMT impact analysis for the project. Detailed model assumptions and inputs for these operational GHG emission calculations for the future development within the North Site Remainder Area are presented in Appendix B.

Health Risk Assessment

A health risk assessment (HRA) was performed to evaluate the estimated cancer risk, non-cancer chronic hazard index (HIC), and acute hazard index (HIA) associated with construction and operation of the Costco project.

Future commercial uses and operations of the North Site Remainder Area are not currently known as the project does not propose development of this area. Hence, a detailed HRA was not performed for the construction and operation of the North Site Remainder Area. Instead, a qualitative assessment of the potential health risk impacts of the North Site Remainder Area is included in the discussion of Impact 3.2-4.

This HRA analysis for the Costco project was conducted in accordance with the Air Toxics Hot Spots Program Risk Assessment Guidelines developed by the OEHHA. A brief discussion on methodology used to estimate the toxic air contaminant emissions that were evaluated as well as the modeling methodology is presented below. Refer to Section 5 in Appendix B (the EDH Costco Project Air Quality Technical Report prepared by Ramboll) for further details.

Toxic Air Contaminant Emissions

This HRA assesses impacts from toxic air contaminant (TACs) emissions associated with off-road diesel construction equipment, construction and operational on-road mobile sources, gasoline transfer and dispensing at the fuel facility, and operation of the emergency generators at the proposed warehouse. The following subsections provide a brief description of these emission sources and the TACs associated with them.

Off-Road Construction Equipment

The analysis of off-road equipment that are expected to operate during the construction of proposed project including the site access and the roadway improvements focused on the diesel exhaust emissions from these equipment. Diesel exhaust, a complex mixture that includes hundreds of individual constituents, is identified by the state of California as a known carcinogen. Under California regulatory guidelines, diesel particulate matter (DPM) is used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole. This analysis assumed that all exhaust PM_{10} from diesel-fueled equipment is DPM.

On-road mobile sources

The analysis of project-related mobile source emissions focused on TAC components of VOC and PM emissions found in gasoline and diesel vehicle exhaust, as well as diesel TRU exhaust. The TACs analyzed in this HRA include Federal Highway Administration's nine priority mobile source air toxics (MSATs), listed below:

- DPM
- 1,3-Butadiene
- Acetaldehyde
- Acrolein
- Benzene
- Ethyl Benzene
- Formaldehyde
- Naphthalene
- Polycyclic Organic Matter, which includes the following: acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, phenanthrene, and pyrene.

TAC emissions associated both on-site (travel and idling) and off-site (travel on roadway links within approximately quarter mile of the project site) activities of construction and operational trucks and TRUs were evaluated. Specifically, cancer and chronic non cancer impacts of project-related diesel-fueled construction trucks, operational delivery trucks, and TRUs were estimated using DPM emissions. This analysis assumed that all exhaust PM_{10} from diesel-fueled trucks and TRUs is DPM. Exhaust PM_{10} emissions from construction trucks (hauling, vendor, and concrete) were obtained from CalEEMod output files for the project construction Scenario 2, as well as the construction of the site access and roadway improvements. Exhaust PM_{10} emissions from operational delivery trucks and TRUs were estimated using emission factors obtained from CARB's EMFAC2021 and OFFROAD models respectively.

Additionally, cancer and non-cancer chronic/acute impacts for the gasoline-fueled passenger vehicles queuing at the fuel facility were estimated by speciating ROG and $PM_{2.5}$ exhaust emissions from these vehicles into the priority MSATs listed above. Refer to Section 5 in Appendix B (the EDH Costco Project Air Quality Technical Report prepared by Ramboll) for further details on these speciation profiles.

Gasoline Transfer and Dispensing

TAC emissions from gasoline transfer and dispensing mainly occur during loading, breathing, refueling, spillage, and from hose permeation. The TACs analyzed in this HRA noted below, are based on the CARB and CAPCOA guidance for gasoline dispensing facilities (CARB and CAPCOA 2022).

- Benzene
- Ethyl Benzene
- n-Hexane
- Naphthalene

- Propylene
- Toluene
- Xylenes

Emergency Generator

This HRA also evaluated the DPM exhaust emissions associated with the testing and maintenance of the diesel-powered generators at the proposed warehouse during the Costco project operation. This analysis assumed that all exhaust PM_{10} from these generators is DPM. The PM_{10} emissions data were obtained from the CalEEMod model run for the project operation.

Modeling Approach

The HRA prepared evaluates the estimated cancer risk, non-cancer chronic hazard index (HIC), and acute hazard index (HIA) associated with construction and operation of the Costco project on off-site receptors in the vicinity of the project site. The HRA modeling was performed using AERMOD and HARP2 based on the EDCAQMD CEQA Guide and OEHHA Guidance.

AERMOD requires a variety of inputs such as source parameters, meteorological data, topography information, and receptor parameters. CARB and SMAQMD provide AERMOD model-ready meteorological data sets for use in air quality and risk impact analyses for projects located within the EDCAQMD jurisdiction. SMAQMD's Sacramento Executive Airport (Station ID 23232) meteorological data set was selected based on its geographic proximity, and similarity in elevation and surrounding terrain to the project site. The SMAQMD meteorological data set for January 1, 2014, to December 25, 2018, was used for the analysis (SMAQMD 2013). The air dispersion model was run using a unit emission factor approach, which is also referred to as the χ/Q ("chi over q") method. The model output based on a unit emission factor approach was incorporated into a post-processing step with the calculated emission rates to estimate the air concentrations at each receptor.

This analysis assesses risk to residential, worker, and other sensitive receptors. Residential receptors have the highest exposure rate, as residents are assumed to live in their home for 30 years. As a conservative and health-protective measure, the estimated excess lifetime cancer risks for a resident was adjusted using age sensitivity factors (ASFs) that account for an "anticipated special sensitivity to carcinogens" of infants and children as recommended in the OEHHA 2009 Technical Support Document and OEHHA 2015 Air Toxics Hot Spots Program Risk Assessment Guidelines. According to EDCAQMD, sensitive receptors include residences, schools, daycares, medical facilities, convalescent centers, and elderly care facilities. For the purposes of this analysis, sensitive receptors are conservatively assumed to have the same exposure rates as residents.

The toxicity assessment characterizes the relationship between the magnitude of exposure and the nature and magnitude of adverse health effects that may result from such exposure. Toxicity factors in the latest HARP Health Database, integrated into the HARP program, were used in this HRA (CARB 2025d). The HARP program contains the most up-to-date listing of available inhalation and oral cancer potency factors (CPFs), chronic inhalation and oral reference exposure levels (RELs), and acute RELs approved by Cal/EPA for use in health risk assessments. TAC emissions and air dispersion modeling results were input into the Hot Spots Analysis and Reporting Program (HARP), version 22118, to estimate cancer risk and non-cancer hazard indices (HIs) associated with potential exposures to potential emissions from the Costco project's construction and operational emissions.

For further details on the modelling options selected for the HRA, refer to Section 5 in Appendix B (the EDH Costco Project Air Quality Technical Report prepared by Ramboll).

Odors

Impacts related to construction odors were assessed qualitatively, based on proposed construction activities, equipment types and duration of use, overall construction schedule, and distance to nearby sensitive receptors. While the project would not include any odor-generating facilities identified by the EDCAQMD, the proposed project does include a fuel facility. Gasoline dispensing facility land use types can result in odors related to the release of VOCs due to refueling, spillage, and hose permeation. Construction and operational odors are discussed in the impact analysis below.

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate project impacts on air quality under CEQA are based on Appendix G of the state CEQA Guidelines and thresholds of significance adopted by EDCAQMD.

Appendix G of the state CEQA Guidelines includes the following criteria for assessing an air quality impact if the project would:

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

EDCAMQD's air quality thresholds of significance are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS, which are scientifically substantiated numerical concentrations of criteria air pollutants considered to be protective of human health. According to the EDCAQMD's CEQA guide, the project would have a potentially significant impact on air quality if it would:

- conflict with or obstruct implementation of an applicable air quality plan (i.e., 2023 Ozone Plan and the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request). This would occur if one or more of the following criteria were met:
  - the project requires a change in the existing land use designation, such as through a general plan amendment or rezone, and projected emissions (ROG, NOx, CO, or PM_{10}) are greater than the emissions anticipated for the site if developed under the existing land use designation;
  - the project exceeds the "project alone" significance criteria;
  - for impacts that are determined to be significant, the lead agency does not require the project to implement the emission reduction measures contained in and/or derived from the applicable air quality plan; or
  - the project does not comply with all applicable district rules and regulations;
- conflict with the efforts of EDCAQMD to attain the NAAQS and CAAQS by resulting in construction-generated or long-term operational emissions of ROG or NO_x that exceed the EDCAQMD-recommended thresholds of 82 pounds per day (lb/day) for ROG and NO_X;
- result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm;
- result in the lifetime probability of contracting cancer to be greater than one in one million (ten in one million if toxic best available control technology is applied); or the ground-level concentration of non-carcinogenic toxic air contaminants to exceed a Hazard Index of greater than 1.; or
- create objectionable odors affecting a substantial number of people.

ISSUES NOT DISCUSSED FURTHER

All issues related to air quality are discussed in this analysis.

Impact 3.2-1: Conflict with or Obstruct Implementation of an Applicable Air Quality Plan

The Costco project and future development on the North Site Remainder Area are consistent with the El Dorado County General Plan land use designations factored in the 2023 Ozone Plan and the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request, and would not conflict with the implementation of these plans. This impact would be **less than significant**.

El Dorado County is designated as nonattainment for ozone and $PM_{2.5}$ for the NAAQS see Table 3.2-3, above). The applicable air quality plans are the 2023 Ozone Plan, adopted in October 2023, and the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request for the Sacramento $PM_{2.5}$ Nonattainment Area.

The 2023 Ozone plan outlines how the SFNA, including western El Dorado County, will meet the ozone NAAQS. The 2023 Ozone Plan estimates future emissions in the SFNA and determines strategies necessary for emission reductions through regulatory controls. Emission projections are based on population, vehicle, and land use trends typically developed by the regional air quality management districts and metropolitan planning organizations, including SACOG.

To address how the region would attain the $PM_{2.5}$ standard, the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request was prepared by the regional air districts in 2013. In this report, the regional air districts included mobile source measures and a comprehensive suite of fiscally responsible local measures for stationary and area sources, including measures to further reduce emissions from industrial sources, residential wood burning and commercial charbroiling.

As stated above, the EDCAQMD *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts under the California Environmental Quality Act* (EDCAQMD CEQA Guide) states that a project would conflict with or obstruct implementation of an applicable air quality plan (i.e., 2023 Ozone Plan and the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request) if one of more of the following criteria were met:

- the project requires a change in the existing land use designation, such as through a general plan amendment or rezone, and projected emissions (ROG, NOx, CO, or PM_{10}) are greater than the emissions anticipated for the site if developed under the existing land use designation;
- the project exceeds the "project alone" significance criteria;
- for impacts that are determined to be significant, the lead agency does not require the project to implement the emission reduction measures contained in and/or derived from the applicable air quality plan; or
- the project does not comply with all applicable district rules and regulations.

An evaluation of the project against each criterion is presented below.

Costco Project

The following addresses the Costco project's evaluation against the above criteria.

Change to Land Use Designation Plan

As described in Section 3.10, "Land Use and Planning," the project site zoning includes Commercial Regional–Planned Development (CR-PD), with smaller areas of Commercial Limited (CL) and Transportation Corridor (TC). Under the General Plan, the proposed Costco project is a retail use that is consistent with the General Plan definition of Commercial. Additionally, as stated above and in Section 3.10, "Land Use and Planning," the project site is included in SACOG's 2020 MTP/SCS as an Established Community type. Because the 2023 Ozone Plan was informed by SACOG's 2020 MTP/SCS, the project has therefore been accounted for in the 2023 Ozone Plan's growth pattern estimation for the region. Thus, the project would not meet EDCAQMD's first criterion to conflict with or obstruct implementation of an applicable air quality plan.

Exceedance of "Project Alone" Significance Criteria

As discussed in the impact analyses below, the project would not result in significant impacts related to its construction or operation by exceeding EDCAQMD criteria air pollutant emission thresholds. In addition, the project would be required to implement the actions included in Mitigation Measures 3.14-2a and 3.14-2b, which require that the project provide a mandatory commute reduction program for Costco employees, and implement pedestrian network improvements. These measures would reduce VMT and associated mobile-source air pollutant emissions during operation. Additional reductions could occur throughout the region as the Costco project would feature 10 electric vehicle (EV) direct current (DC) fast chargers, which would support regionwide reductions in mobile-source related fossil fuel combustion. As further addressed in Impact 3.2-4 below, the project would be required to implement Mitigation Measures 3.2-4a and 3.2-4b, which require application of Tier-4 Emission Standards to Diesel-Powered Off-Road Equipment and preparation of an Asbestos Dust Mitigation Plan, respectively to mitigate potential public health impacts. Thus, the project would not result in exceedances of project-level thresholds as they apply to the "project alone" criteria.

Implementation of Applicable Air Pollutant Emission Reduction Measures

As described under "Exceedance of "Project Alone" Significance Criteria," the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment. Hence, the proposed project is not required to implement any additional mitigation measures contained in these plans.

While not required to implement 2023 Ozone Plan reduction measures, the project would include design features which would minimize ozone precursor emissions. The 2023 Ozone Plan prioritizes reductions of NO_X, a precursor of ozone, through measures and policies meant to reduce mobile and area source emissions of the criteria pollutant. Project design would include multiple energy efficient design features such as energy-efficient LED lighting, water-efficient landscaping, high efficiency HVAC systems, high-efficiency water heaters, and a Clean Energy Contract with PG&E which would provide 100 percent renewable electrical power to the project. The project also would be required to implement mandatory energy efficiency measures in accordance with Part 6 of Title 24 of the California Building Code (California Energy Code) to reduce energy demand from buildings. By sourcing 100 percent of electrical power provided to the project from renewable sources through PG&E, indirect NO_x emissions that would otherwise occur from the procurement of fossil-fuel-based power sources are avoided. Additionally, efficiency features such as the high-efficiency water heaters included in the project design would reduce natural gas demand and thus reduce NO_x emissions generated as a biproduct of natural gas combustion. These features, which reduce emissions from energy used in buildings, align with the reduction goals of the 2023 Ozone Plan.

Another priority goal of the 2023 Ozone Plan is reducing emissions associated with mobile sources. This is typically achieved through actions such as implementing VMT reduction measures; increasing electric vehicle (EV) use; and increasing access to alternative modes of transportation, such as biking and walking. As identified in Chapter 2, "Project Description," the project would install 10 EV DC fast chargers that would encourage and facilitate the use of EVs over fossil fuel powered vehicles. Implementation of Mitigation Measures 3.14-2a and 3.14-2b would further address mobile emissions by requiring a mandatory commute reduction program for Costco employees and implementing pedestrian network improvements. These design features and mitigation measures align with the goals of the 2023 Ozone Plan to reduce mobile-source emissions. Therefore, the Costco project would be consistent with the 2023 Ozone Plan.

The Costco project would also be consistent with the control strategies in the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation request through compliance with EDCAQMD Rule 223 and Rule 223-1, implementation of Mitigation Measure 3.2-4a (see Impact 3.2-4), and the implementation of the VMT reduction measures discussed in the previous paragraph.

Compliance with Air District Rules and Regulations

As described for Impact 3.2-2, below, the project would incorporate Rule 223-1 and Rule 223-2 as the geological report prepared for project identified the location of NOA nearby. Notably, the report concluded that the potential for NOA to be encountered at the project site would be low, as NOA was not detected in any of the soil samples conducted at the project site and the Asbestos Review Area maps published by Churchill et al. in 2000 indicate that the project site area has been removed as mappable NOA bearing unit based on geologic evaluation. Because there remains some potential for NOA to be encountered, the project would submit an Asbestos Dust Mitigation Plan to the EDCAQMD before the start of any construction activity (see Impact 3.2-4 and Mitigation Measure 3.2-4b). The project would comply with all other applicable EDCAQMD rules, as described in Section 3.2.1, "Regulatory Setting," above.

North Site Remainder Area

The following addresses the North Site's Remainder Area's compliance with the above criteria.

Change to Land Use Designation Plan

The North Site Remainder Area is designated Commercial under the General Plan and could potentially support approximately 138,000 square feet of development. The North Site Remainder Area is not proposed for development as part of this project, and future development would submit a separate application. Future development within the North Site Remainder Area is generally accounted for in the 2023 Ozone Plan and would be accounted for in forthcoming attainment plans. The 2023 Ozone Plan was informed by SACOG's 2020 MTP/SCS. As stated in Section 3.10, "Land Use and Planning," the North Site Remainder Area is included in SACOG's 2020 MTP/SCS as an Established Community type and has therefore been accounted for in its growth pattern estimation for the region.

Exceedance of "Project Alone" Significance Criteria

As detailed in Chapter 2, "Project Description," commercial development could occur within the 13.79-acre North Site remainder area. While the project proposes no development for the North Site Remainder Area, air pollutant emissions related to construction and operation of this site were estimated for this area to disclose potential future impacts related to development on the site, As described under Impacts 3.2-2, 3.2-3, 3.2-4, and 3.2-5, air quality impacts related to construction and operation of development within the North Site Remainder Area would be less than significant. In addition, the North Site Remainder Area would be required to implement the actions included in Mitigation Measure 3.14-2c, which require a TDM program and implement VMT reduction measures for subsequent developments in the North Site Remainder Area. These measures would reduce VMT and associated mobile-source air pollutant emissions during operation. As further addressed in Impact 3.2-4 below, the project would be required to implement Mitigation Measures 3.2-4a and 3.2-4b, which require application of Tier-4 Emission Standards to Diesel-Powered Off-Road Equipment and preparation of an Asbestos Dust Mitigation Plan, respectively to mitigate potential public health impacts. Therefore, implementation of development within the North Site Remainder Area would not exceed the "project alone" significance criteria.

Implementation of Applicable Air Pollutant Emission Reduction Measures

As described under "Exceedance of 'Project Alone' Significance Criteria," the development within the North Site Remainder Area would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment. Hence, development within the North Site Remainder Area would not be required to implement any additional mitigation measures contained in these plans.

However, the project would include design features and mitigation measures that would support the ozone reduction goals of the 2023 Ozone Plan to reduce ozone precursor emissions. Development within the North Site Remainder Area would be consistent with current state and building code requirements related to energy efficiency and EV charging and would have the ability to obtain 100 percent renewable electrical power from PG&E to avoid indirect ozone precursor emissions from energy generated using fossil fuels at power plants. Implementation of Mitigation Measures 3.14-2c would further address mobile emissions by requiring a TDM program and implementing VMT reduction measures for subsequent developments in the North Site Remainder Area.

Future development of North Site Remainder Area would also be consistent with $PM_{2.5}$ Implementation/Maintenance Plan control strategies through compliance with EDCAQMD Rule 223 and Rule 223-1, implementation of Mitigation Measure 3.2-4a (see Impact 3.2-4), and implementation of Mitigation Measure 3.14-2c to reduce VMT.

Compliance with Air District Rules and Regulations

As described above, the project would incorporate Rule 223-1 because there remains some potential for NOA to be encountered due to the presence of NOA nearby as stated in the geological report prepared for the project. Therefore, the project would submit an Asbestos Dust Mitigation Plan to the EDCAQMD before the start of any construction activity (see Impact 3.2-4 and Mitigation Measure 3.2-4b). The project would comply with all other applicable EDCAQMD rules, as described in Section 3.2.1, "Regulatory Setting," above.

Conclusion

Because the project is a retail use that is consistent with the General Plan definition of Commercial and the project site is designated as Commercial under the General Plan, the project would not require rezoning or an amendment to the General Plan. Implementation of the project would not result in construction– or operations-related emissions that would exceed EDCAQMD's project-level thresholds for criteria pollutants and precursors. The project would also comply with all applicable EDCAQMD Rules, as described in Section 3.2.1, "Regulatory Setting," above. The project would result in a less than significant impact related to cancer risk from TAC emissions and NOA as detailed under Impact 3.2-4, below. While not required to implement any of the 2023 Ozone Plan's control measures, the project would include project design features which would support the ozone reduction goals of the 2023 Ozone Plan. The project would not conflict with or obstruct the goals of the 2023 Ozone Plan to reduce mobile-source emissions. Additionally, because the project would not result in significant impacts related to $PM_{2.5}$ emissions and would implement particulate matter control strategies, the project would not conflict with the goal of the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request. For these reasons, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.2-2: Generate Short-Term Construction-Related Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that Exceed Applicable Thresholds

Construction of the project (including off-site roadway and infrastructure improvements) would not result in an exceedance of EDCAQMD's numerical thresholds for criteria pollutants and precursors. Further, for impacts related to particulate matter emissions to be considered less than significant, projects must comply with EDCAQMD Rule 223-1. The project would comply with EDCAQMD Rule 223-1 for fugitive dust control. The combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of ROG exceeding EDCAQMD thresholds. Thus, this impact would be **significant**.

Costco Project

Construction-related activities associated with the Costco project (including off-site roadway and infrastructure improvements) would generate emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the operation of off-road equipment, material delivery trips, worker/vendor commute trips, and other miscellaneous activities (e.g., application of architectural coatings). Fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be associated primarily with on-site grading activities and on-road vehicle travel. PM_{10} and $PM_{2.5}$ are also contained in exhaust from off-road equipment and on-road vehicles. Emissions of the ozone precursors ROG and NO_X would be associated primarily with construction equipment and on-road vehicle exhaust. The application of architectural coatings results in fugitive ROG emissions.

Construction is assumed to occur over an approximately 11-month period, with construction activities commencing in July 2026 and concluding in May 2027. The EDCAQMD CEQA Guide specifies that emissions of fugitive dust PM_{10} need not be quantified, and may be assumed to be not significant, if the project includes control measures that will prevent visible dust beyond the project property lines in compliance with EDCAQMD Rule 223 and Rule 223-1. Therefore, emissions of $PM_{2.5}$ and PM_{10} are identified in Table 3.2-4 for informational purposes only. Dust control measures were included in the modeling to reflect the required compliance with EDCAQMD's Rule 223-1.

Table 3.2-5 summarizes the modeled daily ROG, NO_X, and PM emissions during construction activities. Specific model assumptions and inputs can be found in Appendix B.

Table 3.2-5 Summary of Daily Emissions of Criteria Air Pollutants and Precursors Associated with Costco Project Construction (Unmitigated)[1, 2]

Year	ROG (lb/day)	NO_X (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
First quarter	4.8	49	47	0.1	10	3.4
Second quarter	5.8	64	57	0.2	15	4.8
Third quarter	11	34	40	0.1	8.1	2.4
Fourth quarter	42	15	24	<0.1	4.9	1.1
Maximum	**42**	**64**	**57**	**0.2**	**15**	**4.8**
EDCAQMD threshold of significance	**82**	**82**	**NA**	**NA**	**NA**	**NA**
Threshold exceeded?	**No**	**No**	**NA**	**NA**	**NA**	**NA**

Notes: NA = not applicable (EDCAQMD has not adopted numerical thresholds for PM_{10} and $PM_{2.5}$); ROG = reactive organic gases; lb/day = pounds per day; NOx = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less; EDCAQMD = El Dorado County Air Quality Management District.

[1] To provide a conservative analysis, Construction Scenario 2 emissions were modeled and are used in the evaluation of construction-related emissions.

[2] Average daily emissions per quarter calculated as the total construction emissions, which include construction of the fuel station, warehouse, parking lot, and site access and roadway improvements, divided by the number of construction days in each quarter.

Particulate matter (PM_{10} and $PM_{2.5}$) emission estimates include the benefits associated with EDCAQMD's fugitive dust control measures under Rule 223-1.

See Appendix B for detailed input parameters and modeling results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025.

As shown in Table 3.2-5, construction-related emissions of ROG and NO_x would not exceed EDCAQMD thresholds. While EDCAQMD has not adopted numerical thresholds for PM_{10} and $PM_{2.5}$, the project would comply with EDCAQMD Rule 223 and Rule 223-1 for fugitive dust control and would therefore result in less than significant air quality impacts related to fugitive dust emissions per EDCAQMD guidance. Thus, construction emissions for the Costco project would be **less than significant**.

North Site Remainder Area

Construction-related activities associated with development within the North Site Remainder Area would generate emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the operations of off-road equipment, material delivery trips, worker/vendor commute trips, and other miscellaneous activities (e.g., application of architectural coatings). Fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be associated primarily with on-site grading activities and on-road vehicle travel. PM_{10} and $PM_{2.5}$ are also contained in exhaust from off-road equipment and on-road vehicles. Emissions of the ozone precursors ROG and NO_X would be associated primarily with construction equipment and on-road vehicle exhaust. The application of architectural coatings results in fugitive ROG emissions.

Construction was assumed to occur over an approximately 12-month period, with construction activities commencing in May 2027 and concluding in May 2028. Dust control measures were included in the model to reflect the required compliance with EDCAQMD's Rule 223-1.

Notably, construction of development within the North Site Remainder Area is assumed to occur simultaneously with operation of the Costco project. Thus, the combined emissions from operation of the Costco project and construction of development within the North Site Remainder Area are compared against EDCAQMD's thresholds in Table 3.2-6. Specific model assumptions and inputs can be found in Appendix B.

Table 3.2-6 Summary of Daily Emissions of Criteria Air Pollutants and Precursors Associated with Construction of North Site Remainder Area and Operation of Costco Project (Unmitigated)[1]

Year	ROG (lb/day)	NO_X (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
First Quarter	68.9	79.3	205.9	0.5	49.3	10.4
Second Quarter	67.7	44.8	196.8	0.3	38.8	7.5
Third Quarter	67.7	44.5	196.5	0.3	38.8	7.5
Fourth Quarter	87.3	41.8	193.2	0.3	38.1	7.4
Maximum	**87.3**	**79.3**	**205.9**	**0.5**	**49.3**	**10.4**
EDCAQMD threshold of significance	**82**	**82**	**NA**	**NA**	**NA**	**NA**
Threshold exceeded?	**Yes**	**No**	**NA**	**NA**	**NA**	**NA**

Notes: NA = not applicable (EDCAQMD has not adopted numerical thresholds for PM_{10} and $PM_{2.5}$); ROG = reactive organic gases; lb/day = pounds per day; NOx = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less; EDCAQMD = El Dorado County Air Quality Management District.

[1] Daily emissions represent the sum of the average daily construction emissions for the North Site Remainder Parcel and the maximum daily emissions associated with the operation of the Costco project. Total values may not sum exactly due to rounding. Average daily construction emissions per quarter for the North Site Remainder Area calculated as the total construction emissions divided by the number of construction days in each quarter.

Particulate matter (PM_{10} and $PM_{2.5}$) emissions estimates include the benefits associated with EDCAQMD's fugitive dust control measures under Rule 223-1.

See Appendix B for detailed input parameters and modeling results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025.

As shown in Table 3.2-6, construction-related emissions of ROG would exceed EDCAQMD thresholds. EDCAQMD has not adopted numerical thresholds for PM_{10} and $PM_{2.5}$. Construction activities related to development within the North Site Remainder Area would comply with EDCAQMD Rule 223-1 for fugitive dust control. Hence, the air quality impacts of construction-related fugitive dust emissions would be less than significant per EDCAQMD guidance. Thus, construction emissions for the North Site Remainder Area in combination with operational emissions of the Costco project would be **significant**.

Conclusions

Because the combined emissions related to construction of the North Site Remainder Area and the Costco project would result in levels of ROG exceeding EDCAQMD thresholds, this impact would be **significant**.

Mitigation Measures

Note that while Mitigation Measure 3.2-4a is implemented here to reduce ROG emissions, it is also applied under Impact 3.2-4 to reduce health risks related to implementation of the project.

Mitigation Measure 3.2-2: Architectural Coating VOC Limits for Development of the North Site Remainder Area

Future building construction of the North Site Remainder Area shall only use architectural coatings with a VOC content not exceeding 100 grams per liter during construction for all interior and exterior spaces. This requirement shall be included in plans submitted for review by the County prior to the issuance of building permits.

Mitigation Measure 3.2-4a: Apply Tier-4 Emission Standards to Diesel-Powered Off-Road Equipment

Construction equipment greater than 50 horsepower (hp) used at the site shall meet EPA Tier 4 Final emission standards for PM_{10} and $PM_{2.5}$, if available. If Tier 4 Final equipment is not available, all construction equipment larger than 50 hp used at the site shall meet EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices. This requirement shall apply to the construction of the Costco project and construction of the North Site Remainder Area.

Significance After Mitigation

With implementation of Mitigation Measure 3.2-2, ROG emissions from construction would be reduced by requiring that development within the North Site Remainder Area limit the VOC content of architectural coatings to 100 grams per liter during construction. Additionally, implementation of Mitigation Measure 3.2-4a (further described below) would reduce particulate matter emissions from construction equipment exhaust by requiring the use of Tier 4 engines in equipment over 50 hp. To provide a conservative estimate of emissions, construction modeling assumed that Tier 3 engines with particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices would be used on-site. Table 3.2-7, below, summarizes combined emissions from operation of the Costco project and construction of development within the North Site Remainder Area with mitigation.

Table 3.2-7 Summary of Daily Emissions of Criteria Air Pollutants and Precursors Associated with Construction of North Site Remainder Area and Operation of Costco Project (Mitigated)[1]

Year	ROG (lb/day)	NO_X (lb/day)	CO (lb/day)	SO_X (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
First Quarter	67.9	81.8	209.7	0.5	48.8	9.9
Second Quarter	67.3	47.6	198.9	0.3	38.6	7.3
Third Quarter	67.3	47.5	198.5	0.3	38.6	7.3
Fourth Quarter	80.9	44.1	194.6	0.3	38.0	7.2
Maximum	**80.9**	**81.8**	**209.7**	**0.5**	**48.8**	**9.9**
EDCAQMD threshold of significance	**82**	**82**	**NA**	**NA**	**NA**	**NA**
Threshold exceeded?	**No**	**No**	**NA**	**NA**	**NA**	**NA**

Notes: NA = not applicable (EDCAQMD has not adopted numerical thresholds for PM_{10} and $PM_{2.5}$); ROG = reactive organic gases; lb/day = pounds per day; NOx = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less; EDCAQMD = El Dorado County Air Quality Management District.

[1] Daily emissions represent the sum of the average daily construction emissions for the North Site Remainder Parcel and the maximum daily emissions associated with the operation of the Costco project. Total values may not sum exactly due to rounding. Average daily construction emissions per quarter for the North Site Remainder Area calculated as the total construction emissions divided by the number of construction days in each quarter.

Particulate matter (PM_{10} and $PM_{2.5}$) emissions estimates include the benefits associated with EDCAQMD's fugitive dust control measures under Rule 223-1.

See Appendix B for detailed input parameters and modeling results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025.

As shown in Table 3.2-7, combined emissions from operation of the Costco project and construction of development within the North Site Remainder Area with mitigation would not exceed EDCAQMD thresholds with the application of Mitigation Measure 3.2-4a and 3.2-2. Thus, the construction air quality impacts would be mitigated to a **less-than-significant** level.

Impact 3.2-3: Generate Long-Term Operational Emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that Exceed Applicable Thresholds

Operation of the project would result in emissions of criteria pollutants from area, energy, mobile, and stationary sources. Because emissions of ROG and NO_x would not exceed EDCAQMD thresholds, operational emissions associated with the project would not conflict with the efforts of EDCAQMD to attain the NAAQS and CAAQS. This impact would be **less than significant**.

Costco Project

Operation of the project would result in criteria air pollutant emissions from area, energy, mobile, and stationary sources. Area-source emissions include fugitive ROG emissions from the application of architectural coatings and the use of various consumer products, such as cleaning chemicals, and criteria air pollutant emissions from the operation of landscaping maintenance equipment (e.g. lawn mowers and leaf blowers). Operational energy-source emissions would occur from natural gas consumption associated with building energy use. Mobile sources of emissions would include employee and customer vehicle trips, and warehouse & tire center delivery truck trips and fuel delivery truck trips. Operational stationary sources include two diesel-powered emergency generators and the proposed gasoline dispensing facility. Routine testing and maintenance of the diesel-powered emergency generators would result in criteria air pollutant emissions. Additionally, ROG emissions from the gasoline dispensing facility would occur during loading, breathing, refueling, spillage, and from hose permeation. The operation of the Costco project is expected to begin in mid-2027 after completion of construction. Hence, operational emissions are quantified for the anticipated first year of operation, i.e., 2027.

Table 3.2-8 Summary of Daily Operational Emissions of Criteria Air Pollutants and Precursors at Full Buildout of the Costco Project (2027) (Unmitigated)

Emission Category	ROG Emissions (lbs/day)	NO_X Emissions (lbs/day)	CO Emissions (lbs/day)	SO_X Emissions (lbs/day)	PM_{10} Emissions (lbs/day)	$PM_{2.5}$ Emissions (lbs/day)
Area	4.65	0.10	11.6	6.9E-04	0.02	0.02
Energy	0.02	0.38	0.32	0.0023	0.03	0.03
Mobile	42	31	168	0.30	37	6.8
Stationary Sources[1]	0.82	2.29	2.09	0.0039	0.12	0.12
Gasoline Dispensing Facility	19	-	-	-	-	-
Total Daily Emissions (lb/day)	**66**	**34**	**182**	**0.30**	**37**	**7.0**
EDCAQMD Mass Daily Significance Thresholds	**82**	**82**	**NA**	**NA**	**NA**	**NA**
Exceeds Threshold?	**No**	**No**	**-**	**-**	**-**	**-**

Notes: NA = not applicable (EDCAQMD has not adopted numerical thresholds for PM_{10} and $PM_{2.5}$); ROG = reactive organic gases; lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less; EDCAQMD = El Dorado County Air Quality Management District.

[1] Represents emissions associated with the testing and maintenance of two diesel-powered emergency generators.

Total values may not sum exactly due to rounding.

See Appendix B for detailed input parameters and modeling results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025.

As shown in Table 3.2-8, operation of the Costco project would not result in emissions exceeding EDCAQMD's numerical thresholds for ROG and NO_x.

EDCAQMD has not adopted numerical thresholds for PM_{10} or $PM_{2.5}$ emissions. The EDCAQMD CEQA Guide states that PM_{10} emissions from a land use development project primarily associated with gasoline-powered vehicles may be assumed to be less than significant if the project does not generate heavy-duty diesel vehicle trips in greater proportion than the general mix of such trips in public roadways (EDCAQMD 2002b). As shown in Table 3.2-8, the project's primary source of PM_{10} emissions is mobile sources. The air quality technical report prepared for the Costco project (Appendix B) identified that on-road vehicle trips generated by the proposed project are predominately passenger vehicles, while project-generated heavy-duty diesel vehicle trips account for less than 0.25 percent of the total project trips. This would be lower than the approximately 6 percent of heavy-duty diesel trucks operating on the roads in El Dorado County (as estimated using vehicle mix data from EMFAC2021). For this reason, the project would not be expected to generate heavy-duty diesel vehicle trips in greater proportion than the general mix of such trips in public roadways in the vicinity of the project site and operational PM_{10} emissions from the project would be **less than significant** per EDCAQMD guidance.

Because the project would not result in emissions exceeding EDCAQMD thresholds, the project's operational emissions would not conflict with air quality planning efforts in the region and would not result in a cumulatively considerable net increase in ozone, PM_{10}, and $PM_{2.5}$ for which the region has been designated as nonattainment for the NAAQS and CAAQS.

North Site Remainder Area

Operation of commercial uses within the North Site Remainder Area, assumed to occur beginning in 2028, would result in the generation of long-term operational emissions from area, energy, and mobile sources. Emissions from area sources such as the fugitive ROG emissions from application of architectural coatings and the use of various consumer products and criteria air pollutant emissions from landscape maintenance equipment (e.g., mowers and leaf blowers). Operational energy-source emissions would occur from the consumption of natural gas associated with building energy use. Operational emissions are also generated by on-road mobile sources (passenger cars and trucks) that travel to and from the Remainder Area development.

Notably, operation of development within the North Site Remainder Area would occur simultaneously with operation of the Costco project. Thus, the combined emissions from operation of the Costco project and development within the North Site Remainder Area are compared against EDCAQMD's thresholds in Table 3.2-9.

Table 3.2-9 Summary of Daily Operational Emissions of Criteria Air Pollutants and Precursors Associated with the Costco Project and the North Site Remainder Area (2028) (Unmitigated)

Proposed Project Land Use	Emission Category	ROG Emissions (lbs/day)	NO_x Emissions (lbs/day)	CO Emissions (lbs/day)	SO_x Emissions (lbs/day)	PM_{10} Emissions (lbs/day)	$PM_{2.5}$ Emissions (lbs/day)
Costco project	Area	4.7	0.1	11.6	<0.1	<0.1	<0.1
Costco project	Energy	0.02	0.4	0.3	<0.1	<0.1	<0.1
Costco project	Mobile	41.7	31	167.5	0.3	36.5	6.8
Costco project	Stationary Sources[1]	0.8	2.3	2.1	<0.1	0.1	0.1
Costco project	Gasoline Dispensing Facility	19.3	—	—	—	—	—
North Site Remainder Area	Area	3.3	<0.1	6.0	<0.1	<0.1	<0.1
North Site Remainder Area	Energy	0.02	0.3	0.3	<0.1	<0.1	<0.1
North Site Remainder Area	Mobile	11.6	7.1	52.3	0.1	16.8	3.0
Total Daily Emissions (lb/day)		**81.4**	**41.7**	**240**	**0.40**	**53.5**	**10.0**
EDCAQMD Mass Daily Significance Thresholds		**82**	**82**	**NA**	**NA**	**NA**	**NA**
Exceeds Threshold?		No	No	—	—	—	—

Notes: NA = not applicable (EDCAQMD has not adopted numerical thresholds for PM_{10} and $PM_{2.5}$); ROG = reactive organic gases; lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less; EDCAQMD = El Dorado County Air Quality Management District.

[1] Represents emissions associated with the testing and maintenance of two diesel-powered emergency generators.

Total values may not sum exactly due to rounding.

See Appendix B for detailed input parameters and modeling results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025.

As shown in Table 3.2-9, combined emissions from operation of the Costco project and development within the North Site Remainder Area would not result in emissions exceeding EDCAQMD thresholds for ROG and NO_X.

EDCAQMD has not adopted numerical thresholds for PM_{10} or $PM_{2.5}$ emissions. The EDCAQMD CEQA Guide states that PM_{10} emissions from a land use development project primarily associated with gasoline-powered vehicles may be assumed to be less than significant if the project does not generate heavy-duty diesel vehicle trips in greater proportion than the general mix of such trips in public roadways (EDCAQMD 2002b). As shown in Table 3.2-9, the primary source of the combined operational PM_{10} emissions is mobile sources. As described in Appendix B, the combined on-road vehicle trips generated by the Costco project and the North Site Remainder Area development are predominately passenger vehicles, and the proportion of heavy-duty diesel vehicle trips generated by the Costco project and the North Site Remainder Area development is expected to be less than the general mix of such trips in public roadways in the vicinity of the project site. Hence, the combined operational PM_{10} emissions from the Costco project and the North Site Remainder Area development would be less than significant per EDCAQMD guidance.

Conclusions

Because operational emissions would not exceed EDCAQMD thresholds, operational emissions would not conflict with air quality planning efforts in the region and would not result in a cumulatively considerable net increase in ozone, PM_{10}, and $PM_{2.5}$, for which the region has been designated as nonattainment for the NAAQS and CAAQS. Because the NAAQS and CAAQS were established to be protective of public health, adverse health impacts to receptors are not likely to occur. For these reasons, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.2-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations

The increase in CO emissions from project-related increased traffic volumes at affected intersections and the on-site fuel facility are less than significant and the proposed project would not expose sensitive receptors to substantial concentrations of localized CO. Construction and operation of the Costco project could result in the exposure of nearby residential receptors to TAC-related health risks that exceed thresholds of significance for cancer risk for the unmitigated scenario. Regarding naturally occurring asbestos, the project site is adjacent to areas in which NOA has been identified, thus construction of the project could result in airborne release of NOA, and this impact would be significant. Therefore, this impact would be **significant**.

Costco Project

CO Hotspots

Although the EDCAQMD CEQA Guide provides guidance regarding CO impact analyses, the guide uses a process that relies on background concentrations of CO and provides analysis-year factors. The provided factors extend only to 2010 and therefore are considered outdated. In the absence of current guidance related to CO impacts from EDCAQMD, CEQA provides lead agencies the discretion to borrow thresholds from other air districts for use in analyses where needed. The Placer County Air Pollution Control District (PCAPCD) 2017 CEQA Handbook offers more recent guidance on evaluating CO impacts from new development projects. According to PCAPCD's CEQA guidelines, a project would result in a less than significant impact to localized CO concentrations if the project's CO emissions from vehicle operation are less than 550 pounds per day (lbs/day).

As shown in Table 3.2-8, the CO emissions from mobile sources associated with operation of the proposed project are less than 550 lbs/day. Thus, the increase in CO emissions from project-related increased traffic volumes at affected intersections and the on-site gasoline fueling facility are **less than significant** and the proposed project would not expose sensitive receptors to substantial concentrations of localized CO.

Health Risk Assessment

EDCAQMD has developed significance thresholds to assess health risk impacts of TACs from project-related emission sources on nearby sensitive receptors including residents and other human populations. These include a maximum incremental cancer risk of one-in-a-million (or ten-in-a-million if best available control technology for toxics (T-BACT) is applied), and incremental chronic and acute hazard indices of 1. The health risk assessment evaluates the impacts from on-site construction and operational emissions against these significance thresholds established by EDCAQMD.

Construction

As noted above, project construction Scenario 2 conservatively assumes that all the excavated material would be exported offsite and soil would be imported for fill during grading. Hence, the emissions associated with Scenario 2 are higher than that from Scenario 1. Therefore, for purposes of the HRA, the TAC emissions associated with project construction Scenario 2 were evaluated. Construction diesel PM would be generated by off-road diesel equipment operation (e.g., construction equipment) and on-road vehicle traffic (e.g., vendor, hauling, and concrete truck trips) which could pose a health risk to nearby receptors. Construction activity is anticipated to take place over an 11-month timeframe for the Costco project. Particulate emissions from diesel engine exhaust (known as diesel particulate matter or DPM) were identified as a TAC by CARB in 1998 (CalEPA and OEHHA 1998).

Operation

The operational HRA assesses impacts from TAC emissions associated with gasoline transfer and dispensing at the fuel facility, operation of the emergency generators at the proposed warehouse, operation of delivery trucks and TRUs, and the on-site queuing of passenger vehicles that visit the fuel facility. The fuel facility generates emissions from gasoline transfer and dispensing occurring during loading, breathing, refueling, spillage, and from hose permeation. The Costco project includes two diesel-powered emergency generators, each rated at 250 hp, to support warehouse operations. Testing and maintenance of each generator is not expected to exceed 50 hours per year or 1 hour on any given day. Mobile-source TACs would be generated from the combustion of diesel fuel in delivery trucks (i.e., fuel delivery trucks; warehouse and tire center delivery trucks; and transport refrigeration units that are mounted on the trailers of some warehouse delivery trucks) traveling to and from the project site, as well as from the queuing of gasoline-fueled vehicles at the fuel facility.

Health Risk Impacts from Project Construction and Operation

Due to the nearby proximity of sensitive receptors to the project area, an HRA was prepared which assesses both cancer and non-cancer risk levels associated with the exposure of receptors to project-generated TAC emissions associated with construction and operation of the Costco project. This assessment was based on the proximity of TAC-generating activity to off-site sensitive receptors the quantity of TAC emissions generated during project construction and operation, and the duration of potential TAC exposure. Table 3.2-10 summarizes the findings of the HRA (Appendix B).

Table 3.2-10 Maximum Cancer Risk under an Unmitigated Project Scenario

Receptor Type	Maximum Estimated Cancer Risk (in one million)[1]	Maximum Estimated Chronic Hazard Index[1]	Maximum Estimated Acute Hazard Index[1]
Residential	11.0	0.05	0.15
Worker	0.13	0.01	0.03
Roadway/Open Space	-	-	0.50
Other Sensitive Receptors	9.1	0.04	0.13
EDCAQMD significance threshold[2]	10	1.0	1.0
Threshold exceeded?	**Yes**	**No**	**No**

Notes: EDCAQMD = El Dorado County Air Quality Management District.

[1] The maximum estimated cancer risk, chronic and acute hazard index can occur at different locations for each receptor type. See Appendix B for further details.

[2] Per EDCAQMD CEQA guidance, a significance threshold of ten-in-a-million can be used for cancer risk if T-BACT is applied (EDCAQMD 2002a). The project would apply T-BACT by implementing Evaporative Vapor Recovery (EVR) Phase I and EVR Phase II on gasoline dispensing facility (GDF) sources and complying with the latest CARB certification procedures.

See Appendix B for detailed input parameters and modeling results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025.

As shown in Table 3.2-10, above, the HRA prepared for the project concluded that construction and operation of the project would result in a maximum cancer risk of 11 in one million, a noncancer chronic risk hazard index of 0.05, and an acute risk hazard index of 0.5. Considering the EDCAQMD threshold (project level) of significance of 10 in one million[2], construction and operation of the project would result in the exposure of nearby residential receptors to TAC-related health risks that exceed thresholds of significance for cancer risk for the unmitigated scenario. This impact would be **significant**.

Naturally Occurring Asbestos

A portion of the project site lies within a mapped NOA Review Area. Additionally, the geotechnical reports by Kleinfelder (2019 and 2024) evaluated NOA and gathered samples within the South Site for testing and the results were negative for NOA minerals. However, the report indicated that there are ultramafic rocks and faulting nearby, such that there remains a potential for NOA to occur in the area (Kleinfelder 2019 and 2024). Thus, Rule 223-2 would be applicable to the project.

Rule 223-1, which is intended to limit fugitive dust emissions from construction-related activities and requires immediate reporting upon discovery of NOA in construction areas, is included in the project's design. Rule 223-2 is intended to reduce the amount of asbestos particulate matter entrained in the ambient air as a result of any construction or construction-related activities that disturb or potentially disturb NOA by requiring actions to prevent, reduce, or mitigate asbestos emissions.

Because the project site is adjacent to areas in which NOA has been identified construction of the Costco project may result in public health impacts from the airborne release of NOAs and this impact would be **significant**.

North Site Remainder Area

CO Hotspots

As described above (see CO Hotspots discussion for the Costco Project), the EDCAQMD CEQA Guide's guidance regarding CO impact analyses is outdated. Hence, this analysis utilizes the PCAPCD's CEQA guidelines to evaluate CO impacts. The PCAPCD's CEQA guidelines state that a project would result in a less than significant impact to localized CO concentrations if the project's CO emissions from vehicle operation are less than 550 pounds per day (lbs/day).

As shown in Table 3.2-9, the CO emissions from mobile sources associated with the combined operation of the Costco project and the future development of the North Site Remainder Area are less than 550 lbs/day. Thus, the increase in CO emissions from project-related increased traffic volumes at affected intersections and the on-site gasoline fueling facility are **less than significant** and the proposed project would not expose sensitive receptors to substantial concentrations of localized CO.

Health Risk Assessment

The North Site Remainder Area is expected to be developed as general retail land uses. As emissions estimates related to construction and operations are largely based on development square footage and emissions related to operation are based on both land use size and type, it is expected that construction and operation of future

[2] Per EDCAQMD CEQA guidance, a significance threshold of ten-in-a-million can be used for cancer risk if T-BACT is applied (EDCAQMD 2002a). The project would apply T-BACT by implementing Evaporative Vapor Recovery (EVR) Phase I and EVR Phase II on GDF sources and complying with the latest CARB certification procedures.

development within the North Site Remainder Area would result in TAC emissions similar to or less than those generated by the Costco project. The primary sources of TAC emissions associated with the North Site Remainder Area would be diesel PM emissions from construction equipment, construction trucks, and operational trucks. Construction equipment, phasing, hauling trips, construction worker trips, operational truck trips, and operational employee and customer trips would be similar to those used to construct the Costco project. Construction and operation of development within the North Site Remainder Area would occur within exposure periods of the analyzed HRA for Costco (30 years for residential receptors and 25 years for workers). When combined with the significant cancer risk identified for the Costco project, above, TAC-related health risks associated with sources in the North Site Remainder Area would be significant. Thus, this impact would be **significant**.

Naturally Occurring Asbestos

As noted above (see Naturally Occurring Asbestos discussion for the Costco Project), a portion of the project site lies within a mapped NOA Review Area. Thus, Rule 223-2 would be applicable to the future development of the North Site Remainder Area.

Rule 223-1, which is intended to limit fugitive dust emissions from construction-related activities and requires immediate reporting upon discovery of NOA in construction areas, is included in the project's design, as a matter of law. Rule 223-2 is intended to reduce the amount of asbestos particulate matter entrained in the ambient air as a result of any construction or construction-related activities that disturb or potentially disturb NOA by requiring actions to prevent, reduce, or mitigate asbestos emissions.

Because the North Site Remainder Area is adjacent to areas in which NOA has been identified construction activities associated with the future development of this area may result in public health impacts from the airborne release of NOAs and this impact would be **significant**.

Conclusions

Because the mobile sources associated with the combined operation of the Costco project and the future development of the North Site Remainder Area are less than 550 lbs/day, the proposed project would not expose sensitive receptors to substantial concentrations of localized CO. Implementing the project would however, result in the exposure of nearby residential receptors to TAC-related health risks that exceed EDCAQMD's the EDCAQMD's recommended threshold of 10 in one million cancer risk[3] for the unmitigated scenario. Additionally, the presence of ultramafic rock and faulting near the project site may result in the potential for NOA to be disturbed during project implementation. This impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.2-4a: Apply Tier-4 Emission Standards to Diesel-Powered Off-Road Equipment

Construction equipment greater than 50 horsepower (hp) used at the site shall meet EPA Tier 4 Final emission standards for PM_{10} and $PM_{2.5}$, if available. If Tier 4 Final equipment is not available, all construction equipment larger than 50 hp used at the site shall meet EPA emission standards for Tier 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices. This requirement shall apply to the construction of the Costco project and construction of the North Site Remainder Area.

Mitigation Measure 3.2-4b: Implement Asbestos Dust Mitigation Consistent with EDCAQMD Rule 223-2

An Asbestos Dust Mitigation Plan shall be prepared and submitted to the EDCAQMD and the County for review and approval by EDCAQMD for implementation during construction on the Costco project, future development of the North Site Remainder Area, and for offsite roadway improvements (if the presence of NOA is confirmed). The Asbestos Dust Mitigation Plan shall comply with the El Dorado County Code Chapter 8.44 (Asbestos and Dust

[3] Per EDCAQMD CEQA guidance, a significance threshold of ten-in-a-million can be used for cancer risk if T-BACT is applied (EDCAQMD 2002a). The project would apply T-BACT by implementing Evaporative Vapor Recovery (EVR) Phase I and EVR Phase II on GDF sources and complying with the latest CARB certification procedures.

Protection) and EDCAQMD Rule 223-2, which provides performance standards for ensuring that adverse impacts do not result from asbestos dust during construction.

Significance after Mitigation

Implementation of Mitigation Measure 3.2-4a would reduce the project's emissions of diesel PM by requiring the use of Tier 4 engines, where available. As noted in Appendix B, this analysis assumes that Tier 3 engines with PM emissions control equivalent to CARB Level 3 verifiable diesel emission control devices would be used on-site to model the potential mitigated construction emissions if Tier 4 Final equipment is not available.

Table 3.2-11 summarizes the Costco project's health risk impacts following the implementation of Mitigation Measure 3.2-4a.

Table 3.2-11 Maximum Cancer Risk under a Mitigated Project Scenario

Receptor Type	Maximum Estimated Cancer Risk (in one million)[1]	Maximum Estimated Chronic Hazard Index[1]	Maximum Estimated Acute Hazard Index[1]
Residential	4.13	0.02	0.15
Worker	0.05	0.003	0.03
Roadway/Open Space	-	-	0.50
Other Sensitive Receptors	3.06	0.01	0.13
EDCAQMD significance threshold	10	1.0	1.0
Threshold exceeded?	No	No	No

Notes: EDCAQMD = El Dorado County Air Quality Management District.

[1] The maximum estimated cancer risk, chronic and acute hazard index can occur at different locations for each receptor type. See Appendix B for further details.

[2] Per EDCAQMD CEQA guidance, a significance threshold of ten-in-a-million can be used for cancer risk if T-BACT is applied (EDCAQMD 2002a). The project would apply T-BACT by implementing Evaporative Vapor Recovery (EVR) Phase I and EVR Phase II on GDF sources and complying with the latest CARB certification procedures.

See Appendix B for detailed input parameters and modeling results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025.

As shown in Table 3.2-11, implementation of Mitigation Measure 3.2-4a would reduce the maximum incremental cancer risk to 4.13 in one million, which is below the EDCAQMD's recommended threshold of 10 in one million. Additionally, Mitigation Measure 3.2-4b would require the applicant to submit an Asbestos Dust Mitigation Plan in accordance with Rule 223-2 and to the satisfaction of the EDCAQMD Air Pollution Control Officer.

These mitigation measures (3.2-4a and 3.2-4b) would also apply to development of the North Site Remainder Area. As described above, emissions related to the construction and operation of development within the North Site Remainder Area would be similar to or less than those generated by the Costco project based on land use type and size. Thus, emissions would be reduced in a similar manner with the implementation of Mitigation Measures 3.2-4a and 3.2-4b and this impact would be reduced to **less than significant**.

Impact 3.2-5: Generate Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People

Odors resulting from construction-generated diesel exhaust would be temporary and would dissipate quickly because of the highly dispersive properties of diesel PM. Operation of the project would not result in the generation of nuisance odors because operational odors are not typically associated with commercial and retail land uses such as those proposed under the project and the proposed gasoline facility would feature gasoline dispensing nozzles equipped with Phase II Enhanced Vapor Recovery systems to avoid odor emissions. This impact would be **less than significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the affected receptors. Although offensive odors rarely cause any physical harm, they can still be unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Impacts related to odors resulting from the project are discussed below.

Construction

The predominant source of power for construction equipment is diesel engines. Exhaust odors from diesel engines, as well as emissions associated with paving and the application of architectural coatings, may be considered offensive to some individuals. The generation of these odor emissions would vary greatly on a day-to-day basis depending on the type of construction activity. Application of architectural coatings would also be a source of offensive odors from ROG. However, because the application of architectural coatings would be required to comply with EDCAQMD Rule 205, Nuisance, potential construction odors would be minimized. Minor odors from the use of heavy-duty diesel equipment would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. Given the temporary nature of construction activities and the dispersion properties of diesel PM, implementing the project is not anticipated to result in an odor-related impact during the construction activities associated with implementation of the project.

Operation

The project proposes commercial and retail development and does not propose any odor-generating facilities identified by the EDCAQMD (e.g., wastewater treatment plants, sanitary landfills, food processing plants, chemical manufacturing land uses, painting/coating operations). However, the project does propose a gasoline dispensing facility, which has the potential to emit odors related to gasoline dispensing. During the operation of the project, VOCs released at the gasoline dispensing facility would be controlled to minimize odors (i.e., nozzles equipped with Phase II Enhanced Vapor Recovery systems). Therefore, odor impact from the gasoline dispensing facility would not affect a substantial number of people.

Summary

Construction-related odors would occur intermittently, disperse quickly, and cease upon the completion of the construction phase. Meanwhile, operational odors are not typically associated with commercial and retail land uses such as those proposed under the project and the proposed gasoline facility would feature gasoline dispensing nozzles equipped with Phase II Enhanced Vapor Recovery systems to avoid odor emissions. Therefore, implementing the project would result in a **less-than-significant** impact related to the exposure of receptors to odors.

Mitigation Measures

No mitigation is required for this impact.

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3.3 BIOLOGICAL RESOURCES

This section addresses common and sensitive biological resources that could be affected by implementation of the project. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the potential direct and indirect impacts of project implementation, and mitigation measures recommended to address impacts determined to be significant. Federal, state, and local regulations that pertain to biological resources are summarized. This evaluation is based on several reports regarding biological resources on the project site (which included several reconnaissance-level surveys of the project site, protocol-level surveys for California red-legged frogs and burrowing owls, and an aquatic resources delineation of the project site), a reconnaissance-level survey of the project site conducted by Ascent biologists on January 31, 2025, and a review of publicly available datasets. Data reviewed in preparation of this analysis consist of:

- Biological Resources Assessment (Foothill Associates 2017),
- Costco El Dorado Hills Project Aquatic Resources Delineation Report (Helix 2025a),
- Costco El Dorado Hills Project Biological Resources Assessment (Helix 2025b),
- Costco El Dorado Hills Project Oak Resources Technical Report (Helix 2025c),
- El Dorado Hills 52 Project Biological Resources Assessment (Helix 2020a),
- El Dorado Hills 52 Project Aquatic Resources Delineation Report (Helix 2020b),
- El Dorado Hills 52 Oak Resources Technical Reports (Helix 2020c and 2021),
- California Red-Legged Frog (*Rana draytonii*) Protocol-Level Survey Report (Foothill Associates 2016a),
- Special-Status Plant Surveys within the El Dorado Hills 52 Project Site (Foothill Associates 2016b),
- Protocol-Level Burrowing Owl Surveys within the El Dorado Hills 52 Project Site (Foothill Associates 2016c),
- results of California Natural Diversity Database (CNDDB) record search of the US Geological Survey (USGS) 7.5-minute quadrangles including and surrounding the project site (CNDDB 2024 and 2025),
- results of California Native Plant Society (CNPS), Inventory of Rare Plants search of the USGS 7.5-minute quadrangles including and surrounding (CNPS 2024),
- list of species that may be affected by activities implemented on the project site obtained from the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) online tool (USFWS 2026),
- reconnaissance-level survey of the project site by Ascent wildlife biologists on January 31, 2025, and
- aerial photographs of the project site and region.

In response to the NOP for the project EIR, comment letters were received from several members of the public. Comments pertaining to biological resources included concerns over the removal of trees, loss of wetland habitat, and impacts on plant and wildlife species. Refer to Appendix A for comments received on the NOP.

3.3.1 Regulatory Setting

FEDERAL

Endangered Species Act

Pursuant to the Endangered Species Act (ESA) (16 US Code [USC] Section 1531 et seq.), USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries regulate the taking of species listed in ESA as threatened or endangered. In general, people subject to ESA (including private parties) are prohibited from "taking" endangered or

threatened fish and wildlife species on private property and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." NOAA Fisheries and USFWS have also interpreted the definition of "harm" to include significant habitat modification that could result in take. ESA requires that recovery plans be developed that describe the steps necessary to restore the species. Similarly, the act provides for the designation of "critical habitat" when prudent and determinable.

Section 10 of ESA applies if a nonfederal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 7 of ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS and NOAA Fisheries.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for the protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. MBTA provides that to pursue, take, or kill any migratory bird or any part, nest, or egg of any such bird is unlawful except as permitted by regulations. Under MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." Take does not include habitat destruction or alteration as long as birds, nests, eggs, or parts thereof are not directly taken. The current list of species protected by MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act, enacted in 1940 and amended multiple times since, prohibits the taking of bald and golden eagles without a permit from the Secretary of the Interior. Similar to ESA, the Bald and Golden Eagle Protection Act defines "take" to include "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" (16 USC 668–668c). Under the act, disturbance that would injure an eagle, decrease productivity, or cause nest abandonment, including habitat alterations that could have these results, is considered take and can result in civil or criminal penalties.

Clean Water Act

Section 404

Section 404 of the Clean Water Act (CWA) (33 USC Section 1344) prohibits the discharge of dredged or fill material into waters of the United States, including wetlands, except as permitted under separate regulations by the US Army Corps of Engineers (USACE) and US Environmental Protection Agency. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water of the United States. To discharge dredged or fill material into waters of the United States, including wetlands, Section 404 requires projects to receive authorization from the Secretary of the Army, acting through USACE. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters that are relatively permanent standing or continuously flowing bodies of water; and wetlands adjacent to and with a continuous surface connection to these waters. Wetlands are defined as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Potentially jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of the CWA pending USACE verification.

Section 401

Under Section 401 of the CWA (33 USC Section 1341), an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board (SWRCB) to the regional water quality control boards (RWQCBs).

STATE

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA), a permit from California Department of Fish and Wildlife (CDFW) is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Section 2080 of CESA prohibits unauthorized take of state-listed species. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but does not include "harm" or "harass," as does the federal definition. As a result, the threshold for take is higher under CESA than under ESA.

California Fish and Game Code

Protection of Bird Nests and Raptors

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.4 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs or young.

Fully Protected Species

The regulation of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and generally do not provide for authorization of incidental take unless the species is covered and conserved in a natural community conservation plan or the project activities qualify for incidental take permitting under Section 2080.15 of the California Fish and Game Code. CDFW's fully protected status was California's first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA.

Lake and Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Section 1602 makes it unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

- substantially divert or obstruct the natural flow of or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation (California Code of Regulations [CCR] Title 14, Section 1.72). CDFW jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any action that would result in an impact on a river, stream, or lake.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires that each of the nine RWQCBs in California prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The jurisdiction of the RWQCBs includes waters of the United States, as well as areas that meet the definition of "waters of the state." "Waters of the state" is defined as any surface water or groundwater, including

saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under CWA Section 404 provided they meet the definition of waters of the state. SWRCB published a new set of procedures for discharges of dredged or fill material into waters of the state on March 22, 2019. Mitigation requiring no net loss of wetlands functions and values of waters of the state typically is required by the RWQCB.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. CESA expanded on the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered. Sixty-four species, subspecies, and varieties of plants are protected as rare under NPPA. The act prohibits take of endangered or rare native plants but includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification to CDFW, for vegetation removal from canals, roads, and other building sites; changes in land use; and other situations.

Oak Woodlands Conservation Act

The Oak Woodlands Conservation Act (SB 1334, Chapter 732, Statutes of 2004) requires counties to determine whether implementation of a project within their jurisdiction may result in a conversion of oak woodlands that would have a significant adverse effect on the environment (PRC Section 21083.4). If it is determined that implementing a project would result in a significant adverse effect on oak woodlands, mitigation measures to reduce the significant adverse effect of converting oak woodlands to other land uses are required.

LOCAL

El Dorado County General Plan

The adopted El Dorado County General Plan Conservation and Open Space Element (El Dorado County 2017) discusses significant natural resources in the County, including aquatic habitat, special-status species, and sensitive habitats, and establishes goals, objectives, and policies related to these topics. Relevant policies from the El Dorado County General Plan include:

- **Objective 7.3.3:** Wetlands - Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.
  - **Policy 7.3.3.1:** For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the US Army Corps of Engineers (USACE) Wetland Delineation Manual.
  - **Policy 7.3.3.5**: Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.
- **Objective 7.3.4:** Drainage - Protection and utilization of natural drainage patterns.
  - **Policy 7.3.4.1**: Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.
  - **Policy 7.3.4.2**: Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

- **Objective 7.4.1:** Pine Hill Rare Plant Species - The County shall protect Pine Hill rare plant species and their habitats consistent with Federal and State laws
  - **Policy 7.4.1.1:** The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 17.71 and the USFWS *Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan* (USFWS 2002).
- **Objective 7.4.2:** Identify and Protect Resources - Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.
  - **Policy 7.4.2.5**: Setbacks from all rivers, streams, and lakes shall be included in the Zoning Ordinance for all ministerial and discretionary development projects.
  - **Policy 7.4.2.8:** Conserve contiguous blocks of important habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the County through a Biological Resource Mitigation Program (Program). The Program will result in the conservation of:
    1. Habitats that support special status species;
    2. Aquatic environments including streams, rivers, and lakes;
    3. Wetland and riparian habitat;
    4. Important habitat for migratory deer herds; and
    5. Large expanses of native vegetation.

       A. **Habitat Protection Strategy**. The Program establishes mitigation ratios to offset impacts to special-status species habitat and special-status vegetation communities within the County.

       Special-status species include plants and animals in the following categories:

       - Species listed or proposed for listing as Threatened or Endangered under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA);
       - Species considered as candidates for listing as Threatened or Endangered under ESA or CESA;
       - Wildlife species identified by CDFW as Species of Special Concern;
       - Wildlife species identified by US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) as Species of Concern;
       - Plants listed as Endangered or Rare under the California Native Plant Protection Act;
       - Animals fully protected under the California Fish and Game Code; and
       - Plants that have a California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) of 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants rare, threatened, or endangered in California and elsewhere), 2A (plants presumed extirpated in California, but more common elsewhere), or 2B (plants rare, threatened, or endangered in California, but more common elsewhere). The CNPS CRPRs are used by both CDFW and USFWS in their consideration of formal species protection under ESA or CESA.

       With the exception of oak woodlands, which would be mitigated in accordance with the Oak Resources Management Plan (ORMP) (see General Plan Policy 7.4.4.4), and Pine Hill rare plant species and their habitat, which would be mitigated in accordance with County Code Chapter 130.71 (see General Plan Policy 7.4.1.1), mitigation of impacts to vegetation communities will be implemented in accordance with the table below [Table 3.3-1]. Preservation and creation of the following vegetation communities will ensure that the current range and distribution of special-status species within the County are maintained.

Table 3.3-1 Habitat Mitigation Summary Table

Vegetation Type	Preservation	Creation	Total
Water	NA	1:1	1:1
Herbaceous Wetland	1:1	1:1	2:1
Shrub and Tree Wetlands	2:1	1:1	3:1
Upland (non-oak and non-Pine Hill rare plant species habitat)	1:1	NA	1:1

C. Biological Resources Assessment. A site-specific biological resources technical report will be required to determine the presence of special-status biological resources that may be affected by a proposed discretionary project. Vegetation communities and special-status plants shall be mapped and assessed in accordance with the CDFG 2009 Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities and subsequent updates, and the List of Vegetation Alliances and Associations and subsequent updates. Any surveys conducted to evaluate potential presence of special-status wildlife species shall conform to practices recommended by CDFW and/or USFWS at the time of the surveys. The report will include an assessment of direct, indirect, and cumulative impacts to biological resources, including vegetation communities, plant and wildlife species and wildlife movement. The report shall include recommendations for:

- pre-construction surveys and avoidance/protection measures for nesting birds;
- pre-construction surveys and avoidance/protection measures for roosting bats;
- avoidance and minimization measures to reduce impacts related to entrapment, entanglement, injury, or poisoning of wildlife; and
- avoidance and minimization measures to reduce indirect impacts to wildlife in open space adjacent to a project site. The results of the biological resources technical report shall be used as the basis for establishing mitigation requirements in conformance with this policy and the Oak Resources Management Plan (ORMP, see General Plan Policy 7.4.4.4).

D. Habitat Protection. Mitigation for impacts to vegetation communities defined above in Section A will occur within the County on a minimum contiguous habitat block of 5 acres. Wetlands mitigation may occur within mitigation banks and/or outside the County if within the watershed of impact. Mitigation sites will be prioritized based on the following criteria:

- Location within PCAs [Priority Conservation Areas] and IBCs [Important Biological Corridors];
- Location within other important ecological areas, as defined in the Updated Integrated Natural Resources Management Plan (INRMP) Initial Inventory and Mapping (June 2010);
- Woodland, forest and shrub communities with diverse age structure;
- Woodland and forest communities with large trees and dense canopies;
- Opportunities for active land management to be used to enhance or restore natural ecosystem processes;
- Presence of or potential to support special-status species;
- Connectivity with adjacent protected lands;
- Parcels that achieve multiple agency and community benefits;
- Parcels that are located generally to the west of the Eldorado National Forest; and
- Parcels that would preserve natural wildlife movement corridors such as crossings under major roadways (e.g., US Highway 50 and across canyons).

F. **Mitigation Monitoring.** Prior to final approval of an individual development project, applicants shall submit to the County a Mitigation Monitoring Plan that provides for periodic monitoring of preserved lands to assess effectiveness of the measures implemented to protect special-status and native species. The Mitigation Monitoring Plan shall demonstrate that funding is secured to implement the monitoring strategy in perpetuity.

- **Policy 7.4.4.4**: For all new development projects or actions that result in impacts to oak woodlands and/or individual native oak trees, including Heritage Trees, the County shall require mitigation as outlined in the El Dorado County Oak Resources Management Plan (ORMP). The ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in Policy 7.4.2.8

El Dorado County General Plan Biological Resources Policy Update and Oak Resources Management Plan

The El Dorado County Board of Supervisors adopted the Biological Resources Policy Update and ORMP in October 2017. The Biological Resources Policy Update included revisions to the General Plan objectives, policies, and implementation measures to establish a comprehensive Biological Resource Mitigation Program. The objective of this program is to conserve special-status species habitat, aquatic habitat, wetland and riparian habitat, habitat for migratory deer herds, and large expanses of native vegetation. The ORMP updated and revised the existing Oak Woodland Management Plan and now defines mitigation requirements for impacts on oak woodlands, individual native oak trees, and heritage trees; and also outlines El Dorado County's strategy for oak resource management and conservation. The ORMP establishes an in-lieu fee payment option for impacts on oak woodlands and oak trees and identifies Priority Conservation Areas where oak woodland conservation efforts will be focused.

The ORMP designates three classes of protected oak resources: oak woodlands that have at least 10 percent oak canopy or that may have historically supported greater than 10 percent canopy cover; heritage trees, defined as native oaks with a total trunk diameter at breast height of 36 inches or greater; and individual oak trees, defined as native oak trees with a trunk diameter at breast height of 6 inches or greater that are not located in oak woodlands. An oak woodland removal permit is required before removal of oak trees that are part of an oak woodland and an oak tree removal permit is required before removal of heritage trees and individual oak trees. Mitigation for impacts on oak woodlands is based on the total area affected ranging from 1:1 mitigation for zero to 50 percent removal to 2:1 mitigation for more than 75 percent removal. Mitigation may be completed with a combination of the following options: acquisition of an off-site conservation easement, payment of in-lieu fees, or either on- or off-site replacement planting of up to 50 percent of the required mitigation area. Mitigation for removal of heritage or individual oak trees requires on- or off-site replacement planting or payment of in-lieu fees at a 3:1 (heritage trees) or 1:1 (individual oak trees) ratio, respectively, to the number of trunk inches removed. Any oak woodland preserved on site and all mitigation planting areas must be protected in perpetuity through deed restrictions or a conservation easement.

El Dorado County Zoning Ordinance, Protection of Wetlands and Sensitive Riparian Habitat

The El Dorado County Zoning Ordinance Site Planning and Project Design Standards for setback requirements (Section 130.30.050) establish standards for avoidance and minimization of impacts on wetlands and sensitive riparian habitat. This section of the ordinance applies to discretionary projects located adjacent to perennial streams, intermittent streams, wetlands, or any sensitive riparian habitat within the county. The ordinance requires new development to avoid or minimize impacts on these habitat types. If the habitats cannot be avoided, the County requires an assessment that establishes appropriate buffers to reduce impacts to a less-than-significant level and mitigation consistent with state or federal permit requirements. Storm drain and irrigation outflow structures are permitted as long as they are approved by the County as part of the development process.

3.3.2 Environmental Setting

VEGETATION AND LAND COVER TYPES

As described in Chapter 2, "Project Description," the project consists of the North Site and the South Site. An approximately 13.8-acre portion of the North Site would remain undeveloped at this time and is referred to as the North Site Remainder Area. Vegetation and land cover types present on both sections of the project site are shown in Figure 3.3-1 and summarized in Table 3.3-2. Five upland vegetation types are present on the project site: nonnative annual grassland, valley foothill riparian, valley oak woodland, ruderal/disturbed land, and purple needlegrass grassland. Several aquatic features are present within these upland areas: seasonal wetland, intermittent drainage, perennial drainage, ephemeral drainage, wetland swale, and seep. Descriptions of each vegetation and land cover type are included below (Helix 2025b). Four vegetation type; valley oak woodland, intermittent drainage, perennial drainage, and seep are present only on the South Site; the wetland swale is present only on the North Site.

Table 3.3-2 Vegetation and Land Cover Types on the Project Site

Vegetation and Land Cover Types	Amount on Project Site (acres)
Upland Vegetation Types	
Nonnative Annual Grassland	29.5
Ruderal/Disturbed	3.8
Valley Foothill Riparian	1. 5
Purple Needlegrass Grassland	0.9
Valley Oak Woodland	0.3
Wetland Types	
Intermittent Drainage	0.4
Ephemeral Drainage	0.2
Perennial Drainage	0.2
Seasonal Wetland	0.2
Wetland Swale	0.01
Seep	0.01

Source: Helix 2025b.

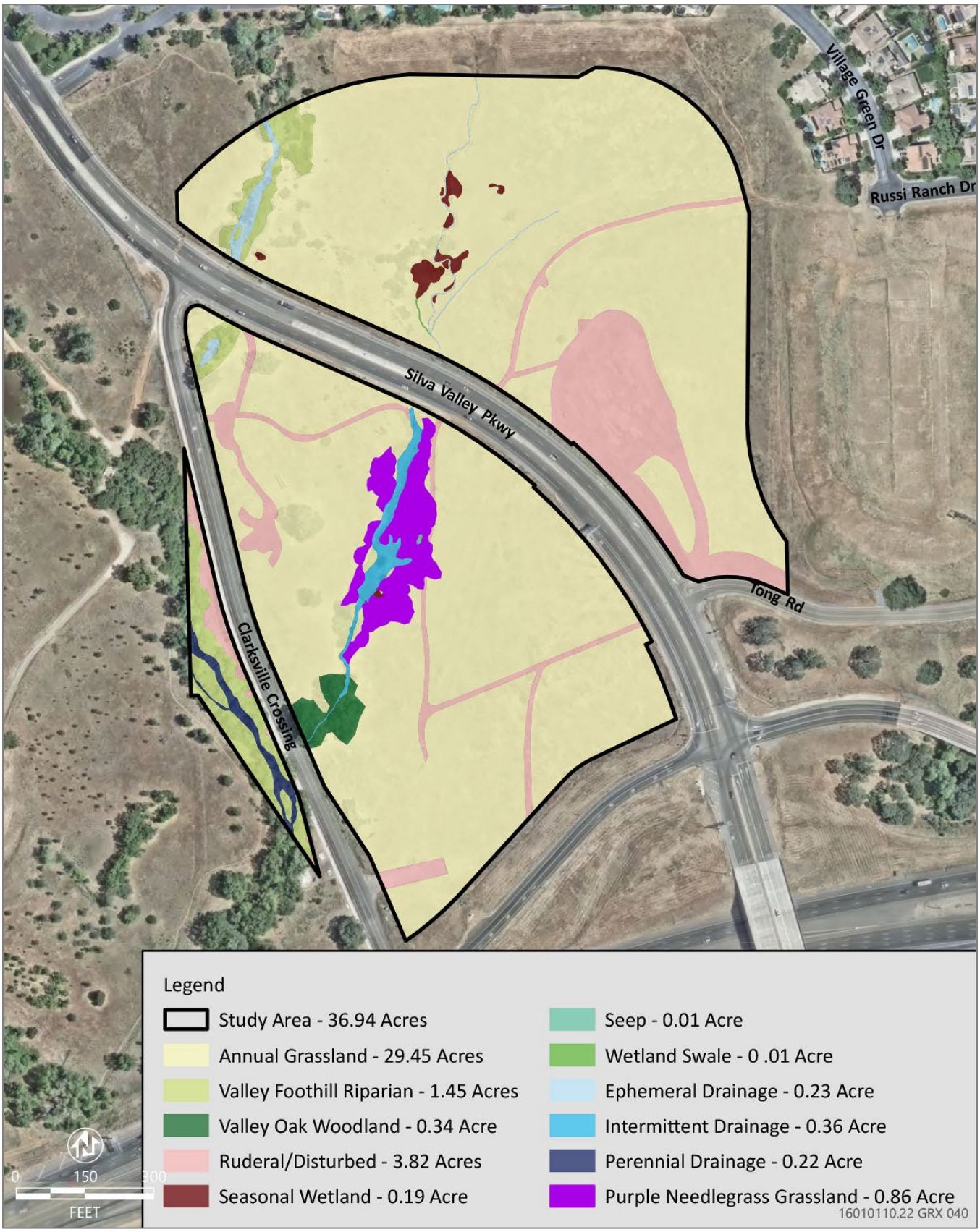
Upland Vegetation Types

Nonnative Annual Grassland

Approximately 29.5 acres of annual grassland is present on the project site, and is characterized primarily by an assemblage of nonnative grasses and herbaceous species, and dominates both the North Site and the South Site. Dominant species include ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and wild oat (*Avena fatua*) associated with red-stemmed filaree (*Erodium cicutarium*), popcornflower (*Plagiobothrys* spp.), black mustard (*Brassica nigra*), winter vetch (*Vicia villosa*), scarlet pimpernel (*Lysimachia arvensis*), St. John's wort (*Hypericum perforatum*), brodiaea (*Brodiaea elegans*), fiddleneck (*Amsinckia* sp.), rose clover (*Trifolium hirtum*), and milk-thistle (*Silybum marianum*).

Purple Needlegrass Grassland

Three small areas within the annual grassland habitat on the South Site contain purple needlegrass (*Stipa pulchra*; Figure 3.3-1) totaling approximately 0.9 acres. Species associated with purple needlegrass include annual willow herb (*Epilobium brachycarpum*), ripgut brome, soft chess, and wild oat. Purple needlegrass grassland is not present on the North Site.



Source: Helix 2025b.

Figure 3.3-1 Vegetation and Land Cover Types

Ruderal/Disturbed

Ruderal/disturbed areas on the project site include roads and a stockpile area (Figure 3.3-1). The approximately 3.8 acres of ruderal/disturbed areas are sparsely vegetated with medusahead (*Taeniatherum caput-medusae*), soft chess, yellow star-thistle (*Centaurea solstitialis*), red-stemmed filaree, and winter vetch.

Valley Foothill Riparian

Approximately 1.4 acres of valley foothill riparian habitat is associated with an ephemeral drainage on the northwest portion of the North Site and a perennial drainage on the southwest portion of the South Site. Dominant vegetation includes broadleaf cattail (*Typha latifolia*), willow (*Salix* spp.), spike rush (*Eleocharis macrostachya*), pennyroyal (*Mentha pulegium*), Himalayan blackberry (*Rubus armeniacus*), and valley oak (*Quercus lobata*).

Valley Oak Woodland

Approximately 1.5 acres of valley oak woodland is present on the southwest portion of the South Site, where a small stand of mature valley oak trees overhangs a small intermittent drainage. The understory is primarily annual grasses with a small area of milkweed (*Ascelpias fasicularis*) and pennyroyal immediately adjacent to the drainage.

Elderberry Shrubs

Two large blue elderberry shrubs (*Sambucus mexicana*) are present within the riparian habitat on the South Site, and smaller blue elderberry shrubs were observed along the perennial drainage on the South Site.

Wetland Types

Intermittent Drainage

A total of 0.4 acres of intermittent drainages are present in the South Site (see Figure 3.3-1). A brick check dam has been constructed across a portion of the drainage and has resulted in periods of water retention during flow events that have supported the establishment of hydrophytic vegetation upstream. The emergent vegetation is dominated by common knotweed (*Persicaria lapatheifolia*) and curly dock (*Rumex crispus*), with areas of cattails, Himalayan blackberry, and a small clump of willows. The area of emergent vegetation is entirely within the ordinary high water mark (OHWM) of the intermittent drainage.

Ephemeral Drainage

A total of 0.2 acres of ephemeral drainages are present in both the North and South sites (Figure 3.3-1). The channels of the ephemeral drainages on the project site are largely unvegetated, but do include winter vetch, ripgut brome, Italian ryegrass (*Festuca perennis*), and medusahead.

Perennial Drainage

A total of 0.2 acres of perennial drainage are present on the South Site (Figure 3.3-1). This feature originates north of the project site and is a direct tributary to Carson Creek. Two high-flow channels are present along the western portion of the main channel and contained flowing water during the survey on January 9, 2025 (Helix 2025b). The perennial drainage is mostly devoid of vegetation, but emergent wetland vegetation and riparian vegetation are present along the upper banks of the drainage and form a swath of valley foothill riparian habitat.

Seasonal Wetland

A total of 0.2 acres of seasonal wetlands are present on the project site (Figure 3.3-1). The majority of the seasonal wetlands are adjacent to an ephemeral drainage on the North Site, and one is adjacent to the intermittent drainage on the South Site. There are also two depressional seasonal wetlands on the project site that appear to have formed as a result of historic excavation as they are near large, steep mounds on the North Site. Dominant vegetation in the seasonal wetlands includes rabbitsfoot grass (*Polypogon monspeliensis*), spike rush, nutsedge, curly dock, pennyroyal, coyote-thistle (*Eryngium vaseyi*), brome fescue (*Vulpia bromoides*), annual hair grass (*Deschampsia danthonioides*), and rye grass.

Wetland Swale

A total of 0.01 acres of wetland swale are present on the North Site (Figure 3.3-1), associated with a seasonal wetland. Dominant vegetation occurring within the wetland swale includes curly dock, pennyroyal, coyote-thistle, brome fescue, rye grass, annual hair grass, and rabbitsfoot grass.

Seep

A total of 0.01 acres of seep are present on the South Site (Figure 3.3-1), Vegetation observed in the seep consisted almost entirely of iris-leaved rush.

SENSITIVE BIOLOGICAL RESOURCES

Special-Status Species

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- listed by the federal government under ESA as endangered or threatened;
- listed by the state of California under CESA as endangered or threatened;
- designated as rare by the state of California (California Fish and Game Commission [CFGC] Section 1901);
- bald eagles and golden eagles, which are protected by Bald and Golden Eagle Protection Act;
- a candidate for listing under ESA or CESA;
- meets the definitions of rare and endangered species under CEQA. The State CEQA Guidelines provide that a plant or animal species may be considered "rare, endangered, or threatened" for purposes of CEQA analysis even if not included in a listing under state or federal law (14 CCR Section 15380);
- species identified by CDFW as a species of special concern;
- species listed as fully protected under the California Fish and Game Code;
- species afforded protection under local planning documents; and
- plant taxa considered by the CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B. The CRPR system includes five rarity and endangerment ranks for categorizing plant species of concern:
  - CRPR 1A—plants presumed to be extinct in California
  - CRPR 1B—plants that are rare, threatened, or endangered in California and elsewhere
  - CRPR 2—plants that are rare, threatened, or endangered in California but more common elsewhere
  - CRPR 3—plants about which more information is needed (a review list)
  - CRPR 4—plants of limited distribution (a watch list).

A preliminary list of special-status plants with potential to occur on the project site was developed based on a review of the CNPS Online Inventory of Rare and Endangered Plants (CNPS 2024); a list of special-status species known to occur within the nine USGS 7.5-minute quadrangles including and surrounding the project alignment, obtained from the CNDDB (2024); a list of species listed as endangered, threatened, or species that are candidates or proposed for listing under ESA that may be affected by the project (USFWS 2026); review of biological studies previously conducted on the project site, and observations made during the January 2025 site surveys. Of the 20 special-status plant species evaluated, one species was determined to have potential to occur on the project site based on the presence of habitat suitable for the species (CNDDB 2024; CNPS 2024; Table 3.3-3).

Table 3.3-3 Special-Status Plants and Their Potential for Occurrence on the Project Site

Species	Federal Status[1]	State Status[1]	CRPR[1]	Habitat	Potential for Occurrence
Jepson's onion *Allium jepsonii*	—	—	1B.2	Ultramafic. Chaparral, cismontane woodland, lower montane coniferous forest. On serpentine soils in Sierra foothills, volcanic soil on Table Mountain. On slopes and flats; usually in an open area. 1,165–3,705 ft in elevation. Blooms April–August. Geophyte.	Not expected to occur. The project site does not contain serpentine soils.
Big-scale balsamroot *Balsamorhiza macrolepis*	—	—	1B.2	Ultramafic. Chaparral, valley and foothill grassland, cismontane woodland. Typically on serpentine. 115–4,805 ft in elevation. Blooms March–June. Perennial.	Not expected to occur. Serpentine soils are not present. While the project site contains annual grassland habitat, the species is typically found in open hills and rock outcrops, often in grasslands that are surrounded by chaparral or cismontane woodland, and these conditions are not present on the project site.
Spicate calycadenia *Calycadenia spicata*	—	—	1B.3	Cismontane woodland, valley and foothill grassland. On clay, adobe, disturbed areas including roadsides. 130–4,595 ft in elevation. Blooms May–September. Annual.	Not expected to occur. The project site does not contain clay or adobe soils.
Stebbin's morning-glory *Calysteaia stebbinsii*	FE	SE	1B.1	Chaparral, cismontane woodland. On red clay soils of the Pine Hill formation; gabbro or serpentine; open areas. 985–2,380 ft in elevation. Blooms April–July. Geophyte.	Not expected to occur. The project site does not contain gabbro or serpentine soils.
Chaparral sedge *Carex xerophila*	—	—	1B.2	Ultramafic. Chaparral, cismontane woodland, lower montane coniferous forest. Serpentinite, gabbroic. 900–2,525 ft in elevation. Blooms March–June. Perennial.	Not expected to occur. The project site does not contain gabbro or serpentine soils.
Pine Hill ceanothus *Ceanothus roderickii*	FE	SR	1B.1	Ultramafic. Chaparral, cismontane woodland. Gabbroic or serpentine soils; often in "historically disturbed" areas with an ensemble of other rare plants. 855–2,065 ft in elevation. Blooms April–June. Perennial.	Not expected to occur. The project site does not contain gabbro or serpentine soils.
Red Hills soaproot *Chlorogaalum grandiflorum*	—	—	1B.2	Ultramafic. Cismontane woodland, chaparral, lower montane coniferous forest. Occurs frequently on serpentine or gabbro, but also on non-ultramafic substrates; often on "historically disturbed" sites. 805–4,070 ft in elevation. Blooms May–June. Geophyte.	Not expected to occur. The project site does not contain gabbro or serpentine soils.

Species	Federal Status[1]	State Status[1]	CRPR[1]	Habitat	Potential for Occurrence
Dwarf dowingia *Dowingia pusilla*	—	—	2B.2	Wetland. Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 5–1,610 ft in elevation. Blooms March–May. Annual.	Not expected to occur. The seasonal wetland habitat on the project site does not provide conditions required by this species, which is associated with vernal pools .
Tuolumne button-celery *Eryngium pinnatisectum*	—	—	1B.2	Wetland. Vernal pools, cismontane woodland, lower montane coniferous forest. Volcanic soils; vernal pools and mesic sites within other natural communities. 230–3,000 ft in elevation. Blooms May–August. Annual/Perennial.	Not expected to occur. The project site does not contain volcanic soils.
Pine Hill flannelbush *Fremontodendron decumbens*	FE	SR	1B.2	Ultramafic. Chaparral, cismontane woodland. Rocky ridges; gabbro or serpentine endemic; often among rocks and boulders. 1,395–2,510 ft in elevation. Blooms April–July. Perennial.	Not expected to occur. The project site does not contain gabbro or serpentine soils.
El Dorado bedstraw *Galium californicum* ssp. *sierrae*	FE	SR	1B.2	Ultramafic. Cismontane woodland, chaparral, lower montane coniferous forest. In pine-oak woodland or chaparral. Restricted to gabbroic or serpentine soils. 425–1,920 ft in elevation. Blooms May–June. Perennial.	Not expected to occur. The project site does not contain gabbro or serpentine soils.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	—	SE	1B.2	Wetland. Marshes and swamps (freshwater), vernal pools. Clay soils; usually in vernal pools, sometimes on lake margins. 35–7,790 ft in elevation. Blooms April–August. Annual.	Not expected to occur. The project site does not contain vernal pools or lakes.
Ahart's dwarf rush *Juncus leiospermus* var. *ghartii*	—	—	1B.2	Valley and foothill grassland. Restricted to the edges of vernal pools in grassland. 100–330 ft in elevation. Blooms March–May. Annual.	Not expected to occur. The project site does not contain vernal pools.
Legenere *Legenere limosa*	—	—	1B.1	Vernal pools, wetland. In beds of vernal pools. 5–2,885 ft in elevation. Blooms April–June. Annual.	Not expected to occur. The project site does not contain vernal pools.
Pincushion navarretia *Navarretia myersii* ssp. *myersii*	—	—	1B.1	Vernal pools, wetland. Clay soils within non-native grassland. 150–330 ft in elevation. Blooms April–May. Annual.	Not expected to occur. The project site does not contain vernal pools.
Slender Orcutt grass *Orcyttia tenuis*	FT	SE	1B.1	Vernal pools, wetland. Often in gravelly substrate. 80–5,760 ft in elevation. Blooms May–September. Annual.	Not expected to occur. The project site does not contain vernal pools.
Sacramento Orcutt grass *Orcuttia visvida*	FE	SE	1B.1	Vernal pools, wetland. 50–280 ft in elevation. Blooms April–July. Annual.	Not expected to occur. The project site does not contain vernal pools.
Layne's ragwort *Packera layneae*	FT	SR	1B.2	Ultramafic. Chaparral, cismontane woodland. Ultramafic soil (serpentine or gabbro); occasionally along streams. 655–3,560 ft in elevation. Blooms April–August. Perennial.	Not expected to occur. The project site does not contain gabbro or serpentine soils.

Species	Federal Status[1]	State Status[1]	CRPR[1]	Habitat	Potential for Occurrence
Sanford's arrowhead *Sagittaria sanfordii*	—	—	1B.2	Wetland. Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0–2,135 ft in elevation. Blooms May–October. Geophyte.	May occur. The project site contains intermittent drainage habitat potentially suitable for this species.
El Dorado County mule ears *Wyethia reticulata*	—	—	1B.2	Ultramafic. Chaparral, cismontane woodland, lower montane coniferous forest. Stony red clay and gabbroic soils; often in openings in gabbro chaparral. 605–2,065 ft in elevation. Blooms April–August. Perennial.	Not expected to occur. The project site does not contain gabbro or red clay soils.

Notes: CESA = California Endangered Species Act; CEQA = California Environmental Quality Act; CRPR = California Rare Plant Rank; CNDDB = California Natural Diversity Database; ESA = Endangered Species Act; NPPA = Native Plant Protection Act; subsp. = subspecies; var. = variety.

[1] Legal Status Definitions

Federal:
FE Endangered (legally protected)
FT Threatened (legally protected)

State:
SE Endangered (legally protected)
SR State-listed as rare (legally protected by NPPA)

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks:
0.1 Seriously threatened in California (more than 80% of occurrences threatened; high degree and immediacy of threat)
0.2 Moderately threatened in California (20–80% occurrences threatened; moderate degree and immediacy of threat)
0.3 Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Sources: CNDDB 2024; CNPS 2024; Helix 2025b.

A preliminary list of special-status wildlife species known or with potential to occur on the project site was developed based on a review of the CDFW Special Animals List (CNDDB 2025) and the overlapping ranges of CDFW species of special concern with the project site; a list of special-status species known to occur within the nine USGS 7.5-minute quadrangles including and surrounding the project site, obtained from the CNDDB (2024); a list of species listed as endangered, threatened, or species that are candidates or proposed for listing under ESA that may be affected by the project (USFWS 2026); review of biological studies previously conducted on the project site, and observations made during the January 2025 site surveys. Of the 32 special-status wildlife species evaluated, 21 species were determined to have potential to occur on the project site based on the presence of habitat suitable for the species (CNDDB 2024; Table 3.3-4).

Tables 3.3-3 and 3.3-4 describe the species' regulatory status, habitat, and potential for occurrence on the project site.

Table 3.3-4 Special-Status Wildlife and Their Potential for Occurrence on the Project Site

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence[2]
Amphibians and Reptiles				
California red-legged frog *Rana draytonii*	FT	SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not expected to occur. Breeding habitat marginally suitable for California red-legged frog is present in the project site within perennial marsh habitat, which holds water for at least four consecutive months (Foothill Associates 2016a). Upland migration habitat is also present on the project site (Foothill Associates 2016a). A protocol-level survey for California red-legged frog was conducted in 2016 and no California red-legged frogs were detected on the project site (Foothill Associates 2016a). The nearest known occurrence of California red-legged frog is approximately 5 miles north of the project site near Folsom Lake (CNDDB 2024). The project site is surrounded by dense residential development to the north, and it is unlikely that frogs from these documented occurrences would disperse to the project site.
Coast horned lizard *Phrynosoma blainvillii*	—	SSC	Chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinyon and juniper woodlands, riparian scrub, riparian woodland, valley and foothill grassland. Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	May occur. The project site is within the range of coast horned lizard and annual grassland and woodland habitats on the project site may provide marginal habitat for this species.
Foothill yellow-legged frog (South Sierra DPS) *Rana boylii* pop. 5	FE	SE	Sierra Nevada from South Fork American River subbasin (HU 8) in El Dorado County south to Tehachapi Mountains in Kern County. Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	Not expected to occur. The nearest documented occurrence of foothill yellow-legged frog is approximately 3.4 miles north of the project site (CNDDB 2024). Most of the occurrences in the vicinity of the project site are considered extirpated (CNDDB 2024). Therefore, the likelihood of foothill yellow-legged frogs occurring on the project site is relatively low. Aquatic habitat on the project site does not provide breeding habitat suitable for this species; however, ephemeral and intermittent drainages on the project site are hydrologically connected with a stream west of the project site (on the west side of Clarksville Road) and the larger local watershed. The stream west of the project site, which flows into Carson Creek south of the project site, would provide only marginal habitat for foothill yellow-legged frog due to extensive shading, and the intermittent nature of the stream. Based on the marginal nature of the aquatic habitat on the project site and the lack of nearby extant occurrences of the species, foothill yellow-legged frog is unlikely to occur.

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence[2]
Giant gartersnake *Thamnophis giga*	FT	ST	Marsh and swamp, riparian scrub, wetland. Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not expected to occur. The project site is outside of the current range of giant gartersnake.
Northwestern pond turtle *Actinemys marmorata*	FP	SSC	Ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	May occur. Aquatic habitat on the project site may provide marginal habitat for northwestern pond turtle. Additionally, aquatic habitat suitable for northwestern pond turtle is present in the stream on the west side of the project site, and the project site may provide upland habitat suitable for the species.
Western spadefoot *Spea hammondii*	FP	SSC	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pool, and wetlands. Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	May occur. The nearest documented occurrence of western spadefoot is approximately 3.8 miles northwest of the project site near Folsom Lake (CNDDB 2024). While marginal, the seasonal wetland habitats on the project site may provide habitat suitable for this species.
Birds				
Bald eagle *Haliaeetus leucocephalus*	FD	SE FP	Lower montane coniferous forest, old growth. Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	May occur. Nesting habitat suitable for bald eagles (i.e., large trees within 1 mile of water) is not present on the project site. However, this species may occasionally forage or perch on the project site.
Bank swallow *Riparia riparia*	—	ST	Riparian scrub, riparian woodland. Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, and ocean to dig nesting hole.	Not expected to occur. Bank or cliff habitat suitable for bank swallows is not present on the project site.
Burrowing owl *Athene cunicularia*	—	SSC SC	Coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grassland. Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	May occur. The project site is within the wintering range of burrowing owl and contains annual grassland habitat that may provide wintering habitat suitable for this species. A protocol-level survey for burrowing owls was conducted in 2016 and no burrowing owls or their sign (e.g., burrows, scat, pellets) were detected on the project site (Foothill Associates 2016a). However, burrowing owls may have established burrows on the project site since completion of the 2016 survey.
California black rail *Laterallus jamaicensis coturniculus*	—	ST FP	Brackish marsh, freshwater marsh, marsh and swamp, salt marsh, wetland. Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	May occur. Wetland and riparian habitat suitable for California black rails is present in the project site, and a breeding pair of this species has been documented approximately 2 miles from the project site (CNDDB 2024).

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence[2]
Golden eagle *Aquila chrysaetos*	—	FP	Broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodlands, upper montane coniferous forest, and valley and foothill grassland. Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	May occur. The nearest documented nesting occurrence of golden eagle is approximately 2 miles northwest of the project site (CNDDB 2024). This documented nest is atypical for golden eagles, because it is surrounded by residential development. The project site does not contain nesting habitat (i.e., large trees surrounded by open habitat) for golden eagles. However, this species may occasionally forage or perch on the project site.
Grasshopper sparrow *Ammodramus savannarum*	—	SSC	Valley and foothill grassland. Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	May occur. Annual grassland habitat potentially suitable for grasshopper sparrows is present on the project site.
Loggerhead shrike *Lanius ludovicianus*	—	SSC	Broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodlands, riparian woodland, Sonoran desert scrub. Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	May occur. This species has not been documented on the project site; however, loggerhead shrikes are underrepresented in the CNDDB (CNDDB 2025). Valley oak woodland on the project site may provide nesting habitat suitable for loggerhead shrikes.
Northern harrier *Circus hudsonius*	—	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	May occur. Wetland and annual grassland habitat on the project site may provide nesting habitat suitable for northern harriers.
Purple martin *Progne subis*	—	SSC	Broadleaved upland forest, lower montane coniferous forest. Inhabits woodlands, low elevation coniferous forest of Douglas fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	May occur. The project site does not contain coniferous forest habitat or human-made structures suitable for purple martin nesting. However, this species may periodically forage on the project site.
Swainson's hawk *Buteo swainsoni*	—	ST	Great Basin grassland, riparian forest, riparian woodland, valley and foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. Nesting habitat potentially suitable for Swainson's hawks is present in oak woodlands on the project site.
Tricolored blackbird *Agelaius tricolor*	—	ST SSC	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	May occur. The project site contains a large bramble of Himalayan blackberry that may provide nesting habitat suitable for tricolored blackbirds.

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence[2]
White-tailed kite *Elanus leucurus*	—	FP	Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, and wetlands. Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	May occur. Nesting habitat potentially suitable for white-tailed kites is present in oak woodlands on the project site.
Yellow warbler *Setophaga petechia*	—	SSC	Riparian forest, riparian scrub, riparian woodland. Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	May occur. The perennial drainage on the west side of the project site may provide habitat suitable for yellow warblers.
Yellow-breasted chat *Icteria virens*	—	SSC	Riparian forest, riparian scrub, riparian woodland. Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	May occur. The project site contains a large bramble of Himalayan blackberry that may provide nesting habitat suitable for yellow-breasted chats.
Fish				
Steelhead – Central Valley DPS *Oncorhynchus mykiss irideus* pop. 11	FT	SSC	Sacramento/San Joaquin flowing waters. Populations in the Sacramento and San Joaquin rivers and their tributaries.	Not expected to occur. The project site does not contain aquatic habitat suitable for this species.
Invertebrates				
Crotch's bumble bee *Bombus crotchii*	—	SC	Found primarily in California: mediterranean, Pacific coast, western desert, Great Valley, and adjacent foothills through most of southwestern California. Habitat includes open grassland and scrub. Nests underground.	May occur. While the population of Crotch's bumble bee has declined significantly, the project site is within the current range of this species. The nearest recent (2020) occurrence of Crotch's bumble bee is approximately 11 miles southwest of the project site (CNDDB 2024). The project site contains floral resources and natural habitat that may provide foraging, breeding, and overwintering habitat suitable for Crotch's bumble bee.
Monarch *Danaus plexippus*	FP	—	Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Along migration routes and within summer ranges, monarch butterflies require two suites of plants: (1) host plants for monarch caterpillars, which are primarily milkweeds (*Asclepias* spp.) within the family Apocynaceae upon which adult monarchs lay eggs; and (2) nectar-producing flowering plants of many other species that provide food for adult butterflies. Having both host and nectar plants available from early spring to late fall and along migration corridors is critical to the survival of migrating pollinators.	May occur. The project site is outside of the overwintering range of monarch butterflies. However, milkweed plants and other floral resources are present on the project site (Helix 2025b); thus, monarchs may forage or breed on the project site.

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence[2]
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT	—	Riparian scrub. Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus mexicana*). Prefers to lay eggs in elderberries 2–8 inches in diameter; some preference shown for "stressed" elderberries.	Not expected to occur. The project site contains two small clumps of blue elderberry shrubs; however, the elevation of the project site (approximately 700 ft) is outside of the expected elevational range of this species (500 ft; USFWS 2023).
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	—	Valley and foothill grassland, vernal pool, wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected to occur. The project site does not contain vernal pool habitat.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE	—	Valley and foothill grassland, vernal pool, wetland. Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	Not expected to occur. The project site does not contain vernal pool habitat.
Western bumble bee *Bombus occidentalis*	—	SC	Once common throughout much of its range, in California, this species is currently largely restricted to high elevation sites in the Sierra Nevada and the northern California coast. Habitat includes open grassy areas, chaparral, scrub, and meadows. Requires suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens.	Not expected to occur. The project site is outside of the current range of western bumble bee, which includes high elevation areas in the Sierra Nevada and some areas along the northern California coast (CDFW 2023).
Mammals				
American badger *Taxidea taxus*	—	SSC	American badgers are most commonly found in treeless areas including tallgrass and shortgrass prairies, grass-dominated meadows and fields within forested habitats, and shrub-steppe communities. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	May occur. Annual grassland habitat potentially suitable for American badger is present on the project site.
Fisher – West Coast DPS *Pekania pennanti*	—	SSC	North coast coniferous forest, old growth, riparian forest. Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest. Endangered status applies to Southern Sierra DPS.	Not expected to occur. The project site is outside of the current range of this species.

Species	Federal Status[1]	State Status[1]	Habitat	Potential for Occurrence[2]
Northern California ringtail *Bassariscus astutus raptor*	—	FP	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations.	Not expected to occur. Northern California ringtail is not tracked in the CNDDB. While the project site contains valley oak woodland that may provide habitat suitable for ringtail, the habitat is marginal due to surrounding urban and residential development and lack of connectivity with other natural habitat.
Pallid bat *Antrozous pallidus*	—	SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Tree roosting has also been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and bole cavities in oaks. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	May occur. Large oak trees on the project site may provide roosting habitat suitable for pallid bat.
Western red bat *Lasiurus frantzii*	—	SSC	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland Roosts primarily in trees, 2–40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	May occur. This species has not been documented on the project site; however, bats in general are underrepresented in the CNDDB (CNDDB 2025). Large oak trees on the project site may provide roosting habitat for western red bat.

Notes: CEQA = California Environmental Quality Act; CNDDB = California Natural Diversity Database; DPS = distinct population segment; ESU = evolutionarily significant unit; ssp. = subspecies.

[1] Legal Status Definitions

Federal:
FE Endangered (legally protected)
FT Threatened (legally protected)
FP Federally proposed for listing (no formal protection other than CEQA consideration)
FC Federal candidate for listing (no formal protection other than CEQA consideration)
FD Federally delisted

State:
SE Endangered (legally protected)
ST Threatened (legally protected)
SC State candidate for listing (legally protected)
SD State delisted
FP Fully protected (legally protected)
SSC Species of special concern (no formal protection other than CEQA consideration)

[2] Potential for Occurrence: *The Costco El Dorado Hills Project Biological Resources Assessment* (Helix 2025b) from which information is this table was partially based, defines potential for occurrence using four categories: no potential, low potential, moderate potential, and high potential. For the purposes of the analysis in this draft EIR, species determined to have no potential to occur are described as "not expected to occur" and species with low, moderate, or high potential to occur are described as "may occur."

Sources: CDFW 2023; CNDDB 2024; Helix 2025b; USFWS 2023; USFWS 2026.

State and Federally Protected Wetlands

An unnamed tributary to Carson Creek, runs along the west side of Clarksville Road on the South Site, and is categorized as a freshwater emergent wetland (Helix 2025a). Additional intermittent drainage, seasonal wetland, wetland swale, and seep habitats on the project site may meet the state and federal definitions of wetlands. These features are described above, under the heading "Vegetation and Land Cover Types." While the seasonal drainages are not vegetated wetlands, they and all of the wetland features on the project site meet the criteria for protection as waters of the United States and state.

Sensitive Natural Communities

Sensitive natural communities include those that are of special concern to resource agencies or are afforded specific consideration through CEQA or other federal or State laws. Sensitive natural communities may be of special concern to regulatory agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species. Many of these communities are tracked in CDFW's CNDDB. CDFW designates sensitive natural communities based on their state rarity and threat ranking using NatureServe's Heritage Methodology. Natural communities with rarity ranks of S1 to S3, where S1 is critically imperiled, S2 is imperiled, and S3 is vulnerable, are considered sensitive natural communities to be addressed in the environmental review processes of CEQA and its equivalents (CDFW 2018). Four sensitive communities were identified in the CNDDB as having potential to occur in the project site: Central Valley drainage hardhead/squawfish stream, northern hardpan vernal pool, northern volcanic mud flow vernal pool, and valley needlegrass grassland (CNDDB 2024). The project site does not contain hardhead/squawfish stream habitat, vernal pool habitat, or volcanic soils. Approximately 0.9 acres of purple needlegrass grassland is present on the South Site (Table 3.3-2). This sensitive natural community is also referred to as Needle grass–Melic grass grassland and has a state rank of S3S4 (i.e., vulnerable; Sawyer et al. 2009). Additionally, valley oak woodland has a state rank of S3 (i.e., vulnerable; Sawyer et al. 2009), and the project site contains approximately 0.2 acres of this vegetation type.

Many riparian plant communities qualify as sensitive natural communities based on the plant associations therein. In addition, riparian habitats are protected under section 1602 of California Fish and Game Code. The project site contains approximately 1.4 acres of valley foothill riparian habitat, in addition to approximately 1 acre of wetland habitats (Table 3.3-2, Figure 3.3-1).

Wildlife Movement Corridors

A wildlife movement corridor is generally a topographical/landscape feature or movement zone that connects two or more natural habitat areas. Wildlife corridors link areas of suitable wildlife habitat that are separated by variation in vegetation, rugged terrain, human disturbance and habitat fragmentation, or other biophysical factors. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas, such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. Therefore, wildlife movement and migration corridors are considered an important ecological resource by CDFW and other agencies and are protected by many local governments in California.

Some of the important areas for habitat connectivity in California were mapped as Essential Connectivity Areas (ECA) for the California Essential Habitat Connectivity Project, which was commissioned by the California Department of Transportation and CDFW with the purpose of making transportation and land-use planning more efficient and less costly, while helping reduce dangerous wildlife-vehicle collisions (Spencer et al. 2010). The ECAs were not developed for the purposes of defining areas subject to specific regulations by CDFW or other agencies. The project site is located within a modeled ECA, connecting natural landscape blocks to the south to undeveloped areas north and east of the project site. The project site contains natural habitat; however, it is surrounded by residential development to the north and west and US 50 to the south. Additionally, the *El Dorado County General Plan* identifies Important Biological Corridors (IBC), none of which intersect with the project site. Therefore, it is unlikely that the project site currently functions as a critical habitat linkage; however, it likely functions as a movement corridor for some wildlife species.

Wildlife Nursery Sites

Nursery sites are locations where fish or wildlife concentrate for hatching and/or raising young, such as nesting rookeries for birds (e.g., herons, egrets), spawning areas for native fish, fawning areas for mule deer (*Odocoileus hemionus*), and maternal roosts for bats. The valley oak woodland on the project site may provide roosting habitat potentially suitable for special-status bats (e.g., pallid bat) or common bat species (e.g., big brown bat [*Eptesicus fuscus*], silver-haired bat [*Lasionycteris noctivagans*]).

3.3.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This impact evaluation is based on existing biological resource reports, review of aerial photographs, and review of existing databases that address biological resources in the project vicinity as described above.

THRESHOLDS OF SIGNIFICANCE

An impact on biological resources is considered significant if implementation of project would do any of 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;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

ISSUES NOT DISCUSSED FURTHER

Off-site Transportation Improvements

Based on field review, there are no sensitive biological resources in the land area associated with offsite transportation improvements to the intersections of Silva Valley Parkway/future project driveway and White Rock Road/Valley View Parkway-Vine Street. Therefore, this component of the project is not discussed further.

Consistency with Habitat Conservation Plans

The project site is not located within the plan area of any adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, this impact is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Result in Disturbance or Loss of Special-Status Plant Species

Development of the project site, including ground disturbance associated with construction of roads, parking areas, or buildings, could result in direct removal, or damage that results in eventual death or loss of special-status plants, if present on the project site. Because the loss of special-status plants could substantially affect the abundance, distribution, and viability of local and regional populations of these species, prior to the implementation of mitigation measures, this would be a **significant** impact.

The following analysis applies to both the Costco project and the North Site Remainder Area.

A total of 20 special-status plant species were identified as having potential to occur within the vicinity of the Costco project site and the North Site Remainder Area (Table 3.3-3; CNDDB 2024; CNPS 2024). Of these species, one has potential to occur on the project site: Sanford's arrowhead. Habitat potentially suitable for this species is present on the North Site and South Site. Protocol-level surveys for special-status plants were conducted on the project site in 2015, and no special-status plant species (including Sanford's arrowhead) were observed (Foothill Associates 2016b). However, because these surveys were conducted approximately 10 years ago, and because there has not been any significant disturbance (i.e., vegetation removal, ground disturbance) on the project site, it is possible that this species could have colonized habitat on the project site since the surveys were conducted.

Development of the project site, including ground disturbance associated with construction of roads, parking areas, or buildings, could result in direct removal of special-status plants, if present on the project site, or in habitat alterations or plant damage that leads to the ultimate death of special-status plants or failure to successfully reproduce. Loss of special-status plants could substantially affect the abundance, distribution, and viability of local and regional populations of these species; thus, prior to implementation of mitigation measures, this would be a **significant** impact.

Mitigation Measures

Mitigation Measure 3.3-1: Conduct Special-Status Plant Surveys and Implement Avoidance Measures and Mitigation

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- Prior to implementation of project activities and during the blooming period for Sanford's arrowhead (May–October), a qualified botanist shall conduct protocol-level surveys for special-status plants within the project site following survey methods from CDFW's *Protocols for Surveying and Evaluating Impacts on Special-Status Native Plant Populations and Natural Communities* (CDFW 2018 or most recent version). The qualified botanist shall: 1) be knowledgeable about plant taxonomy, 2) be familiar with plants of the Sierra Nevada region, including special-status plants and sensitive natural communities, 3) have experience conducting floristic botanical field surveys as described in CDFW 2018, 4) be familiar with the California Manual of Vegetation (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/), and 5) be familiar with federal and state statutes and regulations related to plants and plant collecting.
- If special-status plants are not found, the botanist shall document the findings in a report to the applicant and El Dorado County, and no further mitigation shall be required.
- If special-status plants are found during special-status plant surveys and cannot be avoided, the applicant shall, in consultation with CDFW or USFWS, as appropriate depending on species status, develop and implement a site-specific mitigation strategy to compensate for loss of occupied habitat or individuals. Mitigation measures may include preserving and enhancing existing populations, establishing populations through seed collection or transplantation from the site that is to be affected, and/or restoring or creating habitat in sufficient quantities to offset loss of occupied habitat or individuals. Potential mitigation sites could include suitable locations within or outside of the project site. Habitat and individual plants lost shall be mitigated at a minimum 1:1 ratio, considering acreage as well as function and value. Success criteria for preserved and compensatory populations shall include:
  - The extent of occupied area and plant density (number of plants per unit area) in compensatory populations shall be equal to or greater than the affected occupied habitat.
  - Compensatory and preserved populations shall be self-producing. Populations would be considered self-producing when:
    - plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and
    - reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity.

If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures shall be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long-term viable populations.

Documentation of the completion of the mitigation strategy and coordination/consultation process with CDFW or USFWS shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-1 would reduce significant impacts on special-status plants to a **less-than-significant** level by requiring protocol-level surveys for special-status plants and implementation of avoidance measures and compensation for impacts on special-status plants if present on the project site. Application of this mitigation measure to the project would be consistent with General Plan Objective 7.4.1 and Policy 7.4.2.8.

Impact 3.3-2: Result in Disturbance to or Loss of Special-Status Wildlife Species and Habitat

Project implementation would include land use conversion and development activities including ground disturbance, vegetation removal, and overall conversion of wildlife habitat, which could result in disturbance, injury, or mortality of several special-status wildlife species if present, reduced breeding productivity of these species, and loss of species habitat. Prior to implementation of mitigation measures, this would be a **significant** impact.

The following analysis applies to both the Costco project and the North Site Remainder Area.

Twenty-one special-status wildlife species were determined to have the potential to occur on the project site: coast horned lizard, northwestern pond turtle, western spadefoot, bald eagle, burrowing owl, California black rail, golden eagle, grasshopper sparrow, loggerhead shrike, northern harrier, purple martin, Swainson's hawk, tricolored blackbird, white-tailed kite, yellow warbler, yellow-breasted chat, Crotch's bumble bee, monarch, American badger, pallid bat, and western red bat. Additionally, native birds without special status protected by California Fish and Game Code and the federal MBTA may also nest on the project site. All of the species listed above have potential to occur in both the North Site and South Site, including the North Site Remainder Area. Bald eagles, golden eagles, and purple martins may occasionally forage or perch on the project site; however, the project site does not contain high-quality foraging habitat for these species or nesting habitat. Therefore, the project would not result in substantial loss of habitat for bald eagles, golden eagles, or purple martins, nor would it result in significant impacts on these species. These species are not described further.

Project activities (i.e., tree removal, vegetation clearing, ground disturbance, staging, heavy equipment use) may result in direct loss of special-status wildlife species, loss of or disturbance to nests or dens, or disturbance leading to abandonment of active nests or dens. Prior to implementation of mitigation measures, this would be a **significant** impact.

Coast Horned Lizard and Western Spadefoot

Coast horned lizards typically occur in open areas with loose soil and scattered, low bushes for cover. Habitat potentially suitable for coast horned lizard on the project site includes annual grassland, valley oak woodland, and ruderal disturbed habitat. Western spadefoot have potential to occur in low-elevation (i.e., less than approximately 1,000 feet) grassland and oak woodland habitats that contain vernal pools or other seasonal wetland habitat formed by winter rains. Seasonal wetland habitat on the project site may provide marginal habitat for western spadefoot.

Project activities (i.e., vegetation clearing, ground disturbance, staging, heavy equipment use) may result in direct loss of coast horned lizards or western spadefoot if present on the project site. Prior to implementation of mitigation measures, this would be a **significant** impact.

Mitigation Measures

Mitigation 3.3-2a: Conduct Preconstruction Surveys for Coast Horned Lizard, Implement Avoidance Measures, and Relocate Individuals

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- Within 14 days before the initiation of any construction activity, a qualified biologist familiar with the life history of coast horned lizard shall conduct a focused visual survey of habitat suitable for this species on the project site, which shall include walking linear transects of the site.
- If coast horned lizards are not detected during the focused survey, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and further mitigation shall not be required.
- If coast horned lizards are detected, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground disturbance activities and shall inspect the project site before initiation of project activities. If coast horned lizards are detected, the qualified biologist shall move individuals into nearby suitable habitat that will not be disturbed by project activities.
- Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities.

Mitigation 3.3-2b: Conduct Preconstruction Surveys for Western Spadefoot, Implement Avoidance Measures, and Relocate Individuals

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- Within 48 hours prior to project implementation, a qualified biologist shall conduct focused surveys in aquatic (i.e., wetlands) and upland (i.e., annual grassland) habitats within approximately 860 feet (262 meters) of aquatic habitat (Baumberger et al. 2019) suitable for the species. Burrows considered potentially suitable for western spadefoot shall be identified and further examined by a qualified biologist (e.g., with a burrow scope, through hand excavation) to determine whether an adult toad is present in the burrow.
- If western spadefoot are not found, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and further mitigation will not be required.
- If western spadefoot are detected during focused surveys, adults, tadpoles, and egg masses shall be relocated by a qualified biologist with a valid CDFW scientific collecting permit to nearby suitable habitat that will not be disturbed by project activities.
- Because western spadefoot is proposed for listing under ESA, if the species is listed before project construction activities begin that could result in injury to or mortality of western spadefoot toads (i.e., ground disturbance, grading, land conversion), then the project applicant may be required to consult with USFWS under Section 7 or Section 10 of ESA. USACE is presumed to be the federal action agency because it has jurisdiction over the aquatic habitat on the project site (see Impact 3.3-4). If it is determined, in consultation with USFWS, that take of this species could occur after implementation of the measures described above, then the project applicant may be required to obtain incidental take authorization through Section 7 consultation or a Section 10 permit pursuant to ESA. In this case, the project shall not proceed until a biological opinion is issued by USFWS.
    - Any conservation measures developed in coordination with USFWS during the course of formal or informal consultation under Section 7 or during Section 10 consultation would supersede the measures listed here.
    - Such conservation measures could include, but would not be limited to, seasonal work restrictions for initial ground disturbance, preconstruction surveys by a qualified biologist, installation of wildlife exclusion fencing, biological monitoring, and worker environmental awareness training. Additional measures could include

preservation, restoration, or enhancement of habitat on- or off-site; purchase of habitat credits from an agency-approved mitigation/conservation bank; work with a local land trust to preserve land; or any other method acceptable to USFWS.

- If USFWS determines that listing of western spadefoot under ESA is not warranted, or the species is not listed prior to project completion, then the above measures related to consultation with USFWS would not be applicable. Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-2a and 3.3-2b would reduce potential impacts on coast horned lizard and western spadefoot to a **less-than-significant** level by requiring focused visual surveys for the species; relocation to nearby habitat of individuals by a qualified biologist with an appropriate CDFW Scientific Collecting Permit, if detected; and consultation with USFWS if western spadefoot are detected and the species is listed under ESA at the time of project construction activities. Application of these mitigation measures to the project would be consistent with General Plan Policy 7.4.2.8.

Northwestern Pond Turtle

Northwestern pond turtle can be found in many different aquatic habitats, including ponds (natural or human-made), marshes, rivers, and irrigation ditches. Northwestern pond turtle uses upland habitat for basking and egg-laying. Upland habitat may include grasslands, scrub, or woodland habitats. Northwestern pond turtles are known to travel into uplands up to 0.3 miles (approximately 1,600 feet) from aquatic habitat (Reese and Welsh 1997). Perennial, intermittent, and ephemeral drainages on the North and South sites may provide aquatic habitat for northwestern pond turtles and the surrounding grassland may provide upland habitat for the species.

Project activities (i.e., vegetation clearing, ground disturbance, staging, heavy equipment use, fill of wetlands and other waters) may result in direct loss of northwestern pond turtles and occupied burrows if present on the project site. Prior to implementation of mitigation measures, this would be a **significant** impact.

Mitigation Measures

Mitigation 3.3-2c: Conduct Preconstruction Surveys for Northwestern Pond Turtle, Implement Avoidance Measures, and Relocate Individuals

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- Within 14 days prior to the initiation of any construction activities, a qualified biologist shall conduct preconstruction surveys for northwestern pond turtle in habitats for this species (i.e., the pond and suitable upland areas within 0.3 mile of the pond) that will be disturbed by construction activity.
- If northwestern pond turtles are found prior to the initiation of, or during, construction activities, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall relocate the turtle to a suitable habitat area outside of the project site.
- If a northwestern pond turtle nest is observed within the proposed impact area during the preconstruction survey, the nest shall be fenced off and avoided until the eggs hatch or the nest is no longer active as determined by a qualified biologist. The fenced area shall be open on one side with the opening facing the nearest aquatic habitat so that hatchling turtles can freely travel from the nest to the aquatic habitat. A qualified biologist shall monitor to ensure that hatchlings do not disperse into the construction area. If any hatchlings are observed within the project area, relocation of hatchlings shall occur as described in the encounter protocol below.
- If a northwestern pond turtle is encountered, work shall be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, a qualified biologist shall notify CDFW to determine the appropriate procedures related to relocation. Any worker who inadvertently injures or kills a northwestern

pond turtle or who finds a northwestern pond turtle dead, injured, or entrapped must immediately report the incident to the applicant, who must immediately notify CDFW.

- Because northwestern pond turtle is proposed for listing under the ESA, if the species is listed before the completion of project construction activities that could result in injury to or mortality of turtles (i.e., ground disturbance, grading, land conversion), then the project applicant may be required to consult with USFWS under Section 7 or Section 10 of ESA. USACE is presumed to be the federal action agency because it has jurisdiction over the aquatic habitat on the project site (see Impact 3.3-4). If it is determined, in consultation with USFWS, that take of this species could occur after implementation of the measures described above, then the project applicant may be required to obtain incidental take authorization through Section 7 consultation or a Section 10 permit pursuant to ESA. In this case, the project shall not proceed until a Biological Opinion is issued by USFWS.
    - Any conservation measures developed in coordination with USFWS during the course of formal or informal consultation under Section 7 or during Section 10 consultation would supersede the measures listed here.
    - Such conservation measures could include, but would not be limited to, seasonal work restrictions for initial ground disturbance, preconstruction surveys by a qualified biologist, installation of wildlife exclusion fencing, biological monitoring, and worker environmental awareness training. Additional measures could include preservation, restoration, or enhancement of habitat on- or off-site; purchase of habitat credits from an agency-approved mitigation/conservation bank; work with a local land trust to preserve land; or any other method acceptable to USFWS.
- If USFWS determines that listing of northwestern pond turtle under ESA is not warranted, or the species is not listed prior to project completion, then the above measures related to consultation with USFWS would not be applicable. CDFW may require mitigation for potential impacts on northwestern pond turtle as part of a streambed alteration agreement. If CDFW assigns mitigation that is more stringent than the measures proposed above, the CDFW measure shall take precedence.
- Documentation of compliance with this mitigation measure and the coordination/consultation process with CDFW and USFWS shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measures 3.3-2c would reduce potential impacts on northwestern pond turtle to a **less-than-significant** level by requiring focused surveys for the species, implementation of measures to avoid injury or mortality of northwestern pond turtles if detected, relocation of individual turtles by a qualified biologist with an appropriate CDFW Scientific Collecting Permit, and consultation with USFWS if western spadefoot are detected and the species is listed under ESA at the time of project construction activities. Application of this mitigation measure to the project would be consistent with General Plan Policy 7.4.2.8.

Burrowing Owl

Annual grassland habitat on the project site may provide habitat suitable for this species. The project site and vicinity are located in the westernmost extent of the range of burrowing owl on the western slope of the Sierra Nevada. The portion of the species' range that overlaps the project site is considered winter range for burrowing owl; therefore, burrowing owls are not expected to nest on the project site. However, burrowing owls may overwinter on the project site. Protocol-level surveys for burrowing owls were conducted on the project site in 2015, and burrowing owls were not observed (Foothill Associates 2016c). They also were not observed during reconnaissance-level surveys on October 13, 2020, or January 9, 2025 (Helix 2020a, 2025b). However, because the protocol-level surveys were conducted approximately ten years ago, it is possible that burrowing owls could have established overwintering burrows within the project site since the surveys.

Project activities (i.e., vegetation clearing, ground disturbance, staging, heavy equipment use) may result in direct loss of burrowing owls or active burrows if present on the project site. Prior to implementation of mitigation measures, this would be a **significant** impact.

Mitigation Measures

Mitigation 3.3-2d: Conduct Take Avoidance Survey for Burrowing Owl and Implement Avoidance Measures

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- A qualified biologist shall conduct a focused survey for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet (500 meters) of the project site no less than 14 days before initiating ground disturbance activities using survey methods described in Appendix D of the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). Inaccessible areas (e.g., adjacent private property) will not be surveyed directly, but the biologist may use binoculars or a spotting scope to survey these areas.
    - If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to the applicant and El Dorado County, and no further mitigation shall be required.
    - If an active burrow is found within 1,640 feet of pending construction activities that would occur during the nonbreeding season (September 1 through January 31), the applicant shall establish and maintain a minimum protection buffer of 1,640 feet (500 meters) around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls throughout construction. The protection buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer would not disturb burrowing owl use of the burrow because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, a qualified biologist shall monitor the behavior of the burrowing owls during all project activities within 1,640 feet of the burrow. If the owls are disturbed or agitated (e.g., vocalizations, bill snaps, fluffing feathers to increase body size appearance, drooping wings and rotating them forward, crouching and weaving back and forth) by the project activities, the biologist shall have the authority to halt the activities and re-establish a buffer consistent with the first bullet until the agitated behavior ceases and normal behavior resumes.
    - The buffer shall remain in place around the occupied burrow and associated satellite burrows until a qualified biologist has determined through noninvasive methods that the burrows are no longer occupied by burrowing owl. A previously occupied burrow will be considered unoccupied if surveys demonstrate that no owls have used the burrow for seven consecutive days.
    - If implementation of a buffer to prevent take of burrowing owl is not feasible, the project applicant shall consult with CDFW and obtain an Incidental Take Permit (ITP) prior to commencing project related ground-disturbing activities. The impacts of taking burrowing owl shall be minimized and fully mitigated.
    - The project applicant shall compensate for the loss of burrowing owl by establishing permanent protection and perpetual management on land that provides burrowing owl habitat. Habitat management lands for burrowing owl may be established by conservation easement or fee title or credits may be purchased from a CDFW-approved conservation or mitigation bank. The compensatory mitigation shall satisfy permit conditions and all other permit conditions shall be implemented.
    - Documentation of compliance with this mitigation measure and the coordination process with CDFW shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-2d would reduce potential impacts on burrowing owl to a **less-than-significant** level by requiring protocol-level surveys for the species, implementation of measures to avoid injury or mortality of burrowing owls and destruction of active burrows if detected, and incidental take permitting from CDFW if impacts cannot be avoided. Application of this mitigation measure to the project would be consistent with General Plan Policy 7.4.2.8.

Special-Status Birds and Other Native Nesting Birds

Nine special-status bird species (other than burrowing owl) have potential to nest on the project site: California black rail, grasshopper sparrow, loggerhead shrike, northern harrier, Swainson's hawk, tricolored blackbird, white-tailed kite, yellow warbler, and yellow-breasted chat (Table 3.3-4). These species may nest in grassland and trees on the project site. Additionally, other raptor species (e.g., Cooper's hawk [*Accipiter cooperi*], red-tailed hawk [*Buteo jamaicensis*], red-shouldered hawk [*Buteo lineatus*]) and other native nesting birds could nest on the project site, and these species and their nests are protected under California Fish and Game Code and MBTA.

Project activities (i.e., tree removal, vegetation clearing, ground disturbance, staging, heavy equipment use) may result in direct loss of special-status birds or active nests if present on the project site. Additionally, operation of heavy equipment and other construction activities could result in noise or visual stimuli that could result in disturbance to nearby nesting birds, which may result in nest abandonment and potential loss of eggs or chicks. Prior to implementation of mitigation measures, this would be a **significant** impact.

Mitigation Measures

Mitigation 3.3-2e: Conduct Focused Surveys for Special-Status Birds, Nesting Raptors, and Other Native Nesting Birds and Implement Protective Buffers

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- To minimize the potential for loss of special-status bird species, raptors, and other native birds, project activities (e.g., tree removal, vegetation clearing, ground disturbance, staging) shall be conducted during the nonbreeding season (approximately September 1-January 31, as determined by a qualified biologist), if feasible. If project activities are conducted during the nonbreeding season, no further mitigation shall be required.
- Within 14 days before the onset of project activities during the breeding season (approximately February 1 through August 31, as determined by a qualified biologist), a qualified biologist familiar with birds of California and with experience conducting nesting bird surveys shall conduct focused surveys for special-status birds, other nesting raptors, and other native birds. Surveys shall be conducted in accessible areas within 0.25 mile of the project site for Swainson's hawk, within 500 feet of the project site for other raptor species and special-status birds, and within 50 feet of the project site for non-raptor common native bird nests.
- If no active nests are found, the qualified biologist shall submit a report documenting the survey methods and results to the applicant and El Dorado County, and no further mitigation shall be required.
- If active nests are found, impacts on nesting birds shall be avoided by establishing appropriate buffers around active nest sites identified during focused surveys to prevent disturbance to the nest. Project activity shall not commence within the buffer areas until a qualified biologist has determined that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Buffers typically shall be 0.25 mile for Swainson's hawk, and 500 feet for other raptors. Buffer size for non-raptor bird species shall be determined by a qualified biologist. Factors to be considered for determining buffer size shall include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and proposed project activities. Generally, buffer size for these species shall be at least 20 feet. The size of the buffer may be adjusted if a qualified biologist, determines that such an adjustment shall not be likely to adversely affect the nest. Any buffer reduction for a special-status species shall require consultation with CDFW. Periodic monitoring of the nest by a qualified biologist during project activities shall be required if the activity has potential to adversely affect the nest, the buffer has been reduced, or if birds within active nests are showing behavioral signs of agitation (e.g., standing up from a brooding position, flying off the nest) during project activities, as determined by the qualified biologist.
- Documentation of compliance with this mitigation measure and any required coordination with CDFW shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-2e would reduce potential impacts on special-status birds, raptors, and other native nesting birds to a **less-than-significant** level by requiring focused surveys for the nesting birds and implementation of measures to avoid disturbance, injury, or mortality of the species if nests are detected. Application of this mitigation measure to the project would be consistent with General Plan Policy 7.4.2.8.

Crotch's Bumble Bee

Crotch's bumble bee, along with three other bumble bee species, was designated as a candidate for listing as endangered under CESA by the California Fish and Game Commission on May 31, 2022. In June of 2023, CDFW released *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species*, which included survey and mitigation guidance for the four candidate species, as well as updated current range maps for each species (CDFW 2023). Crotch's bumble bee has recently undergone a decline in abundance and distribution and is no longer present across much of its historic range. In California, Crotch's bumble bee's current range includes the Mediterranean region (ecoregion encompassing the greater Central Valley, Sierra foothills and central coast ranges of California south to Mexico), Pacific Coast, Great Valley, and adjacent foothills though most of southwestern California. This range encompasses the western approximately two-thirds of El Dorado County up to elevations of approximately 6,000 feet (CDFW 2023). Crotch's bumble bees have been documented approximately 11 miles southwest of the project site (CNDDB2025).

Although the life history characteristics of Crotch's bumble bees are not well understood, bumble bees have three basic habitat requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and overwintering sites for queens. Bumble bees in general are capable of flying up to approximately 6 miles from the nest while foraging; however, most foraging activity is likely conducted much closer to the nest (Williams et al. 2014).

Known native floral resources for crotch bumble bee include milkweed (*Asclepias* spp.), lupine (*Lupinus* spp.), *Phacelia* spp., *Clarkia* spp., poppy (*Eschscholzia* spp.), sage (*Salvia* spp.), and buckwheat (*Eriogonum* spp.). Bumble bees are typically generalist foragers and are known to use other native and nonnative floral resources, such as vetch (*Vicia* spp.) and clover (*Trifolium* spp.) (Williams et al. 2014). These floral species are fairly common within grassland habitats in California. Grassland habitat within the project site is dominated by nonnative grasses and forbs and may include flowering plants that could be used by bumble bees for foraging. Vegetation removal activities would result in removal of this potential foraging habitat, and conversion of the habitat to urban uses.

Crotch's bumble bees nest underground and likely use, at least in part, old rodent burrows (Williams et al. 2014; Xerces Society 2018). Some bumble bees favor nest sites near woody transitional habitats and nest in holes or crevices in leaf litter, beneath woody debris, at the base of a tree, in herbaceous plant debris, or near grass clumps (Lanterman et al. 2019). Very little is known about the hibernacula, or overwintering sites utilized by Crotch's bumble bees. Generally, bumble bees overwinter in soft, well-drained, disturbed soil (Goulson et al. 2010; Liczner and Colla 2019), or under leaf or needle litter or other debris (Williams et al. 2014; Williams et al. 2019) in woody forest edges (CDFW 2023). Overwintering likely occurs primarily in woodlands (USFWS 2021). Overwintering queens may prefer shaded areas near trees in areas without dense vegetation and north-facing slopes (Liczner and Colla 2019; Williams et al. 2019). Bumble bees in California have been documented overwintering under 1–2 inches of duff, between leaf/needle litter and mineral soil (Williams et al. 2014).

Nesting and overwintering habitat potentially suitable for this species may be present on the project site within grassland, oak woodland, or riparian woodland habitats. Vegetation removal and ground disturbing activities could result in mortality of foraging Crotch's bumble bees, nesting colonies, or overwintering queens (e.g., in underground rodent holes, loose soil, leaf litter, log/tree cavities, surface vegetation).

Project activities that could result in loss (i.e., take) of Crotch's bumble bees include ground disturbance and vegetation removal. Prior to implementation of mitigation measures, loss of Crotch's bumble bees would be a **significant** impact.

Mitigation Measure 3.3-f: Implement Limited Operating Period, Conduct Focused Surveys, and Implement Avoidance Measures for Crotch's Bumble Bee

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between August 15 and March 15, if feasible, to avoid impacts on nesting Crotch's bumble bees.
- Regardless of the feasibility of the above limited operating period, a qualified biologist familiar with bumble bees of California and experienced using survey methods for bumble bees shall conduct a habitat assessment and focused survey for Crotch's bumble bee before the start of any ground-disturbing activities. Surveys shall be performed when Crotch's bumble bee is most likely to be identified, typically from April through August (i.e., the colony active period) when floral resources and ideal weather conditions are present, and shall follow the methods in Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023). Surveys shall be conducted during the colony active period closest to the start of planned construction activities. Survey results shall be submitted to the applicant and El Dorado County no less than 7 days before construction begins.
- The applicant shall submit a survey report to CDFW within 1 month of survey completion and shall notify CDFW and El Dorado County within 24 hours if Crotch's bumble bees are detected.
- If Crotch's bumble bees are detected during the focused survey, appropriate avoidance measures shall be implemented. Avoidance measures shall include, but not be limited to, the following:
    - Protective buffers shall be implemented around active nesting colonies or overwintering queens until these sites are no longer active. A qualified biologist, in coordination with CDFW, shall determine the appropriate buffer size to protect nesting colonies or overwintering queens; however, the buffer shall be a minimum of 50 feet.
        - If impacts on Crotch's bumble bee cannot be avoided, the applicant shall obtain an incidental take permit (ITP) from CDFW and shall implement all avoidance measures included in the ITP.
        - Documentation of compliance with this mitigation measure and any required coordination with CDFW or acquisition of an ITP shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-2f would reduce potential impacts on Crotch's bumble bee to a **less-than-significant** level by requiring focused surveys for the species, implementation of measures to avoid injury or mortality of Crotch's bumble bees if detected, and incidental take permitting from CDFW if impacts cannot be avoided. Application of this mitigation measure to the project would be consistent with General Plan Policy 7.4.2.8.

Monarch Butterfly

Monarch is proposed for listing under ESA (USFWS 2024), and as such, currently does not have protection under ESA. However, it is possible that the species will be listed during the life of the project. The nearest documented sighting of a monarch is approximately 1.8 miles northwest of the project site near Kalithea Park in El Dorado Hills (Western Monarch Milkweed Mapper 2025). However, the project site is within the range of this species and milkweed plants and other floral resources observed on the project site may provide foraging or breeding habitat suitable for monarchs (Helix 2025b). Project activities, including ground disturbance or vegetation removal, could result in disturbance of monarchs and habitat suitable for the species. Monarch butterflies could be adversely affected if construction activity results in the removal of milkweed plants that are actively supporting monarch eggs or caterpillars at the time of removal. Prior to implementation of mitigation measures, loss of monarch eggs or caterpillars would be a **significant** impact.

Mitigation Measure 3.3-2g: Conduct Surveys for Milkweed Plants, Monarch Eggs, and Monarch Caterpillars, and Implement Avoidance Measures

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- If construction activities (e.g., ground disturbance, vegetation removal, staging) on the project site occur during the period when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September) a qualified biologist shall survey the project site for milkweed plants. If milkweed plants are found, a qualified biologist shall inspect the milkweed plants for the presence of monarch eggs or caterpillars no more than 14 days before plant removal. If monarch eggs or caterpillars are detected, the milkweed plants shall be avoided until they are no longer being used by monarch caterpillars, as confirmed by a qualified biologist, if feasible. If no eggs or caterpillars are detected, no additional protection measures are necessary.
- Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-2g would reduce the potential impact on monarch to a **less-than-significant** level by requiring focused surveys for milkweed host plants and implementation of measures to avoid loss of monarch eggs or caterpillars if they are detected through avoidance of the plants. Application of this mitigation measure to the project would be consistent with General Plan Policy 7.4.2.8.

American Badger

Annual grassland habitat on the project site may provide habitat suitable for American badger. Project activities (i.e., vegetation clearing, ground disturbance, staging, heavy equipment use) may result in direct loss of American badgers or active badger dens if present on the project site. Prior to implementation of mitigation measures, this would be a **significant** impact.

Mitigation Measures

Mitigation 3.3-2h: Conduct Focused American Badger Survey and Establish Protective Buffers

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- Within 14 days before commencement of project activities, a qualified wildlife biologist familiar with American badger and experience using survey methods for the species shall conduct focused surveys of habitat suitable for the species within the project site to identify any American badger dens.
- If occupied dens are not found, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and further mitigation shall not be required.
- If occupied dens are found, impacts on active badger dens shall be avoided by establishing exclusion zones around all active badger dens, the size of which shall be determined by the qualified biologist such that the active badger den is not disturbed by project activities. No project activities (e.g., vegetation removal, ground disturbance, staging) shall occur within the exclusion zone until denning activities are complete or the den is abandoned, as confirmed by a qualified biologist. The qualified biologist shall monitor each den once per week to track the status of the den and to determine when it is no longer occupied. When it is no longer occupied, project activities within the exclusion zone may occur.
- If occupied dens cannot be avoided during construction, passive exclusion such as installing one-way doors on the occupied burrow(s) may be considered. Passive relocation shall only occur outside of the cub-rearing season (generally March 1 to July 31) to avoid impacts on cubs still dependent on the den. CDFW shall be consulted prior to performing passive relocation and an exclusion plan shall be prepared and approved by CDFW. Costco shall work with a qualified biologist during the CDFW consultation process, if necessary, and passive relocation shall be performed by a qualified biologist.

- Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-2h would reduce potential impacts on American badger to a **less-than-significant** level by requiring focused surveys for the species and implementation of measures to avoid injury or mortality of American badger and destruction of active dens if detected. Application of this mitigation measure to the project would be consistent with General Plan Policy 7.4.2.8.

Special-Status Bats

Two special-status bat species have potential to occur on the project site: pallid bat and western red bat. Roosting habitat potentially suitable for these species on the project site is present within large oak trees (i.e., crevices, cavities, exfoliating bark, foliage). Project activities (i.e., tree removal) may result in direct loss of roosting special-status bats if present on the project site. Prior to implementation of mitigation measures, this would be a **significant** impact.

Mitigation Measures

Mitigation 3.3-2i: Conduct Focused Bat Surveys and Implement Avoidance Measures

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

- Prior to the start of project activities, a qualified biologist familiar with bats and bat ecology, and experienced in conducting bat surveys, shall conduct surveys for bat roosts in suitable habitat (e.g., large trees, crevices, cavities, exfoliating bark, foliage) within and adjacent to the project site.
- If no evidence of bat roosts is found, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and no further study shall be required.
- If evidence of bat maternity roosts or hibernacula is observed, the species and number of bats using the roost shall be determined by a qualified biologist using noninvasive methods. Bat detectors (i.e., acoustic monitoring) or evening emergence surveys shall be used if deemed necessary to supplement survey efforts by the qualified biologist.
- A no-disturbance buffer of 250 feet shall be established around active pallid bat or western red bat maternity roosts or hibernacula, as well as substantial maternity roosts or hibernacula of other bat species considered to be a wildlife nursery by the qualified biologist, and project activities shall not occur within this buffer until after the roosts are unoccupied as determined by a qualified biologist.
- If roosts of pallid bat or western red bat are determined to be present and must be removed, the bats shall be excluded from the roosting site before the tree is removed. A program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter) or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) shall be replaced in consultation with CDFW and may require construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. If determined necessary during consultation with CDFW, replacement roosts shall be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site by a qualified biologist, the roost tree may be removed.
- Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-2i would reduce potential impacts on pallid bat and western red bat to **less than significant** by requiring focused surveys for bat roosts and implementation of no-disturbance buffers

around active special-status bat roosts. Application of this mitigation measure to the project would be consistent with General Plan Policy 7.4.2.8.

Impact 3.3-3: Result in Degradation or Loss of Riparian Habitat or Other Sensitive Natural Communities

Project implementation would include activities resulting in ground disturbance, vegetation removal, and land development, which would result in removal of riparian habitat and sensitive natural communities. This would be a **significant** impact.

Approximately 0.9 acres of purple needlegrass grassland (also known as Needle grass–Melic grass grassland) and 1.4 acres of valley foothill riparian habitat are present on the project site (Table 3.3-2). Both of these vegetation communities are considered sensitive natural communities, or are otherwise protected under California Fish and Game Code.

Costco Project

The purple needlegrass grassland described above was mapped on the South Site, within the project area. A portion of valley foothill riparian habitat is also present in the Costco project area. Project activities would include ground disturbance, vegetation removal, and land development, which would result in removal of purple needlegrass grassland and riparian woodland on the project site. This would be a **significant** impact.

North Site Remainder Area

Purple needlegrass grassland was not documented in the North Site Remainder Area; however a portion of the valley foothill riparian habitat on the project site is present in North Site Remainder Area. Future development of this North Site Remainder Area that would result in removal of the valley foothill riparian habitat on the project site would be a **significant** impact.

Based on the analysis above, development of the Costco project site and the North Site Remainder Area (valley foothill riparian habitat only) could result in **significant** impacts on valley foothill riparian and purple needlegrass grassland habitat.

Mitigation Measures

Mitigation Measure 3.3-3a: Map and Compensate for Loss of Sensitive Natural Communities

The following measure shall be implemented prior to implementation of project construction activities.

- The applicant shall compensate for unavoidable loss of purple needlegrass grassland such that no net loss of habitat function occurs by one of these three methods:
  - restoring degraded purple needlegrass grassland outside of the project site at a sufficient ratio to offset the loss of habitat function (at least 1:1); or
  - creating habitat mitigation through relocation of plants and establishment of purple needlegrass grassland; or
  - preserving existing purple needlegrass grassland of equal or better value to the sensitive natural community affected through a conservation easement at a sufficient ratio to offset the loss of habitat function (at least 1:1).
- Prepare and implement a Compensatory Mitigation Plan that includes the following:
  - For preserving existing habitat, the Compensatory Mitigation Plan shall include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The applicant shall provide evidence in the plan that the necessary mitigation has been implemented or that the applicant has entered into a legal agreement to implement it and that compensatory habitat shall be preserved in perpetuity.

- For restoring or enhancing habitat, the Compensatory Mitigation Plan shall include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met and parties responsible for the restored or enhanced habitat.
- Success criteria required to maintain habitat function for preserved and compensatory populations shall include:
    - The extent of occupied area and density of plants associated with the sensitive natural community (number of plants per unit area) in compensatory habitats shall be equal to or greater than the affected occupied habitat.
    - Compensatory and preserved sensitive natural communities shall be self-producing. Populations would be considered self-producing when:
        - Plants associated with sensitive natural communities reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and
        - Reestablished and preserved habitats contain an occupied area and density comparable to existing occupied habitat areas in similar habitat types in the project vicinity.

Documentation of compliance with this mitigation measure shall be provided to El Dorado County before commencement of any project construction activities.

Mitigation Measure 3.3-3b: Compensate for Loss of Riparian Habitat

The following measure shall be implemented on the Costco project site prior to implementation of project construction activities, and on the North Site Remainder Area prior to future development activities.

The following measures shall be implemented prior to vegetation removal or ground disturbing activities:

- A Streambed Alteration Notification shall be submitted to CDFW, pursuant to Section 1602 of the California Fish and Game Code. If proposed project activities are determined to be subject to CDFW jurisdiction, the applicant shall abide by the measures to protect fish and wildlife resources required by any executed agreement prior to any vegetation removal or activity that may affect the resource. Measures to protect fish and wildlife resources shall include, at a minimum, a combination of the following mitigation.
- The applicant shall compensate for the loss of riparian habitat such that no net loss of habitat function and values occurs by:
    - restoring degraded riparian habitat outside of the project site;
    - purchasing riparian habitat credits at a CDFW-approved mitigation bank; or
    - preserving existing riparian habitat of equal or better value to the affected riparian habitat through a conservation easement at a sufficient ratio to offset the loss of riparian habitat function (at least 1:1).
- The applicant shall prepare and implement a Compensatory Mitigation Plan that includes the following:
    - For preserving existing riparian habitat outside of the project site in perpetuity, the Compensatory Mitigation Plan shall include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The applicant shall provide evidence in the plan that the necessary mitigation has been implemented or that the applicant has entered into a legal agreement to implement it and that compensatory habitat shall be preserved in perpetuity.
    - For restoring or enhancing riparian habitat outside of the project site, the Compensatory Mitigation Plan shall include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat.

- Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the applicant (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above.
- Documentation of compliance with this mitigation measure and receipt of a Lake and Streambed Alteration Agreement from CDFW (or a letter from CDFW stating that such an Agreement is not required) shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measures 3.3-3a and 3.3-3b would reduce significant impacts on sensitive natural communities and riparian habitat to a **less-than-significant** level by requiring compensation for permanent loss of these habitats such that there is no net loss, potentially including a streambed alteration agreement with CDFW. Application of these mitigation measures to the project would be consistent with General Plan Objective 7.3.3 and associated Policy 7.3.3.5, Objective 7.3.4 and associated Policies 7.3.4.1 and 7.3.4.2, and Objective 7.4.2 and associated Policy 7.4.2.8.

Impact 3.3-4: Result in Degradation or Loss of State or Federally Protected Wetlands

Project implementation would include activities resulting in ground disturbance, vegetation removal, and land development, which would result in removal (fill) of wetlands. This would be a **significant** impact.

The following analysis applies to both the Costco project and the North Site Remainder Area.

An aquatic resources delineation of the project site was conducted on January 9, 2025 (Helix 2025a). A total of 1.021 acres of aquatic resources were delineated on the project site, including 0.206 acres of wetlands (i.e., seasonal wetland, wetland swale, seep) and 0.815 acres of other waters (e.g., ephemeral drainage, intermittent drainage, perennial drainage; Table 3.3-2; Figure 3.3-1; Helix 2025a). These aquatic resources delineation has not been verified by USACE. Aquatic resources are present on the North Site and South Site, including the North Site Remainder Area. A previous aquatic resources delineation was conducted on December 15, 2015, of approximately 17.9 acres on the North Site (Helix 2020a and 2020b). This 2015 delineation, which identified 0.19 acres of waters of the United States, was verified by USACE in August of 2019 (Helix 2020a and 2020b). All delineated aquatic resources in the project area are expected to be considered waters of the state, and would be subject to regulation by the Central Valley RWQCB. At least a subset of these aquatic resources would likely also be considered waters of the United States subject to verification by USACE.

Project activities would include ground disturbance, vegetation removal, and land development. These activities would result in removal of wetland habitats on the project site. This would be a **significant** impact.

Mitigation Measures

Mitigation 3.3-4: Obtain Permits for Impacts on Wetlands

- The 2025 aquatic resources delineation report shall be submitted by the applicant to USACE, with a request for preliminary jurisdictional determination.
- Authorization for fill or waters of the United States shall be secured from USACE and the RWQCB through the Clean Water Act Sections 401 and 404 permitting processes. In association with the Section 404 and prior to the issuance of any grading permit, Section 401 Water Quality Certification from the Central Valley RWQCB shall be obtained. For impacts on waters of the state that are not also waters of the United States and are therefore not covered by the 401 Water Quality Certification, the applicant shall apply to the RWQCB for Waste Discharge Requirements following the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Water Resources Control Board 2021). Any waters of the United States or waters of the state that are affected by the project shall be replaced on a no-net-loss basis in accordance with the applicable USACE and California Water Board mitigation standards in place at the time of construction.

- Prior to commencing activity that may divert the natural flow or otherwise alter the bed or bank, of any lake or stream on the project site, the applicant shall notify CDFW, through issuance of a Lake and Streambed Alteration Notification (notification). If CDFW determines, based on the notification, project activities trigger the need for a Lake and Streambed Alteration Agreement, the proponent shall obtain an agreement from CDFW before the activity commences. The applicant shall conduct project construction activities in accordance with the agreement, including implementing reasonable measures in the agreement necessary to protect fish and wildlife resources, when working within the bed or bank of waterways or in riparian habitats associated with those waterways. These measures may include but not be limited to demarcation of the construction area, biological monitoring, environmental awareness training for construction crews, and compensatory measures (e.g., restoration, long-term habitat management).
- Documentation of compliance with this mitigation measure and receipt of a Lake and Streambed Alteration Agreement from CDFW, as well as wetland permitting from USACE, shall be provided to El Dorado County before commencement of any project construction activities.

Significance after Mitigation

Implementation of Mitigation Measure 3.3-4 would reduce significant impacts on state and federally protected wetlands to a **less-than-significant** level by requiring permitting and compensation for unavoidable impacts on state or federally protected wetlands such that there is no net loss of these resources. Application of this mitigation measure to the project would be consistent with General Plan Objective 7.3.3 and associated Policies 7.3.3.1 and 7.3.3.2 or 7.3.3.5, Objective 7.3.4 and associated Policies 7.3.4.1 and 7.3.4.2, and Objective 7.4.2 and associated Policy 7.4.2.8.

Impact 3.3-5: Interfere with Wildlife Movement Corridors or Impede the Use of Wildlife Nurseries

Development of the project site would result in removal of natural habitat, which has been identified as an ECA. Natural habitat on the project site may also provide roosting habitat for common bat species (i.e., in large oak trees). However, the project site is surrounded by dense residential development and large roads and highways. As a result, the project site likely does not currently function as a significant wildlife nursery site or wildlife movement corridor. However, bird nesting colonies and bat roosts that may be considered wildlife nurseries may be present on the project site. Thus, prior to implementation of mitigation measures, the impact related to wildlife nurseries would be **significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

The project site is located within a modeled ECA, connecting natural landscape blocks to the south to undeveloped areas north and east of the project site. The valley oak woodland and valley foothill riparian habitats on the project site may provide roosting habitat potentially suitable for common bat species. However, based on the number and size of the trees on the project site, it is unlikely that the project site would support a large colony of common bats. Further, as discussed above in Impact 3.3-2, while implementation of the project may affect special-status birds and bats, mitigation measures, including preconstruction surveys and avoidance of active bird nests and bat roosts, would be implemented to reduce impacts to less than significant. These mitigation measures would also result in protection of active bat roosts that would be considered nursery sites.

While the project site contains natural habitat and may provide some wildlife nursery habitat and function as a movement corridor for some wildlife species, it is surrounded by residential development to the north and west and US 50 (including onramps and offramps) to the south. Silva Valley Parkway, which bisects the north and south portions of the project site, is a busy four-lane road. As documented in Section 3.11, "Noise and Vibration," existing ambient noise conditions for the project area range from 53.5 to 65.2 dBA L_{eq} (Table 3.11-8), and operations at the project site would not result in substantial increases in noise outside of the development area that would disrupt wildlife activities (Figure 3.11-2 and 3.11-3). Relatively undeveloped areas are present south of the project site, characterized by rural residences, creeks, streams, wetlands, and oak woodlands; and north of the project site, characterized by rural residences, oak woodlands, chaparral, creeks, streams, the American River, and Folsom Lake. However, US 50 presents a significant barrier to movement to the south and dense residential development and roads present a significant barrier to movement to the north. Therefore, it is unlikely that the project site currently functions as a critical habitat linkage for wildlife. Project activities are not expected to significantly impede wildlife

movement in the vicinity of the project site or the region. However, prior to implementation of mitigation measures, impacts on wildlife nursery sites would be **significant**.

Mitigation Measures

Mitigation 3.3-2e: Conduct Focused Surveys for Special-Status Birds, Nesting Raptors, and Other Native Nesting Birds and Implement Protective Buffers

Mitigation 3.3-2i: Conduct Focused Bat Surveys and Implement Avoidance Measures

Significance after Mitigation

Implementation of Mitigation Measures 3.3-2e and 3.3-2i would reduce potential impacts on nesting bird colonies and bat roosts that may be considered wildlife nursery sites to **less than significant** by requiring focused surveys for nesting birds and bat roosts and implementation of no-disturbance buffers around active nests and roosts. Application of these mitigation measures to the project would be consistent with General Plan Policy 7.4.2.8.

Impact 3.3-6: Conflict with Local Policies and Ordinances

Project implementation would include activities resulting in removal of oak trees and oak woodlands. The applicant will comply with the El Dorado County ORMP. Therefore, there would be **no impact** related to conflict with local policies and ordinances.

The following analysis applies to both the Costco project and the North Site Remainder Area.

The El Dorado County General Plan includes policies intended to protect aquatic habitat (e.g., wetlands), special-status species, and sensitive habitats (see Section 3.4.1, "Regulatory Setting"). Wetlands, riparian habitat, and valley oak woodlands are present on the project site, and special-status species occur or have potential to occur on the site. As discussed above for Impacts 3.3-1, 3.3-2, 3.3-3, and 3.3-4 and 3-3.5, although implementation of the project may affect special-status plants, special-status wildlife, sensitive natural communities, riparian habitat, and wetlands, mitigation measures shall be implemented to reduce impacts to less than significant. Therefore, there would be no conflict with General Plan policies protecting these resources.

The El Dorado County ORMP defines mitigation requirements for impacts on oak woodlands, individual native oak trees, and heritage trees; and also outlines El Dorado County's strategy for oak resource management and conservation (see Section 3.4.1, "Regulatory Setting"). Oak trees on the project site were surveyed in 2013, 2015, 2020, and 2025 (Helix 2025c). A total of 1.45 acres of valley oak woodland habitat were identified on the project site. A 0.35-acre portion of valley oak woodland is located along either side of the perennial drainage west of Clarksville Crossing on the South Site as well as ten protected oak trees (Helix 2025c). Five of the protected oaks on the project site are considered heritage trees: three valley oaks, one blue oak, and one interior live oak (Helix 2025c). Three additional trees (two valley oak and one interior live oak) are present on the North Site Remainder Area.

Project implementation will result in the removal of 0.35 acres of valley oak woodland, which is 24 percent of the total oak woodland on the project site. Additionally, five individual trees outside of the oak woodland canopy, including four heritage trees, are planned for removal on the project site. Three individual trees are present on the North Site Remainder Area and may be removed in the future. As described in Chapter 2.0, "Project Description," the applicant would comply with the tree protection requirements in El Dorado County ORMP. Therefore, there would be **no impact** related to conflict with local policies and ordinances.

Mitigation Measures

No mitigation is required for this impact.

3.4 CULTURAL RESOURCES

This section analyzes and evaluates the potential impacts of the project on known and unknown cultural resources. Cultural resources are defined as precontact or historic-era archaeological resources and historical resources. Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Archaeological resources are locations where human activity has measurably altered the earth or left deposits of precontact or historic-period physical remains (e.g., stone tools, bottles, former roads, house foundations). Precontact archaeological resources include sites and artifacts associated with the indigenous, non-Euro-American population prior to contact with people of European descent. Historic-era archaeological resources consist of artifacts and sites that date from Euro-American settlement of the region. Historical (or built-environment) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads, districts, or landscapes. A cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. Precontact and Native American resources of cultural and religious significance that are identified as Tribal Cultural Resources are addressed in Section 3.15, "Tribal Cultural Resources." This section describes the cultural setting of the project site, discusses known resources within the area, identifies the resource sensitivity of the site, discusses the relevant state and local regulatory considerations, and evaluates how implementation of the project may affect cultural resources that may be present.

Comment letters regarding archaeological and cultural resource concerns were received in response to the Notice of Preparation (see Appendix A). Comments related to tribal issues are addressed in Section 3.15, Tribal Cultural Resources.

3.4.1 Regulatory Setting

Federal, state, and local governments have developed laws and regulations designed to protect and preserve significant cultural resources that may be affected by actions that they undertake or regulate. The National Historic Preservation Act (NHPA) and CEQA are the basic federal and state laws governing the preservation of historical and archeological resources of national, regional, state, and/or local or tribal significance within the state.

FEDERAL

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic properties. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

The formal criteria (36 Code of Federal Regulations 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:

   Criterion A Is associated with events that have made a significant contribution to the broad patterns of history (events).

   Criterion B Is associated with the lives of persons significant in the past (persons).

Criterion C Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

Criterion D Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

For a property to retain and convey historic integrity it must possess most of the seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Location is the place where the historic property was constructed or the place where a historic event occurred. Integrity of location refers to whether the property has been moved since its construction. Design is the combination of elements that create the form, plan, space, structure, and style of a property. Setting is the physical environment of a historic property that illustrates the character of the place. Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. This is an intangible quality evoked by physical features that reflect a sense of a past time and place. Association is the direct link between the important historic event or person and a historic property. Continuation of historic use and occupation help maintain integrity of association.

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee consideration in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

The National Register Bulletin series was developed to assist evaluators in the application of NRHP criteria. For example, National Register Bulletin #36 provides guidance in the evaluation of archaeological site significance. If a property cannot be placed within a particular theme or time period, and thereby lacks "focus," it will be unlikely to possess characteristics which would make it eligible for listing in the NRHP. Evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, and flumes) are considered in terms of four related criteria that account for specific elements that define engineering and construction methods of linear features: (1) size and length, (2) presence of distinctive engineering features and associated properties, (3) structural integrity, and (4) setting. The highest probability for NRHP eligibility exists in the intact, longer segments, where multiple criteria coincide.

National Historic Preservation Act

The NHPA established the NRHP and the President's Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers to carry out some of the functions of the NHPA. Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the NHPA directs the following:

> [t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP.

Section 106 also affords the ACHP a reasonable opportunity to comment on the undertaking (16 USC 470f).

Title 36 of the Code of Federal Regulations, Part 800 (36 CFR 800) implements Section 106 of the NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources with important cultural values; to determine whether they may be adversely affected by a proposed undertaking; and the process for eliminating, reducing, or mitigating the adverse effects.

Title 36 of the Code of Federal Regulations, Section 60.4, defines criteria for determining eligibility for listing in the NRHP. The significance of cultural resources identified during an inventory must be formally evaluated for historic significance in consultation with the ACHP and the California State Historic Preservation Officer to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Regarding criteria A through D of Section 106, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, cultural resources, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (36 CFR 60.4):

A. Are associated with events that have made a significant contribution to the broad patterns of our 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 be likely to yield, information important in prehistory or history.

The 1992 amendments to the NHPA enhance the recognition of tribal governments' roles in the national historic preservation program, including adding a member of an Indian tribe or Native Hawaiian organization to the ACHP.

The NHPA amendments:

- Clarify that properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined eligible for inclusion in the National Register
- Reinforce the provisions of the Council's regulations that require the federal agency to consult on properties of religious and cultural importance.

The 1992 amendments also specify that the ACHP can enter into agreement with tribes that permit undertakings on tribal land and that are reviewed under tribal regulations governing Section 106. Regulations implementing the NHPA state that a federal agency must consult with any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by an undertaking.

STATE

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are also listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historical resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

Criterion 1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

Criterion 2. Is associated with the lives of persons important to local, California, or national history.

Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.

Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852[d][2]).

The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest.

California Environmental Quality Act

Under CEQA (PRC Section 21000 et seq.), public agencies must consider the effects of their actions on both historical resources and unique archaeological resources. Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; State CEQA Guidelines Sections 15064.5[a] and [b]). The term embraces any resource listed in or recommended eligible for listing in the CRHR. As noted above, CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest. Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

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

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

3) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).

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

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be "historical resources" for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC Section 5024.1, and 14 CCR 4850). Unless a resource listed in a survey has been demolished

or has lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource potentially eligible for the CRHR.

In addition to assessing whether historical resources potentially impacted by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the CRHR criteria as discussed previously, prior to making a finding as to a proposed project's impacts to historical resources (PRC Section 21084.1, and 14 CCR 15064.5(a)(3)). As noted above, the fact that a resource is not listed or determined to be eligible for listing does not preclude a lead agency from determining that it may be a historical resource (PRC Section 21084.1, and 14 CCR 15064.5(a)(4)).

Unique Archaeological Resources

CEQA also distinguishes between two classes of archaeological resources: archaeological sites that meet the definition of a historical resource, as described previously, and unique archaeological resources. PRC Section 21083.2(g) states that "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

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

Public Resources Code Section 21083.2

Treatment options under PRC Section 21083.2(b) to mitigate impacts to archaeological resources include activities that preserve such resources in place in an undisturbed state. PRC Section 21083.2 states:

(a) As part of the determination made pursuant to Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact report shall address the issue of those resources. An environmental impact report, if otherwise necessary, shall not address the issue of nonunique archaeological resources. A negative declaration shall be issued with respect to a project if, but for the issue of nonunique archaeological resources, the negative declaration would be otherwise issued.

(b) If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:

(1) Planning construction to avoid archaeological sites.

(2) Deeding archaeological sites into permanent conservation easements.

(3) Capping or covering archaeological sites with a layer of soil before building on the sites.

(4) Planning parks, greenspace, or other open space to incorporate archaeological sites.

(c) To the extent that unique archaeological resources are not preserved in place or not left in an undisturbed state, mitigation measures shall be required as provided in this subdivision.

(d) Excavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project.

(e) In no event shall the amount paid by a project applicant for mitigation measures required pursuant to subdivision (c) exceed the following amounts:

(1) An amount equal to one-half of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a commercial or industrial project.

(2) An amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a housing project consisting of a single unit.

(3) If a housing project consists of more than a single unit, an amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of the project for the first unit plus the sum of the following:

(A) Two hundred dollars ($200) per unit for any of the next 99 units.

(B) One hundred fifty dollars ($150) per unit for any of the next 400 units.

(C) One hundred dollars ($100) per unit in excess of 500 units.

(f) Unless special or unusual circumstances warrant an exception, the field excavation phase of an approved mitigation plan shall be completed within 90 days after final approval necessary to implement the physical development of the project or, if a phased project, in connection with the phased portion to which the specific mitigation measures are applicable. However, the project applicant may extend that period if he or she so elects. Nothing in this section shall nullify protections for Indian cemeteries under any other provision of law.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the Native American Heritage Commission (NAHC), which notifies and has the authority to designate the most likely descendant (MLD) of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Health and Safety Code, Sections 7050.5

Section 7050.5 of the California Health and Safety Code specifies protocols to address any human remains that may be discovered. The code states:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in section 5097.98 of the Public Resources Code.

If human remains are determined to be those of a Native American, the coroner must contact NAHC.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to be followed if human remains are unexpectedly discovered on nonfederal land. The disposition of Native American burials falls within the jurisdiction of NAHC. Section 5097.5 of the code states:

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

Senate Bill 297

SB 297 addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction; and establishes the NAHC to resolve disputes regarding the disposition of such remains. The provisions of SB 297 have been incorporated into Section 15064.5(e) of the CEQA Guidelines.

LOCAL

El Dorado County General Plan

The Conservation and Open Space Element included in the County General Plan (last amended 2019) contains the following goals, objectives, and policies related to cultural resources that are relevant to the proposed project:

Conservation and Open Space Element

Goal 7.5: Cultural Resources: Ensure the preservation of the County's important cultural resources.

- **Objective 7.5.1:** Protection of Cultural Heritage - Creation of an identification and preservation program for the County's cultural resources.
  - **Policy 7.5.1.1.** The County shall establish a Cultural Resources Ordinance. This ordinance shall provide a broad regulatory framework for the mitigation of impacts on cultural resources (including historic, precontact and paleontological resources) by discretionary projects. This Ordinance should include (but not be limited to) and provide for the following:
    - Appropriate (as per guidance from the Native American Heritage Commission) Native American monitors to be notified regarding projects involving significant ground-disturbing activities that could affect significant resources.
    - A 100-foot development setback in sensitive areas as a study threshold when deemed appropriate.
    - Identification of appropriate buffers, given the nature of the resources within which ground-disturbing activities should be limited.
    - A definition of cultural resources that are significant to the County. This definition shall conform to (but not necessarily be limited to) the significance criteria used for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) and Society of Vertebrate Paleontology.
    - Formulation of project review guidelines for all development projects.
    - Development of a cultural resources sensitivity map of the County.
  - **Policy 7.5.1.2:** Reports and/or maps identifying specific locations of archaeological or historical sites shall be kept confidential in the Planning Department but shall be disclosed where applicable.
  - **Policy 7.5.1.3:** Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.
  - **Policy 7.5.1.4:** Promote the registration of historic districts, sites, buildings, structures, and objects in the National Register of Historic Places and inclusion in the California State Office of Historic Preservation's California Points of Historic Interest and California Inventory of Historic Resources.

- **Policy 7.5.1.6:** The County shall treat any significant cultural resources (i.e., those determined California Register of Historical Resources/National Register of Historic Places eligible and unique paleontological resources), documented as a result of a conformity review for ministerial development, in accordance with CEQA standards.

- **Objective 7.5.2:** Visual Integrity - Maintenance of the visual integrity of historic resources.
  - **Policy 7.5.2.4:** The County shall prohibit the modification of all National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) listed properties that would alter their integrity, historic setting, and appearance to a degree that would preclude their continued listing on these registers. If avoidance of such modifications on privately owned listed properties is deemed infeasible, mitigation measures commensurate with NRHP/CRHR standards shall be formulated in cooperation with the property owner.
  - **Policy 7.5.2.5:** In cases where the County permits the demolition or alteration of an historic building, such alteration or new construction (subsequent to demolition) shall be required to maintain the character of the historic building or replicate its historic features.

- **Objective 7.5.3:** Recognition of Prehistoric/Historic Resources - Recognition of the value of the County's prehistoric and historic resources to residents, tourists, and the economy of the County, and promotion of public access and enjoyment of prehistoric and historic resources where appropriate.

3.4.2 Environmental Setting

NATIVE AMERICAN PRECONTACT HISTORY

California archaeology can be described as a series of patterns—an essentially non-temporal, integrative cultural unit–the way of general life shared by people within a given geographic region. These patterns include (Helix 2025):

- Windmiller Pattern or Early Horizon (3000 to 1000 before common era [BCE]),
- Berkeley Pattern or Middle Horizon (1000 BCE to CE 500), and,
- Augustine Pattern or Late Horizon (500 to historic period).

Windmiller Pattern or Early Horizon (3000 to 1000 BCE)

Characterized by the Windmiller Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests the exploitation of numerous terrestrial and aquatic species. Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on the acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicates an extensive trade network that may represent the arrival of Utian populations into central California. Also indicative of this period are rectangular *Haliotis* and *Olivella* shell beads and charmstones that usually were perforated (Helix 2025).

Berkeley Pattern or Middle Horizon (1000 BCE to 500 CE)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. The Berkeley Pattern may have marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on

hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, the practice of spreading ground ochre over the burial was common at this time. Grave goods during this period were generally sparse and typically included only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles occasionally were present, which suggest the religious or ceremonial significance of the individual. During this period, larger populations are suggested by the number and depth of sites compared with the Windmiller Pattern. According to some archaeologists, the Berkeley Pattern reflects the gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis (Helix 2025).

Augustine Pattern or Late Horizon (500 to Historic Period)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology, and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of Haliotis ornaments of many elaborate shapes and forms. Burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation. Judging from the number and types of grave goods associated with the two types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. The Augustine Pattern may represent the expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of precontact populations. Although debate continues over a single model or sequence for central California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

The oldest archaeological sites in the vicinity of the project area are few in number and consist of evidence of occupations by groups, which made use of lithic tools associated with the Lower Berkeley Pattern of the San Francisco Bay and the Windmiller Pattern of the Delta area, which date to between 3,000 and 500 BCE. Beyond this, however, the archaeology of the foothill margins along the east slope of the Central Valley and in Solano County is poorly understood and under-researched. Despite that, it is suggested through linguistic data that the ancestors of the cultural groups encountered in the project area by the earliest European explorers moved into the area around 700 CE (Helix 2025).

HISTORIC SETTING

Clarksville History

Following the initial discovery of gold at Sutter's Mill, Coloma, in January 1848, two members of the disbanded Mormon Battalion found gold on the South Fork of the American River about a mile above its confluence with the North Fork. The March 1848 discovery at “Mormon Island” actually started the gold rush. The discoveries spurred thousands of immigrants to California. By May 1848, there were only a few hundred working at shallow placer mines. By the end of 1848, there were 8,000 to 10,000. During the following year, almost 40,000 followed routes by land and sea to the gold fields. The early mining focused on the river placers. Deposits of gravel along the river meanders were an initial attraction. Mining camps arose at these river “bars.” Early placer mining expanded from Coloma to Weber Creek and then to the rich creek gravels in the vicinity of present-day Placerville. Fueled by discoveries at Coloma, Placerville, and Folsom, soon nearly every ravine in the region was mined (Helix 2025).

The earliest settlement in the project area vicinity was Mormon Tavern. There is some discrepancy as to the original owner of the inn. It was established either in 1848 by a Mormon immigrant named “Morgan,” or in 1849 by another Mormon, Asabel A. Lathrop. Mormon Tavern was situated at the foot of the first steep grade into the Sierra foothills from Sacramento. As the earliest settlement in the locality, Mormon Tavern lent its name to the steep grade beyond it

and to the toll road that climbed the grade (also known as the old Bass Lake Road). Mormon Tavern was a stage stop during the 1850s. During the short-lived Pony Express, Mormon Tavern also served as a changing station for the horses (Helix 2025).

Most of what is now the project site was first deeded to the Central Pacific Railroad. On the west side of the project site was William Daly's homestead. On the northeast was William Johnson's homestead. Clarksville, established one-eighth mile southeast of the project site and one-half mile east of Mormon Tavern, began as a mining camp and way station. In the early years of the gold rush, Clarksville was known as "Clarkson's" or "Clarkson Town." The town was apparently named after David P. Clark who, along with his wife and daughter, settled there in 1850. The mining camp was situated near the junction of the freighting road to the mines and the stagecoach road that connected Rhoad's Diggings, Prairie City, and Sacramento. The freight wagon road was a separate route owing to the fact that freight wagons were much slower than stagecoaches. The freighting route connected Clarksville with Placerville to the east and White Rock Springs and Mill's Station to the west (Helix 2025).

The early period of mining was confined to the wet seasons of winter and spring when sufficient water was available in the local creeks. Miners constructed small, temporary camps near the diggings along the creeks and gullies. Archaeologist Susan Lindstrom indicated that Carson, Screech Owl, and Plunket creeks were all seasonal; the seasonal availability of water needed for mining along these creeks and their tributaries was supplemented by ditches tapping the system connected with the American Reservoir (Bass Lake), which was constructed in 1856 (Helix 2025).

By the 1860s, most of the region surrounding Clarksville was dry farmed and winter grazed by sheep or cattle. The land around Clarksville was rocky and clearing fields was necessary to allow the grass to grow and to relieve difficulty in mowing. Ranchers would extend brush fences or, later, barbed wire from the rock walls to create acreage. The fences functioned as field divisions, section lines, and corrals. Sheep were introduced to the semi-arid foothills around Clarksville in the 1850s. The peak of sheep raising was probably reached by the 1860s and 1870s. The California Trespass Act of 1850 required farmers to fence their crops to keep out grazing animals. By the late 1860s, however, the burden of fencing was placed on the ranchers who kept livestock. Many of the rock fences found in the region may date to this period and later (Helix 2025).

The period from 1870 to 1960 was characterized by a consolidation of land holdings and the transhumance or seasonal movement of livestock to greener pastures in the Sierra. By the early 1870s, it was virtually impossible to earn a living from the smaller parcels of land that once dotted the countryside around Clarksville. The early mixed economy of mining, ranching and other activities was replaced by the focused strategy of large-scale cattle and sheep ranching (Helix 2025).

The 1960s brought significant changes to the Clarksville viewshed. U.S. Highway 50, which by then bypassed Clarksville, was widened into a modern divided freeway. High voltage 115kV lines parallel the highway. During the 1965 construction of additional highway lanes and Tong Road, construction equipment graded at least a portion of the area where the Richmond-Hall graves were reputedly located (Helix 2025).

RECORDS SEARCHES, AND SURVEYS

On March 29, 2013, a California Historical Resources Information System (CHRIS) records search of the project site was conducted at the North Central Information Center (NCIC), at California State University, Sacramento. On February 5, 2018, a supplemental CHRIS records search was conducted for the project site and a 1-mile radius. Because the project area was revised, on January 14, 2025, staff at the NCIC conducted a records search for the current project site and a 0.5-mile radius.

The following information was reviewed as part of the records search efforts:

- NRHP and CRHR,
- California Office of Historic Preservation Historic Property Directory,
- California Inventory of Historic Resources,

- California State Historic Landmarks,
- California Points of Historical Interest, and
- Historic properties reference map.

The 2018 records searches determined that six previously recorded archaeological sites are located within the project site and an additional 57 located within 1 mile of the project site. The 2025 update revealed two additional cultural resources within a one-half-mile radius of the project site. The six sites within the project site, described further below, are a fieldstone reinforced fence segment, a precontact bedrock milling feature, the Fitch House Site, a pile of quarried rock associated with the Finch House Site, the Sacramento to Placerville Road segment of Lincoln Highway, and the Mormon Hill Historic District. There were no previously recoded built environment features.

The project site was originally surveyed in 2013; in 2018 known archaeological sites were revisited. On October 15, 2020, a pedestrian survey was conducted for the approximately 2-acre portion of the project's south site that had not been addressed by previous surveys. The survey consisted of a pedestrian inspection, with the surveyors walking 10-meter-wide intervals to ensure maximum ground coverage. No precontact or historic-era artifacts or features were found during the 2020 survey. On January 16, 2025, a qualified archaeologist surveyed the approximately 1.42-acre portion of expanded project site that had not been addressed by previous surveys. Ground visibility ranged from 0 to approximately 40 percent due to heavy oak duff and overgrown vegetation. No precontact or historic-era artifacts or features were found during the 2025 survey.

Archaeological Sites

P-09-00016

The site consists of the remnants of an east-west bearing fieldstone reinforced fence. The linear resource was first recorded in 1987 and is made up of a single course of stones appearing at regular intervals where barbed-wire posts were once place. All posts have since been removed and evidence of the remnant stone piles that once supported them is scant. In a June 27, 2012 letter from the US Army Corps of Engineers (USACE) to the State Historic Preservation Officer (SHPO), the USACE determined that P-09-00016 was a non-contributing resource in the Mormon Hill Historic District. In a December 2012 Memorandum of Agreement, the SHPO concurred with the USACE regarding the fence's ineligibility for the NRHP. As a result, P-09-000016 remains as an isolated, ubiquitous landscape feature that does not have any specific, important historical associations that would support its individual eligibility for NRHP or CRHR listing and is therefore not a resource under CEQA. As described in Section 3.4.1, "Regulatory Setting," CRHR includes resources listed in or formally determined eligible for listing in the NRHP.

P-09-00017

This minor archaeological feature is a single shallow bedrock mortar hole located on a greenstone outcrop. The cupule measures 9 centimeters (cm) by 10 cm and is 2 cm deep. No artifacts have been found in association with the feature. In 2013 a single shovel test pit adjacent to the outcrop revealed no artifacts or cultural deposits. Inspection of nearby backdirt from gophers and/or other burrowing animals was also negative. In a June 2012 letter from the USACE to the SHPO, the USACE recommended that P-09-00017 was not eligible for the NRHP as an individual resource or as a contributing resource to the Mormon Hill Historic District. The SHPO concurred with these determinations in an August 2012 letter. This feature was not located during the 2018 survey. For these reasons, it is not eligible for NRHP or CRHR listing and is therefore not a resource under CEQA. As described above, CRHR includes resources listed in or formally determined eligible for listing in the NRHP.

P-09-00646 and P-09-05361

The Fitch House Site (P-09-00646) was originally recorded as the remains of a 1920s residential building including an associated garden and other features in 1987 and additional elements were added in 1992. Site records for all elements were updated subsequently in 2010 and 2013. Features 4, 6, and 7 are within the project site. Feature 4 is a circular concrete well with timbers. Feature 6 was described as a locally quarried rock pile measuring 12 feet by 5 feet by 3 feet high. It was subsequently documented as P-09-05361 with some disturbance to the resource noted by that time. Feature 7 is a linear north-south bearing, rock reinforced, split-rail and barbed-wire fence that marks the

eastern boundary of the historical Fitch House Site. In 2003 the Fitch residence site was evaluated and recommended not eligible for the NRHP and CRHR. In 2004, the Albert Fitch House and features were determined ineligible for the NRHP as an individual resource and as a contributing resource to the Mormon Hill Historic District by consensus between USACE and the SHPO.

P-09-00809

The primary number "P-09-00809" has been assigned to more than one historic route between Sacramento and Placerville. The specific road segment evaluated here is associated with an old fence line remnant that follows the road on its east side from the north side of Tong Road northeast to the west edge of a hill where the road and the fence line remnant tum east and end at the east boundary of the project site. Modem traffic over the old road trace has literally made it impossible to distinguish the old from the new. The southern portion of the trace, while not impacted by modern traffic, is so eroded that it is difficult to distinguish from the surrounding landscape. The USACE recommended that the road segment was a non-contributing resource to the Mormon Hill Historic District. In a December 2012 Memorandum of Agreement, the SHPO concurred with the USACE regarding the road segment's ineligibility for the NRHP. During the 2018 site visit, very little visible trace of the road remained. For these reasons, it is not eligible for NRHP or CRHR listing and is therefore not a resource under CEQA. As described above, CRHR includes resources listed in or formally determined eligible for listing in the NRHP.

P-09-01670

The Mormon Hill Historic District contains remains associated with both the Gold Rush-era and late 19th century agricultural development. Its key characteristics include economic dependence on the Sacramento to Placerville transportation corridor, the Mormon Tavern, the town of Clarksville, eight large ranch complexes, mining camps, transitional mining claims and homesteads, and the remains of the Eureka Ditch. Mormon Hill Historic District encompasses the entire project site and surrounding area, however. none of the six archaeological sites described above are considered contributing resources to the Mormon Hill Historic District. SHPO recommended further evaluation and review. Because the boundaries of the Mormon Hill District encompass numerous unevaluated resources outside the project site, evaluation, and review of the district as a whole exceeded the scope of the studies for this project.

3.4.3 Impacts and Mitigation Measures

METHODOLOGY

The impact analysis for archaeological and historical resources is based on the findings and recommendations of the *Costco El Dorado Hills Project Cultural Resources Assessment* (Helix 2025). The analysis is informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources.

PRC Section 21083.2(g) defines a "unique archaeological resource" as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following CRHR-related criteria: (1) that it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) that it as a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) that it is directly associated with a scientifically recognized important prehistoric or historic event or person. An impact on a resource that is not unique is not a significant environmental impact under CEQA (State CEQA Guidelines Section 15064.5[c][4]). If an archaeological resource qualifies as a resource under CRHR criteria, then the resource is treated as a unique archaeological resource for the purposes of CEQA.

For the purposes of the impact discussion, "historical resource" is used to describe built-environment historic-period resources. Archaeological resources (both prehistoric and historic-period), which may qualify as "historical resources" pursuant to CEQA, are analyzed separately from built-environment historical resources.

THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are used to determine the significance of a project's environmental effects. Per Section 15064.7 of the CEQA Guidelines, a threshold is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant and compliance with normally means the effect will be determined to be less than significant. Based on Appendix G of the State CEQA Guidelines, the project would result in a significant impact on cultural resources if it would:

- cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the State CEQA Guidelines;
- cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines; or
- disturb any human remains, including those interred outside of formal cemeteries.

ISSUES NOT DISCUSSED FURTHER

As described above, no built environment features that would qualify as historical resources were identified on the project site, either from the CHRIS records search or any of the pedestrian surveys. Therefore, project construction and operation would have no impact on historical resources. This issue is not analyzed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources

Project-related ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources pursuant to Section 15064.5. This would have a **significant** impact.

The following analysis applies to both the Costco project and the North Site Remainder Area.

The Mormon Hill Historic District (P-09-001670) encompasses the entire Costco project site, the North Site Remainder Area, and surrounding area but has not been fully evaluated for NRHP/CRHR significance. Five other known archaeological sites within the project site have been determined to be ineligible for listing the NRHP and/or CRHR and are not considered resources for purposes of CEQA. These five archaeological sites have also been determined through concurrence with SHPO to be non-contributing elements of the potential historic district. Therefore, project activities affecting these five sites will not affect the ability of the potential Mormon Hill Historic District to qualify for NRHP- or CRHR-listing.

Additionally, because these five archaeological sites are non-contributing elements, the project site itself would not be considered a contributor to the potential Mormon Hill Historic District. Therefore, development of the entirety of the project site would not affect the ability of the potential historic district to qualify for NRHP- or CRHR-listing.

Nevertheless, components of the project that require earth-moving and excavation (including off-site transportation improvements to the intersections of Silva Valley Parkway/Entrada Lane and White Rock Road/Valley View Parkway-Vine Street) may result in the discovery of previously undisturbed archaeological deposits. Because project-related ground-disturbing activities could result in the damage or destruction of yet undiscovered significant archaeological resources pursuant to Section 15064.5, the impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.4-1a: Develop and Implement a Worker Environmental Awareness Training

The applicant shall retain a qualified professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeologists to prepare a worker environmental awareness training. Training shall be provided to all construction personnel and supervisors who will have the potential to encounter and alter archaeological and paleontological resources on the project site and off-site transportation improvements. A copy of the worker environmental awareness training shall be provided to the County before construction activities begin. The topics to be addressed in the worker environmental awareness training will include, at a minimum:

- types of cultural resources located on the project site,
- types of evidence that indicates cultural resources might be present (e.g., glass shards, lithic scatters),
- what to do if a worker encounters a possible resource,
- what to do if a worker encounters animal bones or possible human bones, and
- repercussions for removing or intentionally disturbing archaeological resources.

Mitigation Measure 3.4-1b: For All Ground-Disturbing Construction Activities, Halt Ground Disturbance upon Discovery of Subsurface Archaeological Features

If any precontact or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits are discovered during construction, all ground-disturbing activity within 100 feet of the resources shall be halted, and a qualified professional archaeologist shall be retained to assess the significance of the find. If the qualified archaeologist determines the archaeological material to be Native American in nature, the applicant and the County shall contact the appropriate Native American tribe(s) for their input on the preferred treatment of the find. If the find is determined to be significant by the archaeologist (i.e., because it is determined to constitute a unique archaeological resource), the archaeologist shall develop, and the applicant shall implement appropriate procedures to protect the integrity of the resource and ensure that no additional resources are affected. Procedures could include but would not necessarily be limited to preservation in place (which shall be the preferred manner of mitigating impacts on archaeological sites), archival research, subsurface testing, or contiguous block unit excavation and data recovery (when it is the only feasible mitigation, and pursuant to a data recovery plan).

Significance after Mitigation

Implementation of Mitigation Measures 3.4-1a and 3.4-1b would reduce impacts associated with archaeological resources to a **less-than-significant** level by providing training to construction personnel; requiring the performance of professionally accepted and legally compliant procedures in the event of a discovery; as well as the protection of any previously undocumented significant archaeological resources. Application of these mitigation measures to the project would be consistent with General Plan Objective 7.5.1 and associated Policies 7.5.1.3 and 7.5.1.6 and Objective 7.5.2. and associated Policy 7.5.2.4.

Impact 3.4-2: Disturb Human Remains

Based on documentary research, no evidence suggests that any precontact or historic-period marked or un-marked human interments are present within or in the immediate vicinity of the project site. However, ground-disturbing construction activities could uncover previously unknown human remains. Compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 would make this impact **less than significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

Based on documentary research, no evidence suggests that any prehistoric or historic-period marked or un-marked human interments are present within or in the immediate vicinity of the project site. However, the location of grave

sites and Native American remains can occur outside of identified cemeteries or burial sites. Therefore, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the project site as well as at off-site transportation improvements identified in Chapter 2, "Project Description," and could be uncovered by project-related construction activities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.

These statutes require that, if human remains are discovered, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the appropriate County coroner shall be notified immediately. If the remains are determined by the coroner to be Native American, NAHC shall be notified within 24 hours and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the NAHC-designated Most Likely Descendant, and the landowner shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments, if present, are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.94 and are included as Mitigation Measure 3.17-1c in the Tribal Cultural Resources section.

Compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.5 ENERGY

This section was prepared pursuant to State CEQA Guidelines Section 15126 and Appendix F and G, which require that EIRs include a discussion of the potential energy impacts of projects. The analysis considers whether the project would result in inefficient, wasteful, and unnecessary consumption of energy and is based on the EDH Costco Project Energy Technical Report and the EDH Costco Project North Site Remainder Area Technical Report prepared by Ramboll which are provided in Appendix D.

Energy related to the project would include energy directly consumed for appliances such as water heaters, heating and cooling units, refrigerators, ovens, and lighting. Indirect energy consumption would be associated with the generation of electricity at power plants. Transportation-related energy consumption includes the use of fuels and electricity to power EV chargers and employee, customer, and delivery trips. Energy would also be consumed by equipment and vehicles used during project construction and routine maintenance activities.

Comments in response to the notice of preparation (NOP) were received that identified concerns regarding operation energy impacts of the project, lack of renewable energy generation on-site, and no provision of energy facilities to accommodate decarbonization. These issues are addressed below as well as in Section 3.7, "Greenhouse Gases and Climate Change." Comments received on the NOP are provided in Appendix A.

3.5.1 Regulatory Setting

FEDERAL

Energy Policy and Conservation Act

Appliance and equipment efficiency standards have served as one of the nation's most effective policies for improving energy efficiency. The first standards were enacted at the state level in California in 1974. At the national level, the Energy Policy and Conservation Act was enacted in 1975, and established a federal program consisting of test procedures, labeling, and energy targets for consumer products. EPCA was amended in 1979 and directed the Department of Energy to establish energy conservation standards for consumer products.

Energy Policy Act of 2005

The Energy Policy Act of 2005, implemented by the US Department of Energy, was intended to establish a comprehensive, long-term energy policy. The Energy Policy Act addresses energy production in the United States, including oil, gas, coal, and renewable forms of energy, and energy efficiency and tax incentives. Energy efficiency and tax incentive programs consist of credits for the construction of new energy-efficient homes and the production or purchase of energy-efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of GHGs.

Construction Equipment Emission Standards

The Code of Federal Regulations established tiered emissions standards for construction equipment (i.e., nonroad diesel engines) to phase in cleaner-burning equipment that will reduce nitrogen oxides (NO_X) and particulate matter emissions from exhaust. After 2014, all construction equipment manufactured in the United States is required to meet the highest tier of emission standards, Tier 4. The US Environmental Protection Agency (EPA) oversees implementation of these regulations (CFR Chapter 40, Parts 1039, 1065, and 1068).

Congressional Actions

Public Law No. 119-15

On June 12, 2025, Public Law 119-15, enacting House Joint Resolution 87, was signed into law. The law used the Congressional Review Act to nullify EPA's rule that had granted California a waiver to enforce stricter emissions

standards for heavy-duty vehicles under the CAA. The disapproved rule included programs such as the Advanced Clean Trucks regulation and zero-emission requirements for airport shuttles. Passed under the Congressional Review Act, the law prevents EPA from implementing or reissuing the same or similar rules without new congressional authorization. This effectively blocks California, and other states that follow its standards, from enforcing these specific vehicle emission and warranty regulations.

Public Law No. 119-16

On June 12, 2025, Public Law No. 119-16, enacting House Joint Resolution 88, became law. The law also relied on the Congressional Review Act to void the EPA's December 2024 waiver under the CAA that allowed California to implement and enforce the Advanced Clean Cars (ACC) II regulation. ACC II included a zero-emission vehicle (ZEV) mandate targeting 100 percent new light-duty ZEV sales by 2035. P.L. No. 119-16 marks the first ever occurrence that waivers under the CAA have been revoked under the Congressional Review Act. The implications of this law on the state's capability to enforce its independent fuel economy standards are uncertain at this time, as the California Attorney General is pursuing legal action challenging P.L. No. 119-16. Whether this action will be successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the ACC II regulation during the legal process.

Fuel Economy Standards

EPA and National Highway Traffic Safety Administration (NHTSA) set the Corporate Average Fuel Economy Standards (CAFE) standards to improve the average fuel economy and reduce fossil fuel consumption and associated GHG emissions generated by cars and light-duty trucks. The most recent update was in 2024, and the CAFE standards were finalized for model years (MYs) 2027 through 2031. The final CAFE standards increase at a rate of 2 percent per year for passenger cars in MYs 2027–2031 and 2 percent per year for light trucks in MYs 2029–2031. The final HDPUV fuel efficiency standards increase at a rate of 10 percent per year in MYs 2030–2032 and 8 percent per year in MYs 2033–2035 (NHTSA 2024).

NHTSA and EPA set fuel efficiency and greenhouse gas (GHG) standards for medium- and heavy-duty trucks. In 2011, EPA and NHTSA finalized a joint rule that established a national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles. This rule—called the Phase 1 standards—requires fuel efficiency standards for engines in MYs 2014 through 2018 (40 Code of Federal Regulations [CFR] Parts 85, 86, 1036, 1037, 1065, 1066, and 1068). In 2016, EPA and NHTSA adopted the Phase 2 standards, which require fuel efficiency standards for engines in MYs 2018 through 2027 (40 CFR Parts 9, 22, 85, 86, 600, 1033, 1036, 1037, 1039, 1042, 1043, 1065, 1066, and 1068) (EPA 2016).

STATE

Executive Order N-79-20

Executive Order (EO) N-79-20 directs the state to scale out the sales of internal combustion engines to 100 percent ZEV sales by 2035. This target helps put the state on a path to carbon neutrality by 2045. By setting the target year to 2035, EO N-79-20 provides time for automakers to scale up and market new ZEVs, as well as further impetus for the providers of charging and refueling infrastructure, electric utilities, and others to plan for and support the increasing consumer demand for these vehicles.

Advanced Clean Cars Program

AB 1493 of 2002 (known as Pavley I, Chapter 200, Statutes of 2002) provided the nation's first GHG standards for automobiles. AB 1493 required the California Air Resources Board (CARB) to adopt vehicle standards that lowered GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards referred to as the ACC Program's Low Emission Vehicle III Regulation was adopted for vehicle model years 2017–2025 in 2012 (13 California Code of Regulations [CCR] Section 1900 et seq.).

The ACC Program also includes the Zero Emission Vehicle Program and the Clean Fuels Outlet Regulation. The Zero Emission Vehicle Program is designed to achieve California's long-term emission reduction goals by requiring

manufacturers to offer for sale specific numbers of ZEVs, which include battery electric, fuel cell, and plug-in hybrid electric vehicles. The Clean Fuels Outlet regulation is intended to ensure that fuels, such as electricity and hydrogen, are available to meet the fueling needs of new advanced technology vehicles as they come to market. The ACC II Program was adopted by CARB in August 2022 and provides the regulatory framework for ensuring the sales requirement goal of EO N-79-20 to ultimately reach 100 percent ZEV sales in the state by 2035. EPA granted CARB its California's CAA waiver request on December 18, 2024.

As identified above, Public Law No. 119-16 was signed by the President on June 12, 2025, to formally rescind the state's ability to enforce the ACC II regulation. While the implications of this federal resolution on the state's capability to enforce independent fuel economy standards are uncertain at this time, the California Attorney General has filed a lawsuit against the federal government challenging House Joint Resolution 88. Whether this action will be successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the ACC II regulation during the legal process.

Advanced Clean Trucks

The Advanced Clean Trucks regulation was adopted by CARB on April 28, 2023. The Advanced Clean Trucks regulation sets requirements for the transition of diesel trucks and vans to zero-emission trucks, which began in 2024. Per the Advanced Clean Trucks Regulation, manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales are required to be 55 percent of Class 2b–3 truck sales, 75 percent of Class 4–8 straight truck sales, and 40 percent of truck tractor sales (EPA 2024). CARB estimates that the regulation will lower related premature deaths (CARB 2020). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, CARB expects that risks associated with exposure to the emissions will also be reduced. EPA granted the waiver request for the Advanced Clean Trucks Regulation on April 6, 2023 (EPA 2023). As noted above, Public Law No. 119-15 rescinds the waiver acquired from EPA to implement the Advanced Clean Trucks regulation; however, at the time of writing this Draft EIR, the California Attorney General has litigated this federal action and it assumed that the state will continue to implement the regulation until otherwise known.

Advanced Clean Fleets

CARB's 2022 Advanced Clean Fleets regulation was developed to reduce diesel particulate matter through the transition of medium- and heavy-duty trucks to become fully electric by 2045. In January 2025, California withdrew its request for a waiver and authorization for the addition of the Advanced Clean Fleets regulation to its emissions control program (CARB 2025a). CARB is not enforcing the existing portions of the Advanced Clean Fleets regulation that require a federal waiver or authorization, such as the portions of the Advanced Clean Fleet regulation that apply to high-priority and drayage fleets. However, not all elements of the Advanced Clean Fleets regulation require a federal waiver or authorization (CARB 2025a). State and local government fleets will still be required to be fully electric by 2045. On September 25, 2025, CARB held a board meeting during which it considered amendments to the Advanced Clean Fleets regulation, including a repeal of requirements affecting federal and private fleets, and an amendment to the Low Carbon Fuel Standard regulation. At this meeting, CARB proposed Resolution 25-9 "*Proposed Amendments to the Advanced Clean Fleets and Low Carbon Fuel Standard Regulations*," At the time of the writing of this EIR, a final decision has not been made in regard to this proposal.

Low Carbon Fuel Standard

CARB adopted the Low Carbon Fuel Standard (LCFS) in 2007 to reduce the carbon intensity (CI) of California's transportation fuels. Low-CI fuels emit less CO_2 than other fossil fuel–based fuels such as gasoline and fossil diesel. The LCFS applies to fuels used by on-road motor vehicles and off-road vehicles, including construction equipment (Wade, pers. comm., 2017).

Tractor-Trailer Greenhouse Gas Regulation

CARB's Tractor-Trailer Greenhouse Gas regulation reduces the energy consumption of large trucks. CARB developed this regulation to make heavy-duty tractors more fuel-efficient. Fuel efficiency is improved by requiring the use of aerodynamic

tractors and trailers that are also equipped with low rolling resistance tires. The tractors and trailers subject to this regulation must either use EPA's SmartWay (SmartWay) certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The SmartWay certification process is part of their broader voluntary program called the SmartWay Transport Partnership Program. The regulation applies primarily to owners of 53-foot or longer box-type trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. All owners regardless of where their vehicle is registered must comply with the regulation when they operate their affected vehicles on California highways. Besides the owners of these vehicles, drivers, motor carriers, California based brokers and California-based shippers that operate or use them also share in the responsibility for compliance with the regulation.

Commercial Motor Vehicle Idling Regulation

In July 2004, CARB initially adopted an Airborne Toxic Control Measure (ATCM) to limit idling of diesel-fueled commercial motor vehicles (idling ATCM) and subsequently amended it in October 2005, October 2009, and December 2013. This ATCM is set forth in Title 13, California Code of Regulations, Section 2485, and requires, among other things, that drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds, including buses and sleeper berth equipped trucks, not idle the vehicle's primary diesel engine longer than five minutes at any location. This regulation helps to reduce fuel consumption by reducing engine usage. The ATCM also requires owners and motor carriers that own or dispatch these vehicles to ensure compliance with the ATCM requirements. 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. Under the new engine requirements, 2008 and newer model year heavy-duty diesel engines need to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling or optionally meets a stringent oxides of nitrogen idling emission standard.

Transport Refrigeration Units

CARB's 2022 amendments to the 2004 Transport Refrigeration Unit (TRU) Airborne Toxic Control Measure (2022 TRU Amendments) increases the stringency of TRU $PM_{2.5}$ standards and requires the electrification of diesel-powered TRU trucks by 2029. On January 3, 2025, EPA granted California Clean Air Act authorization of elements of its TRU Regulation (90 FR 2000). In its action, EPA did not act on the Regulation's requirements for the turnover of at least 15 percent of diesel-fueled truck TRU fleet to zero emissions by December 31, 2023 (and each year thereafter), within the 2022 TRU Amendments (EPA 2025b). As of January 2025, CARB has withdrawn its request for the portions of the TRU Regulation on which EPA did not take action in its authorization decision on January 3, 2025 (CARB 2025b).

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required the California Energy Commission (CEC) to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. CEC shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in preparing the first Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every two years and updates it every other year. The 2023 IEPR, the most recent IEPR, was adopted in February 2024. The 2023 IEPR summarizes California's priority energy issues, outlining strategies and recommendations to further the state's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the state's energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California's nuclear power plants (CEC 2024a).

Renewables Portfolio Standard

SB 1078 (Sher 2002) established California's Renewables Portfolio Standard (RPS). The program sets continuously escalating renewable energy procurement requirements for the state's load-serving entities. Generation must be procured from RPS-certified facilities. SB 2 (1X) of 2011 obligated all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. The California Public Utilities Commission and CEC are jointly responsible for implementing the program. All electricity retail sellers had an interim target between compliance periods to serve at least 38.5 percent of their load with RPS-eligible resources by December 31, 2022. In general, retail sellers either meet or exceeded the interim 38.5 percent target and are on track to achieve their compliance requirements. In 2018, SB 100 (Public Utilities Code Sections 399.11, 399.15, 399.30 and, Section 454.53) was signed into law, which again increases the RPS to 60 percent by 2030 and requires all the state's electricity to come from carbon-free resources by 2045.

SB 100 established a new RPS target of 50 percent by 2026, increases the RPS target in 2030 from 50 to 60 percent, and establishes a goal of 100 percent zero-carbon energy sources by 2045. SB 1020 superseded the goals of SB 100 by requiring that 90 percent of all retail sales of electricity to California end-use customers are procured from renewable energy and zero-carbon resources by December 31, 2035. The requirement increases to 95 percent by December 31, 2040, and to 100 percent by December 31, 2045. Under SB 1020, state agency facilities must use 100 percent renewable and zero-carbon energy resources by December 31, 2035.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires doubling the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Climate Change Scoping Plan

The California Legislature enacted AB 1279 in 2022, which establishes the policy of the state to achieve net zero emissions as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by no later than 2045, statewide anthropogenic GHG emissions are reduced by at least 85 percent below 1990 levels. CARB released the Final *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on November 16, 2022, as directed by AB 1279 (CARB 2022). The 2022 Scoping Plan traces the pathway for the state to achieve the goals set forth in AB 1279 and includes several regulations, plans, and policies directed to reduce energy consumption, improve energy efficiency, and increase renewable energy resources within the state. CARB adopted the 2022 Scoping Plan on December 16, 2022.

California Energy Efficiency Action Plan

The *2021 California Building Decarbonization Assessment* is the initial report addressing the mandates codified in AB 3232 (Friedman, Chapter 373, Statutes of 2018). The report analyzes scenarios to reduce GHG emissions by at least 40 percent by 2030 and identifies several strategies that will lead to significant emission reductions related to electricity and natural gas use in buildings, as well as from refrigerants. The strategies include electrification, electricity generation decarbonization, energy efficiency, refrigerant leakage reduction, distributed energy resources, decarbonizing the gas system, and demand flexibility. The assessment shows that California can achieve significantly more than a 40 percent reduction by 2030 through these strategies.

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

California's energy consumption of new residential and nonresidential buildings is regulated by the California Code of Regulations Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). CEC updates the California Energy Code every three years with more stringent design requirements for reduced energy consumption, resulting in fewer GHG emissions. The 2022 California Energy Code went into effect on January 1, 2023. The 2022 California Energy Code advances the onsite energy generation progress started in the 2019 California Energy Code by encouraging electric heat pump technology and use, establishing electric-ready requirements when natural gas is installed, expanding solar photovoltaic (PV) system and battery storage standards, and strengthening ventilation standards to improve indoor air quality.

The 2025 Building Energy Efficiency Standards (2025 California Energy Code) were adopted on September 11, 2024, and will go into effect for commercial uses on January 1, 2026. While not applicable to the project, a commercial land use, it is

notable that the 2025 California Energy Code will not go into effect for residential uses until January 1, 2031. This was affected following the signing of AB 130 and AB 131 by the Governor on June 30, 2025, as part of the effort to address housing needs in the state. Regarding commercial buildings, the 2025 California Energy Code puts particular emphasis on encouraging efficient electric heat pump technology for space and water heating in newly constructed select nonresidential building types, replacing end-of-life rooftop heating, ventilation, and air-conditioning units of a specific size with high efficiency systems, establishing electric-ready requirements for commercial kitchens, updating solar and storage standards for buildings to make clean energy available for onsite use while minimizing exports to the electrical grid.

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code, also known as the CALGreen Code, is a portion of the California Building Code developed by CEC that consists of both voluntary and mandatory requirements related to green building standards for statewide residential and non-residential construction. The voluntary provisions of the CALGreen Code often guide the adoption of local reach codes by incorporated cities and unincorporated counties. The current version is the 2022 CALGreen Code, which took effect on January 1, 2023. Compared to the 2019 CALGreen Code, the 2022 CALGreen Code strengthened sections pertaining to electric vehicle (EV) and bicycle parking, water efficiency and conservation, and material conservation and resource efficiency, among other sections of the CALGreen Code. The CALGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. These codes are adopted by local agencies that enforce building codes and are used as guidelines by state agencies for meeting the requirements of EO B-18-12.

The 2025 CALGreen Code was adopted on September 11, 2024, and goes into effect for commercial uses on January 1, 2026. Similar to the discussion of the 2025 California Energy Code above, while not applicable to the project, which is a commercial land use, it is notable that the 2025 CALGreen Code will not go into effect for residential uses until January 1, 2031. This was affected following the signing of AB 130 and AB 131 by the Governor on June 30, 2025, as part of the effort to address housing needs in the state. Relative to the 2022 CALGreen Code, the 2025 version includes increased requirements for EV charging infrastructure (i.e., a higher percentage of parking spaces that must be equipped with EV chargers and more stringent requirements for the types of chargers that must be installed) in both residential and non-residential buildings. The 2025 CALGreen Code also includes required analysis of Embodied Carbon in Building Materials, which was not required under the 2022 CALGreen Code. Lastly, the 2025 CALGreen Code includes updates to energy efficiency standards aimed at further reducing energy consumption in buildings and promoting the use of renewable energy sources.

California Appliance Efficiency Requirements (Title 20)

These efficiency requirements apply to appliances sold in California to promote the use of energy- and water-efficiency appliances, setting standards for minimum levels of operating efficiency and other cost-effective measures. After standards are adopted, CEC informs stakeholders and manufacturers of the final appliance efficiency testing requirements, certification instructions, and procedures to comply with the standards. Appliance manufacturers selling their products in California are required to test them at CEC-approved laboratories and receive third-party certification. Once certified, manufacturers are required to submit their documentation and data to CEC to be uploaded into the agency's online Modernized Appliance Efficiency Database System. A regulated appliance that is not certified cannot be legally sold or offered for sale in California.

LOCAL

El Dorado County General Plan

The El Dorado County General Plan includes the following objectives and policies applicable to the energy efficiency of new development and reducing community-wide energy consumption in El Dorado County:

- Objective 5.6.2: Encourage Energy-Efficient Development - Encourage development of energy-efficient buildings, subdivisions, development, and landscape designs.
  - Policy 5.6.2.1: Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.

3.5.2 Environmental Setting

ENERGY TYPES AND SOURCES

Among the states, California ranks eighth in the nation in production of crude oil, fifteenth in production of natural gas, second in generation of conventional hydroelectric power, second in the production of electricity from biomass, and first in the production of electricity from geothermal and solar energy. California produces approximately 10 percent of the natural gas used in the State and imports approximately 90 percent from Canada, the Southwest, and the Rocky Mountains region of the United States. Approximately two-thirds of the crude oil refined in California is from foreign countries, including Iraq, Brazil, Guyana, and Ecuador. Additional crude oil is imported from Alaska. Approximately one-fifth to one-third of California's electricity supply is from out-of-state locations (EIA 2025).

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California are natural gas. In 2024, approximately 40 percent of the electricity generated in the state was from natural gas. Nuclear power generates 8.5 percent of the state's total electricity.

while renewable resources, including hydropower and small-scale (less than 1-megawatt) customer-sited solar PV systems, supplied 59.7 percent of California's total in-state electricity generation in 2024 (CEC 2025a).

Electric and natural gas services in the County of El Dorado are provided by the Pacific Gas and Electric Company (PG&E). Also providing utility service to El Dorado County is Pioneer Community Energy, which is a Community Choice Aggregator (CCA) that began service in 2018. CCAs are voluntary programs that community members may enroll in that aim to lower power costs by aggregating the buying power of individual customers within a defined jurisdiction to secure alternative energy supply contracts. Table 3.5-1 below summarizes PG&E's power content label for 2024. Table 3.5-2 summarizes Pioneer Community Energy's power content label for 2023.

Table 3.5-1 Pacific Gas and Electric Power Content Label (2024)

Energy Resource	Percent of Total (Base Plan)
Eligible Renewable (biomass and biowaste, geothermal, eligible hydroelectric, solar, and wind)	23
Coal	0
Large hydroelectric	12
Natural Gas	2
Nuclear	63
Other	0
Total	**100**

[1] Unspecified power is electricity that has been purchased through open market transactions and is not traceable to a specific generation source.

Source: PG&E 2025.

Table 3.5-2 Pioneer Community Energy Power Content Label (2023)

Energy Resource	Percent of Total
Eligible Renewable (biomass and biowaste, geothermal, eligible hydroelectric, solar, and wind)	39
Coal	0
Large hydroelectric	4
Natural Gas	0
Nuclear	27
Other	0
Unspecified Power[1]	30
Total	**100**

Notes: totals may not sum due to rounding.

[1] Unspecified power is electricity that has been purchased through open market transactions and is not traceable to a specific generation source.

Source: CEC 2024b.

Commercial Energy Use

The commercial sector accounts for 17 percent of total energy consumption in California. In comparison, the transportation sector accounts for 44.5 percent of statewide energy consumption while the industrial and residential sectors account for approximately 21.4 percent and 17.1 percent, respectively (EIA 2025).

Alternative Fuels

A variety of alternative fuels are used to reduce demand for petroleum-based fuel. The use of these fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, AB 32 Scoping Plan). Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many transportation fuels, including:

- biodiesel,
- electricity,
- ethanol (E-10 and E-85),
- hydrogen,
- natural gas (methane in the form of compressed and liquefied natural gas),
- propane,
- renewable diesel (including biomass-to-liquid),
- synthetic fuels, and
- gas-to-liquid and coal-to-liquid fuels.

California has a growing number of alternative fuel vehicles through the joint efforts of CEC, CARB, local air districts, federal government, transit agencies, utilities, and other public and private entities. As of December 2023, California contained over 60,200 alternative fueling stations (AFDC 2025).

ENERGY USE FOR TRANSPORTATION

On-road vehicle use comprises about 90 percent of the petroleum consumed in California (EIA 2025). Most petroleum fuel refined in California is for use in on-road motor vehicles and is refined within California to meet state-specific formulations required by CARB. The major categories of petroleum fuels are gasoline and diesel for passenger vehicles, transit, and rail vehicles and fuel oil for industry and emergency electrical power generation. Other liquid fuels include kerosene, jet fuel, and residual fuel oil for marine vessels.

California's oil fields make it the eight-largest petroleum-producing state in the United States, after Texas, New Mexico, North Dakota, Colorado, Alaska, Oklahoma, and Wyoming. Crude oil is transported within California through a network of pipelines that carry it from both onshore and offshore oil wells to the refineries that are located in the San Francisco Bay Area, the Los Angeles area, and the Central Valley. Currently, 13 petroleum refineries operate in California, processing approximately 1.6 million barrels per day of crude oil (EIA 2025).

CEC reported retail sales of 53 million and 9 million gallons of gasoline and diesel, respectively, in El Dorado County in 2024 (the most recent data available) (CEC 2025b).

ENERGY USE AND CLIMATE CHANGE

Scientists and climatologists have produced evidence that the burning of fossil fuels by vehicles, power plants, industrial facilities, residences, and commercial facilities has led to an increase of the earth's temperature. For an

analysis of greenhouse gas production and the project's impacts on climate change, refer to Section 3.7, "Greenhouse Gas Emissions and Climate Change."

3.5.3 Impacts and Mitigation Measures

METHODOLOGY

Appendix G of the State CEQA Guidelines requires consideration of the energy implications of a project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision (b)(3)). Neither the law nor the State CEQA Guidelines establish criteria that define wasteful, inefficient, or unnecessary use. Therefore, impacts related to energy are addressed qualitatively. Estimations of energy consumption are provided for informational purposes. Each impact area was analyzed in the context of existing laws and regulations and the extent to which these existing laws and regulations adequately address and minimize the potential for impacts associated with project implementation.

The impact analysis is based on the EDH Costco Project Energy Technical Report and the EDH Costco Project North Site Remainder Area Technical Report prepared by Ramboll that are provided in Appendix D.

Construction of the Costco project was assumed to occur beginning in early July 2026 and ending in mid-May 2027, or approximately 11 months. Construction was assumed to occur 7 days per week. Diesel consumption from the use of off-road construction equipment was estimated as a ratio of the carbon dioxide emissions from each piece of equipment to the carbon dioxide emission factor per gallon of diesel consumed sourced from EPA (EPA 2025a). Notably, two scenarios are considered for the construction of the project that have different material movement amounts in the grading phase. Scenario 1 assumes that the excavated material from portions of the project site would be used as fill during grading. Scenario 2 conservatively assumes that all the excavated material would be exported offsite and soil would be imported for fill during grading. To provide a conservative analysis, the worst-case emissions scenario (i.e., Scenario 2) is used in the evaluation of construction-related energy consumption as this scenario would have a higher energy demand related to the increase in material hauling trips relative to Scenario 1. The construction energy analysis also factors the frontage and off-site roadway improvements associated with the Costco project identified in Chapter 2, "Project Description."

Fuel consumption from worker, vendor, concrete truck, and hauling trips are estimated by multiplying the trip rate by the trip length to obtain VMT for each trip type, and then applying the average fuel consumption rate for vehicles used for each trip type to this VMT. Consistent with CalEEMod defaults, worker vehicles are assumed to include light-duty automobiles and trucks, vendor vehicles are assumed to include an equal mix of medium-heavy-duty trucks and heavy-heavy-duty trucks, and hauling vehicles are assumed to include heavy-heavy-duty trucks. Concrete trucks are assumed to be heavy-heavy duty trucks.

The North Site Remainder Area future development would occur on roughly 13.79 acres of land to the northeast of the Costco project and is assumed to include up to 138,000 square feet of commercial/retail development. Construction was assumed to occur over an approximately 12-month period, with construction activities commencing in May 2027 and concluding in May 2028. Because the material movement volumes required for construction within the North Site Remainder Area are currently unknown, excavation and hauling volumes (and thus associated fuel consumption) were assumed to be the same as those used to estimate fuel consumption from the Costco project's construction Scenario 2. Similar to the Costco project, fuel consumption from worker, vendor, concrete truck, and hauling trips related to the North Site Remainder Area were estimated by multiplying the trip rate by the trip length to obtain VMT for each trip type, and then applying the average fuel consumption rate for vehicles used for each trip type to this VMT. Consistent with CalEEMod defaults, worker vehicles are assumed to include light-duty automobiles and trucks, vendor vehicles are assumed to include an equal mix of medium-heavy-duty trucks and heavy-heavy-duty trucks, and hauling vehicles are assumed to include heavy-heavy-duty trucks. Concrete trucks are assumed to be heavy-heavy duty trucks.

Energy requirements are evaluated for the first year of operation of the Costco project, which would be 2027. The project's energy consumption was estimated using CalEEMod default methodologies for non-mobile sources,

including landscape equipment, emergency diesel generators, and energy use, which is assumed to include both natural gas and electricity consumption.

Operation of the Costco project will result in gasoline usage from on-site landscape equipment and diesel fuel use from the testing and maintenance of two diesel-powered emergency generators. The gasoline and diesel fuel consumption associated with these equipment were estimated by converting the carbon-dioxide (CO_2) emissions from these equipment (obtained from the Costco project's CalEEMod model run) to gallons of gasoline/diesel using US EPA's fuel-specific CO_2 emission factors.

The operational energy use estimates (natural gas and electricity) for the Costco project land uses are based on CalEEMod methodologies. These methodologies incorporate the 2019 Title 24 standards. Notably, the Costco project would meet or exceed the California Energy Code and CALGreen standards in effect at the time of building permit application. Therefore, compliance with the 2019 Title 24 standards provides a conservative estimate of the Costco project's energy demand due to newer requirements being more stringent and requiring greater energy efficiency than the 2019 standards. Additionally, the Costco project would utilize 100 percent renewable electrical power as part of its Clean Energy Contract with Pacific Gas & Electric (PG&E). This analysis also estimates the electricity use associated with the on-site EV charging stations. Refer to Appendix F (EDH Costco GHG Technical Report) for further details on energy use calculations for the EV charging stations.

Fuel consumption was estimated for passenger vehicle trips visiting the proposed gasoline dispensing facility and warehouse including employee vehicles, fuel delivery trucks, warehouse, and tire center delivery trucks, and TRUs that are mounted on the trailers of some warehouse delivery trucks.

Specifically, the on-road vehicle fuel consumption was calculated by dividing the project-specific VMT for each vehicle type by its average fuel efficiency. The VMT of passenger vehicles (customer and employees) was obtained in the traffic study (Kittleson & Associates 2025). The VMT for the delivery trucks was calculated as a product of the project-specific trip rates and trip lengths as described in Appendix F. The proposed fuel station is expected to receive approximately five fuel truck deliveries per day. It is anticipated that the proposed warehouse would result in a maximum of 26 one-way delivery truck trips per day. EMFAC2021 was used to estimate the average fuel efficiency of each vehicle type travelling in El Dorado County in calendar year 2027.

EMFAC2021 does not incorporate reductions associated with Advanced Clean Cars II and Advanced Clean Fleets. Hence, the United States Congress's recent action to disapprove California's CAA waiver for Advanced Clean Cars II and CARB's withdrawal of the CAA waiver request for the Advanced Clean Fleets regulation do not impact this analysis (Public Law No. 119-16). Additionally, this analysis assumes that all Project-related delivery trucks are diesel-fueled.

TRU fuel consumption is calculated based on the hours of TRU operation and the average fuel consumption rate of TRU trailers operating in El Dorado County in calendar year 2027, obtained from OFFROAD2021.

Energy requirements are evaluated for the first year of operation for the future development within the North Site Remainder Area, which is assumed to be 2028. The project's energy consumption was estimated using CalEEMod default methodologies for non-mobile sources, including energy use, which is assumed to include both natural gas and electricity consumption. The total energy use for the Project incorporates 2019 Title 24 standards.

Fuel consumption was estimated for on-road vehicle trips visiting the commercial/retail uses within the North Site remainder area and was calculated by dividing the VMT (derived from the traffic study prepared for the project [Kittleson & Associates 2025]) with the average fuel efficiency of the vehicles operating in El Dorado County in calendar year 2028, obtained from EMFAC2021. The reader is referred to Section 3.14, "Transportation," for a further discussion of the VMT analysis.

Diesel and gasoline consumption data for El Dorado County and the State of California were obtained from EMFAC2021 and OFFROAD2021 for calendar year 2028 to inform operational fuel consumption calculations.

THRESHOLDS OF SIGNIFICANCE

The following significance criteria are based on CEQA Guidelines Appendix G (energy), under which implementation of the project would have a potentially significant adverse impact if the project would:

- result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation; and/or
- conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

ISSUES NOT DISCUSSED FURTHER

All issues related to energy are discussed in the analysis below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Wasteful, Inefficient, or Unnecessary Consumption of Energy, During Project Construction or Operation

Construction activities associated with the project would be temporary and would not increase long-term energy or fuel demand. Regarding operation, the project would, at minimum, comply with the energy efficiency requirements of both the 2025 CalGreen Code and the 2025 California Energy Code. Additionally, the project would include multiple design features to improve energy efficiency and prevent the wasteful or inefficient use of energy for building operations. Operational-phase mobile sources and landscape equipment are expected to account for 0.44 percent of countywide gasoline consumption and 0.0021 percent of state-wide gasoline consumption in 2027, while diesel-fuel mobile and stationary sources related to the project would account for 1.19 percent of the total diesel that would be used countywide and 0.0039 percent of the total diesel fuel that would be consumed state-wide in 2027. There are no unusual project characteristics that would require the use of gasoline, diesel, natural gas, or electricity that would be more energy intensive than is used for comparable activities, equipment, or vehicles that would not conform to current emissions standards (and related fuel efficiencies). This impact would be **less than significant**.

This analysis is based on the Energy Technical Report (Appendix D).

Construction

As detailed in Chapter 2, "Project Description," construction on the North and South site would occur simultaneously beginning in July 2026 and continuing for approximately 11 months. Energy would be required to construct, operate, and maintain construction equipment and to produce and transport construction materials associated with the construction of the project. The one-time energy expenditure required to construct the physical buildings and infrastructure associated with the project would be nonrecoverable. Most energy consumption would result from the operation of construction equipment and vehicle trips associated with commutes by construction workers and haul trucks supplying materials.

Costco Project

The project would include the construction of a Costco fuel facility, a Costco warehouse, and below-grade and main-level parking areas. See Table 3.5-3, below, for an estimate of fuel needed for construction activities associated with the project.

Table 3.5-3 Costco Project Construction-Related Energy Consumption[1]

Construction Year	Diesel (Gallons/year)[2]	Gasoline (Gallons/year)[3]	Electricity (kWh/year)[4]
2026	159,850	10,851	88
2027	56,712	9,121	59
Total	**216,562**	**19,972**	**147**

Notes: kWh = kilowatt hours.

[1] To provide a conservative analysis, Construction Scenario 2 energy consumption was modeled and is used in the evaluation of construction-related energy impacts.

[2] Diesel gallons include off-road equipment and on-road gallons from worker, hauling, concrete, and vendor trips.

[3] Gasoline gallons include on-road gallons from worker trips.

[4] Electricity consumption is from the use of signal boards.

Refer to Appendix D for assumptions and detailed input parameters and results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025 (see Appendix D).

Although construction activities would require fuel and other energy sources, these increases would be temporary. Construction contractors strive to complete construction projects efficiently to meet project schedules and minimize costs. Thus, only the necessary amount of fuel would be consumed. Furthermore, all construction equipment would be subject to applicable regulations relating to diesel equipment (see "Construction Equipment Standards" above under Section 3.5.1 "Regulatory Setting").

North Site Remainder Area

The Costco project proposes no development for the North Site Remainder Area. Future development within the North Site Remainder Area is assumed to include construction of 138,000 sf of commercial and/or retail space. Table 3.5-4, below, provides an estimate of fuel needed for construction activities associated with the North Site Remainder Area. Notably, construction activities related to the Costco project and development within the North Site Remainder Area may overlap in 2027. Thus, Table 3.5-4 provides a summary of the construction-related fuel consumption of both the Costco project and development within the North Site Remainder Area.

Table 3.5-4 North Site Remainder Area Construction-related Energy Consumption

Energy Resource	Year	North Site Remainder Area Consumption	Costco Project Consumption	Total Energy Consumption for Proposed Project Construction (gal)
Gasoline (gallons/year)[1]	2027	4,906	9,121	14,027
Diesel (gallons/year)	2027	118,647	56,712	175,359
Electricity (kWh/year)	2027	-	59	59
Gasoline (gallons/year)[1]	2028	2,873	-	2,873
Diesel (gallons/year)	2028	17,852	-	17,852
Electricity (kWh/year)	2028	-	-	-

Notes: gal = gallons.

[1] Gasoline gallons include on-road gallons from worker trips.

Refer to Appendix D for assumptions and detailed input parameters and results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025 (see Appendix D).

Although construction activities would require fuel and other energy sources, these increases would be temporary. Construction contractors strive to complete construction projects efficiently to meet project schedules and minimize costs. Thus, only the necessary amount of fuel would be consumed. Furthermore, all construction equipment would be subject to applicable regulations relating to diesel equipment (see "Construction Equipment Standards" above under Section 3.5.1 "Regulatory Setting").

Operations

Costco Project

Implementation of the project would increase electricity and natural gas consumption relative to existing conditions. Energy in the form of electricity and natural gas would be consumed from the operation of appliances (e.g., ovens,

stoves, refrigerators) and utilities (e.g., water, heating, and air conditioning). Energy would also be consumed during maintenance activities such as landscaping. Gasoline, diesel fuel, and electricity would be consumed during employee and customer trips to the project site, fuel station and warehouse delivery trips, and testing, and maintenance of emergency generators. Electricity would also be consumed during the use of proposed EV chargers.

Customer/member trips to the warehouse and gasoline dispensing facility and employee trips would make up the majority of VMT associated with the project (see Section 3.14, "Transportation," for further discussion of each of these trip types). Notably, it is anticipated that the opening of a new Costco warehouse in the county would result in a shift of vehicle trips (and therefore transportation-related energy consumption) from the existing Folsom Costco warehouse, located approximately 4 miles southwest of the project site, to the new facility. However, after some existing members shift their trips to the new warehouse, the existing Folsom Costco is anticipated to become less crowded with the opening of a new warehouse and could experience an increase in trip frequency by existing members who continue to shop at the same warehouse.

Table 3.5-5 provides a summary of the estimated operational energy consumption associated with the project. Model inputs and outputs are included in Appendix D.

Table 3.5-5 Operational Energy Consumption

Land Use/Energy Type	Energy Consumption	Units
Building Energy Consumption		
Electricity	5,888	MWh/year
Natural Gas	1,423	MBTU/year
Emergency Generator Diesel Fuel	932	Gal/year
Landscaping Equipment Gasoline	444	Gal/year
Transportation Energy Consumptions		
Gasoline	284,366	Gal/year
Diesel fuel	168,439	Gal/year
Electricity	138	MWh/year

Notes: MWh/year = megawatt-hours per year; MBtu/year = million British thermal units per year; gal = gallons

Refer to Appendix D for assumptions and detailed input parameters and results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025 (see Appendix D).

There are no unusual project characteristics that would require the use of gasoline, diesel, natural gas, or electricity that would be more energy intensive than is used for comparable activities, equipment, or vehicles.

As described in Chapter 2, "Project Description," the project would include multiple design features to improve energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, because Costco has a Clean Energy Contract with PG&E, all electricity consumed by the project would be 100 percent renewable electrical power.

Mobile-source energy consumption, in the form of fossil fuel, is directly linked to the anticipated VMT associated with the project. The project would be located in a central location that would serve the local population and result in less transportation energy consumption compared to warehouse locations further away from the populations they serve. The proposed Project is expected to result in approximately 285,366 gallons of gasoline consumption per year, which is 0.44 percent of the countywide consumption and 0.0021 percent of the statewide consumption in 2027. Project operational diesel consumption is approximately 169,371 gallons/year, which is 1.19 percent of the total diesel that would be used countywide and 0.0039 percent of the total diesel that would be use statewide in 2027. Thus, operation of the project would account for a small portion of countywide and statewide fuel consumption and would not include any

unusual characteristics that would make it more fuel intensive than similar commercial uses. In addition, 10 electric vehicle direct current (DC) fast chargers with a total power rating of 1,800 kilowatts would be installed on the site. These chargers would be powered by 100 percent renewable electricity, as Costco has a Clean Energy Contract with PG&E.

North Site Remainder Area

Future development of the North Site Remainder Area would increase electricity and natural gas consumption relative to existing conditions. Energy in the form of electricity and natural gas would be consumed from the operation of appliances (e.g., ovens, stoves, refrigerators) and utilities (e.g., water, heating, and air conditioning). Energy would also be consumed during maintenance activities such as landscaping. Gasoline, diesel fuel, and electricity would be consumed during employee and customer trips to the project site, as well as truck trips for deliveries. Notably, operational activities related to the Costco project and development within the North Site Remainder Area would overlap once development within the North Site Remainder Area begins in 2028. Thus, Table 3.5-6 provides a summary of the operations-related fuel consumption of both the Costco project and development within the North Site Remainder Area.

Table 3.5-6 provides a summary of the estimated operational energy consumption associated with the project. Model inputs and outputs are included in Appendix D.

Table 3.5-6 Operational Energy Consumption

Energy Resource	North Site Remainder Area	Costco Project	Total Energy Consumption for Proposed Project	Units
Building energy				
Electricity	1,673,392	6,026,405	7,699,797	(kWh/yr)
Natural Gas	1,192,913	1,423,224	2,616,137	(kBtu/yr)
Transportation energy				
Gasoline fuel	145,697	285,366	431,064	(gallons/yr)
Diesel fuel	24,867	169,371	194,238	(gallons/yr)

Notes: MWh/year = megawatt-hours per year; MBtu/year = million British thermal units per year; gal = gallons; yr = year.

Refer to Appendix D for assumptions and detailed input parameters and results.

Source: Modeled by Ramboll Americas Engineering Solutions, Inc. in 2025 (see Appendix D).

Future development on the North Site Remainder Area is assumed to include operation of 138,000 sf of commercial/retail space and there are no unusual project characteristics that would require the use of gasoline, diesel, natural gas, or electricity that would be more energy intensive than is used for comparable activities, equipment, or vehicles.

Mobile-source energy consumption, in the form of fossil fuel, is directly linked to the anticipated VMT associated with the project. The development within the North Site Remainder Area is expected to result in approximately 145,697 gallons of gasoline consumption per year. Including the Costco project's annual gasoline consumption of 285,366 gallons per year, this would be for 0.68 percent of the countywide consumption and 0.00323 percent of the statewide consumption in 2028. Project operational diesel consumption is approximately 194,238 gallons/year, which is 1.39 percent of the total diesel that would be used countywide and 0.00450 percent of the total diesel that would be use statewide in 2028. Thus, operation of the project would account for a small portion of countywide and statewide fuel consumption and would not include any unusual characteristics that would make it more fuel intensive than similar commercial uses.

Summary

The project would increase energy consumption for temporary construction activities related to vehicle use and material transport. However, construction activities would be temporary and would not increase long-term energy or fuel demand. Construction activities would consume the necessary amount of fuel and energy to complete work in an efficient and timely manner. Once operational, the project would increase transportation and building energy demand.

According to Appendix F and G of the State CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall per capita energy consumption, decreasing reliance on fossil fuels, and increasing reliance on renewable energy sources. As described above, the project would, at minimum, comply with the energy efficiency requirements of both the 2025 CalGreen Code and the 2025 California Energy Code. Each of these codes is updated regularly with increasingly stringent standards for energy conservation and efficiency. Additionally, the project would include multiple design features to improve energy efficiency and prevent the wasteful or inefficient use of energy for building operations. Furthermore, the Costco project would utilize 100 percent renewable electrical power as part of its Clean Energy Contract with PG&E. Regarding transportation energy, the project would reduce vehicle trip lengths for customers local to the project area that would otherwise travel to further warehouses. Operation of the project would account for a small portion of countywide and statewide fuel consumption and would not include any unusual characteristics that would make it more fuel intensive than similar commercial uses. This impact would be **less than significant.**

Mitigation Measures

No mitigation measures are required.

Impact 3.5-2: Conflict With or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

The proposed project would include energy efficiency features such as high-efficiency landscaping that would align with Objective 5.6.2 of the El Dorado County General Plan. The proposed project would also comply with all mandatory requirements for nonresidential land uses required in the 2025 California Energy Code (Title 24 Part 6) and the 2025 CALGreen Code (Title 24 Part 11) and would include several energy and water efficient features, on-site EV chargers, and 100 percent renewable electrical power as part of Costco's Clean Energy Contract with PG&E. Therefore, this impact would be **less than significant**.

Costco Project

The Costco project would comply with any applicable local and state plans, regulations, and policies for renewable energy or energy efficiency. Tables 3.5-7 and 3.5-8 summarize an evaluation of the Costco project against applicable policies within the County of El Dorado General Plan and applicable statewide renewable energy and energy efficiency strategies, respectively. Through this evaluation, the Costco project was determined to not conflict with or obstruct applicable state regulations and policies. The Costco project will also meet the voluntary Tier 1 requirements for EV chargers in the 2025 CALGreen code by installing ten DC fast chargers that provide a total power of 1,800 kilowatts. Additionally, all energy delivered to the Costco Project (including for these chargers) would be powered by 100 percent renewable electricity, as Costco has a Clean Energy Contract with PG&E.

Table 3.5-7 Consistency with Applicable General Plan Energy Efficiency Strategies

Objective [1]	Policy [1]	Does it Conflict?
Objective 5.6.2 - Encourage Energy-Efficient Development: Encourage development of energy-efficient buildings, subdivisions, development, and landscape designs.	Policy 5.6.2.1 Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.	Does Not Conflict. As described in Section 1.2 of the EDH Costco Project Energy Technical Report, the proposed Project's irrigation system will include the use of drip rings to efficiently water the root ball while minimizing water usage and ensuring that water goes directly to the intended planting areas. Additionally, a substantial amount of the proposed plant material will be climate adapted to the region and would use less water than other common landscaping species. Finally, the Project's storm water management plans are designed to treat all runoff from new impervious surfaces and maintain storm water discharge rates based on County requirements.

[1] The applicable goals are obtained from the El Dorado County General Plan. Available at: https://www.eldoradocounty.ca.gov/Land-Use/Planning-and-Building/Planning-Division/Adopted-General-Plan. Accessed: September 2025.

Source: Data compiled by Ramboll in 2025.

Table 3.5-8 Consistency with Applicable State Renewable Energy and Energy Efficiency Strategies

#	Plan	Category Description	Does it Conflict?
1	California Renewables Portfolio Standard (RPS) and SB 100	As most recently amended by SB 100 (2018), California's RPS increases the proportion of electricity from renewable sources to 33 percent renewable power by 2020; 50 percent renewable power by 2026; and, 60 percent renewable power by 2030. SB 350 (2015) also requires the State Energy Resources Conservation and Development Commission to double (by 2030) the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	Does Not Conflict. The Project would not conflict with implementation of the state's RPS. The electricity for the operation of the Project would be supplied by Pacific Gas & Electric (PG&E) and powered by 100% renewable energy, as Costco has a Clean Energy Contract with PG&E.
2	California Code of Regulations, Title 24, Part 6	Title 24, Part 6 of the California Code of Regulations establishes energy and water efficiency requirements for residential and non-residential new construction, additions to existing buildings, and alterations to existing buildings. Standards include requirements for water heating, HVAC, lighting, electrical systems, and solar design.	Consistent. The Project would meet or exceed the Title 24 energy efficiency standards in effect at the time of building permit application. As noted in Section 1.2 and listed below, the Project will include a number of energy and water efficiency features: ▶ Parking lot light standards would be designed in order to provide even light distribution, and utilize less energy compared to a greater number of fixtures at lower heights. The use of LED lamps can provide a higher level of perceived brightness with less energy than other lamps such as high-pressure sodium. ▶ Pre-manufactured metal wall panels with insulation carry a higher R-Value and greater solar reflectivity to help conserve energy as compared to other materials. Building heat absorption would be further reduced by a decrease in the thermal mass of the metal wall when compared to a typical masonry block wall. ▶ A substantial amount of the proposed landscaping material for the North Site and South Site is climate adapted to the region and would use less water than other common landscape species. ▶ The irrigation system proposes to include the use of deep root watering bubblers for parking lot trees to minimize usage and ensure that water goes directly to the intended planting areas. ▶ High-efficiency restroom fixtures would be installed. ▶ Commissioning of mechanical systems would occur to ensure that the HVAC systems are performing as designed. HVAC comfort systems would be controlled by a computerized building management system to maximize efficiency. ▶ HVAC units planned for the South Site are high-efficiency direct ducted units, which have phased out the use of hydrochlorofluorocarbons completely. ▶ Parking lot and exterior lights would be controlled by a photo sensor and time clock. ▶ Lighting would be controlled by the overall project energy management system. ▶ Energy efficient Transformers (i.e., Square D Type EE transformers) would be used. ▶ Variable speed motors would be used on make-up air units and booster pumps. ▶ Gas water heaters would be direct vent and 94 percent efficient or greater. ▶ Reclaim tanks would be used to capture heat released by refrigeration equipment to heat domestic water in lieu of venting heat to the outside.

#	Plan	Category Description	Does it Conflict?
3	Assembly Bill 1109	The Lighting Efficiency And Toxics Reduction Act (AB 1109) requires a reduction in average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018.	Does Not Conflict. The Project would not conflict with the implementation of AB 1109. Additionally, the proposed Project will incorporate several sustainability and energy efficiency measures including green building practices as required by the 2025 California Green Building Standards Code. Refer to Section 1.2 for a detailed listing of these measures.
4	California Green (CalGreen) Building Standards Code Requirements	CalGreen establishes green building standards to meet the goals of AB 32. CalGreen includes standards for residential and nonresidential structures such as new buildings or portions of new buildings, additions and alterations, and all occupancies where no other state agency has the authority to adopt green building standards applicable to those occupancies. Standards include requirements for site development, indoor and outdoor water use, construction waste reduction, disposal and recycling and building maintenance and operation.	Consistent. The Project will comply with the CalGreen Building Standards Code that is in effect at the time of the building permit application, as applicable. Furthermore, the proposed Project will include several sustainability and energy efficiency measures, including those mandated by California Green Building Standards Code. For a detailed list of these measures, please refer to Section 1.2.
Mobile Sources			
5	AB 1493 (Pavley Regulations)	Reduces GHG emissions in new passenger vehicles from model years 2012-2016 (Phase I) and model years 2017–2025 (Phase II). Also reduces gasoline consumption to a rate of 31 percent of 1990 gasoline consumption (and associated GHG emissions) by 2020.	Does Not Conflict. The Project would not conflict with the implementation of the AB 1493 regulations.
6	Low Carbon Fuel Standard (LCFS)	Establishes protocols for measuring and reducing the life-cycle carbon intensity of transportation fuels and helps to establish use of alternative fuels.	Does Not Conflict. The Project would not conflict with implementation of the LCFS.
7	Advanced Clean Cars (ACC) Program	In 2012, the California Air Resources Board (CARB) adopted the ACC program to reduce criteria pollutant emissions and GHG emissions for model year vehicles 2015 through 2025. ACC includes the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulations that require manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. In 2022, CARB developed the ACC II regulations which seeks to reduce criteria and greenhouse gas emissions from new light- and medium-duty vehicles beyond the 2025 model year, and increase the number of ZEVs for sale. On December 18, 2024, the US EPA granted a waiver for California's ACC II regulation	Does Not Conflict. The Project would not conflict with implementation of the ACC program. The United States Congress and Senate voted to disapprove California's Clean Air Act waivers for Advanced Clean Cars II using the Congressional Review Act (CRA) in late May 2025. In response to this action, CARB stated that they "will pursue every remedy available to challenge these actions"

#	Plan	Category Description	Does it Conflict?
8	Advanced Clean Trucks (ACT)	In 2021, the CARB adopted the ACT regulation to accelerate the market for on-road zero-emission vehicles and to reduce emissions of oxides of nitrogen (NOx), fine particulate matter (PM), other criteria pollutants, toxic air contaminants, and GHG from medium- and heavy-duty on-road vehicles. ACT applies to any manufacturer that certifies on-road vehicles over 8,500 lbs. gross vehicle weight rating for sale in California unless specified as exempt.	Does Not Conflict. The Project would not conflict with implementation of the ACT regulation. The United States Congress and Senate voted to disapprove California's Clean Air Act waivers for Advanced Clean Trucks using the Congressional Review Act (CRA) in late May 2025. In response to this action, CARB stated that they "will pursue every remedy available to challenge these actions."
9	Advanced Clean Fleets (ACF)	In October 2022, CARB approved the Advanced Clean Fleets (ACF) regulation, which has requirements for fleets to phase in the use of ZEVs from 2024 to 2042 and beyond. The fleets required to comply with the regulation include State and local government agency fleets, high priority and federal fleets, and drayage fleets. The regulation also includes a requirement for manufacturers to only sell zero-emission trucks starting in 2036. The ACF regulation is meant to complement the ACT regulation and will contribute to meeting the goals set out in Governor Newsom's Executive Order N-79-20.	Does Not Conflict. The Project would not conflict with implementation of the ACF regulation. In January 2025, CARB withdrew its request for authorization of this rule from the EPA.
10	Transport Refrigeration Unit (TRU) Air Toxic Control Measure (ATCM)	CARB adopted the ATCM for TRUs, TRU generator sets, and facilities where TRUs and TRU generator sets operate in 2004 (amendments in 2010, 2011, and 2022) to reduce diesel particulate matter emissions from diesel-powered TRUs and TRU generator sets.	Consistent. The Project would comply with all applicable requirements of the TRU ATCM. In January 2025, CARB withdrew its request to the EPA for authorization of parts of this rule that require TRU owners to turnover at least 15 percent of their diesel-fueled truck TRU fleet to ZE TRU by December 31, 2023, and each year thereafter.
11	SB 375	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the State's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035.	Does Not Conflict. The Project would not conflict with the implementation of SB 375.

Notes: AB = Assembly Bill; GHG = greenhouse gases; HVAC = heating, ventilation, and air conditioning; LED = light-emitting diode; SB = Senate Bill; EPA = US Environmental Protection Agency; ZE = zero emission.

Source: Data compiled by Ramboll in 2025.

North Site Remainder Area

Similar to the discussion of the Costco project, above any future development at the North Site Remainder Area would comply with any applicable local and state plans, regulations, and policies for renewable energy or energy efficiency.

Conclusions

As demonstrated above, the project includes numerous project design features that serve to further the State's efforts regarding renewable energy and energy efficiency, including onsite EV DC charging facilities meeting the Voluntary Tier 1 requirements of the 2025 CALGreen Code, use of 100 percent renewable electricity, and several energy efficiency features. Therefore, the project would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. This impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

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3.6 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

This section describes current conditions relative to geology and soils at the project site. It includes a description of soils, an analysis of environmental impacts, and recommendations for mitigation measures for any significant or potentially significant impacts. The primary source of information used for this analysis is the Geotechnical Study for the Proposed Costco Fuel Facility and Draft Geotechnical Study Proposed Costco Wholesale Warehouse and Fuel Facility provided in Appendix E (collectively referred to as "Geotechnical Study").

The project site is not located within a designated mineral resource zone, contains no known mineral deposits, and has no history of mineral extraction activities. Therefore, no impacts to mineral resources would occur. This issue is not discussed further.

Comments were received in response to the Notice of Preparation (NOP) regarding geology and soils. The comments expressed concerns related to site grading, soil erosion, stormwater runoff, potential for naturally occurring asbestos (NOA), and water and soil contamination as a result of the proposed development and requested that geological risks be independently studied and that the EIR include a geotechnical report. These comments are addressed where appropriate throughout this section, with the exception of NOA impacts that are addressed in Draft EIR Section 3.2, "Air Quality." The NOP and comments submitted in response to it are included in Appendix A.

3.6.1 Regulatory Setting

FEDERAL

Paleontological Resources Preservation Act (16 USC Section 470aaa)

Enacted as part of the Omnibus Public Land Management Act (2009), the Paleontological Resources Preservation Act (PRPA) requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal land using scientific principles and expertise. The PRPA includes specific provisions addressing management of these resources by the US Bureau of Land Management, the National Park Service, the US Bureau of Reclamation, the US Fish and Wildlife Service, and the US Forest Service of the Department of Agriculture. The PRPA affirms the authority for many of the policies the federal land managing agencies already have in place for the management of paleontological resources, such as issuing permits for collecting paleontological resources, curation of paleontological resources, and confidentiality of locality data.

National Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities.

Clean Water Act 402/National Pollutant Discharge Elimination System

The Clean Water Act (CWA) is discussed in detail in Section 3.9, "Hydrology and Water Quality." However, because CWA Section 402 is directly relevant to excavation, additional information is provided below.

Section 402 mandates that certain types of construction activity comply with the requirements of the US Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) program. EPA has delegated to the State Water Resources Control Board (SWRCB) the authority for the NPDES program in

California, where it is implemented by the state's nine regional water quality control boards (RWQCBs). Construction activity disturbing 1 acre or more must obtain coverage under the state's Construction General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (see "Construction General Permit," below). Construction General Permit applicants are required to prepare a notice of intent and a stormwater pollution prevention plan (SWPPP) and implement and maintain best management practices (BMPs) to avoid adverse effects on receiving water quality as a result of construction activities, including earthwork.

Because implementing the project would result in the disturbance of an area greater than 1 acre, the project applicant would need to obtain coverage under the NPDES Construction General Permit (issued and enforced by the Central Valley RWQCB).

Additionally, the County is implementing requirements of SWRCB's NPDES Construction General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4) Order No. 2013-0001-DWQ (Order). The project qualifies as a "Regulated Project" as defined in Section E.12 of the Order and therefore would be required to comply with the standards provided in the Order.

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (PRC Section 2621-2630) intends to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors, and by prohibiting the location of most types of structures intended for human occupancy across the traces of active faults. The act defines criteria for identifying active faults, giving legal support to terms such as active and inactive, and establishes a process for reviewing building proposals in Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across these zones is strictly regulated if they are "sufficiently active" and "well-defined." A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as within the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Bryant and Hart 2007). Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act

The intention of the Seismic Hazards Mapping Act of 1990 (PRC Section 2690–2699.6) is to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The act's provisions are similar in concept to those of the Alquist-Priolo Act: The State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development.

Construction General Permit

Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under SWRCB's Construction General Permit (Order WQ 2022-0057-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation.

Coverage under the Construction General Permit is obtained by submitting permit registration documents to SWRCB that include a risk-level assessment and a site-specific SWPPP that identifies an effective combination of erosion control, sediment control, and non-stormwater BMPs. The Construction General Permit requires that the SWPPP

define a program of regular inspections of the BMPs and, in some cases, sampling of water quality parameters. The Central Valley RWQCB administers the NPDES stormwater permit program in El Dorado County.

California Building Standards Code

The California Building Standards Code (CBSC) (CCR Title 24) is based on the International Building Code. The CBSC has been modified from the International Building Code for California conditions, with more detailed and/or more stringent regulations. It is composed of 12 "Parts," and Part 2 is the California Building Code (CBC), which contains general building design and construction requirements related to fire and life safety, structural safety, and access compliance. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16, Structural Design, of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18, Soils and Foundations, regulates the excavation of foundations and retaining walls, whereas Chapter 18A, Soils and Foundations, regulates construction on unstable soils, such as expansive soils and areas subject to liquefaction, and Appendix J, "Grading," regulates grading activities, including drainage and erosion control. The CBC contains a provision that provides for a preliminary soil report to be prepared to identify "the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects" (CBC Chapter 18 Section 1803.1.1.1).

Public Resources Code Provisions Related to Paleontological Resources

Paleontological resources on private property are considered the property of the landowner and receive no particular legal protection unless otherwise addressed in the conditions of approval of a land development permit, as mitigation in an applicable CEQA document, or through local policy and/or regulation (see below). Paleontological resources on public lands are protected by state statute (PRC Chapter 1.7, Archaeological, Paleontological, and Historical Sites, and Appendix G). Section 5097.5(a) of this statute states:

> A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

LOCAL

El Dorado County General Plan

The Public Health, Safety, and Noise Element of the El Dorado County General Plan sets forth planning strategies for fire hazards, geologic and seismic hazards, flood hazards, noise, hazardous materials, air quality, airport safety, and highway safety (El Dorado County 2024). Geologic and slope stability policy provisions are addressed in the Conservation and Open Space Element of the General Plan. This includes goals, objectives, and policies focused on providing guidelines for protecting the residents from existing and potential geologic and seismic hazards in El Dorado County.

The following geology and soils–related objectives and policies are applicable to the project:

- Objective 6.3.1: Building and Site Standards. Adopt and enforce development regulations, including building and site standards, to protect against seismic and geologic hazards.
  - Policy 6.3.1.1: The County shall require that all discretionary projects and all projects requiring a grading permit, or a building permit that would result in earth disturbance, that are located in areas likely to contain naturally occurring asbestos (based on mapping developed by the California Department of Conservation [DOC]) comply with the Air Quality Management District (AQMD) Rules 223, 223-1 and 223-2 requirements. The Department of Transportation and the AQMD shall consider the requirement of posting a warning sign at the work site in areas likely to contain naturally occurring asbestos based on the mapping developed by the DOC.

- **Policy 6.3.1.2:** The County shall establish a mandatory disclosure program, where potential buyers and sellers of real property in all areas likely to contain naturally occurring asbestos (based on mapping developed by DOC are provided information regarding the potential presence of asbestos subject to sale. Information shall include potential for exposure from access roads and from disturbance activities (e.g., landscaping).

- **Objective 6.3.2: County-Wide Seismic Hazards**. Continue to evaluate seismic related hazards such as liquefaction, landslides, avalanche, and seiche, particularly in the Tahoe Basin.[1]
  - **Policy 6.3.2.4:** Applications for development of habitable structures shall be reviewed for potential hazards associated with steep or unstable slopes, areas susceptible to high erosion, and avalanche risk. Geotechnical studies shall be required when development may be subject to geological hazards. If hazards are identified, applicants shall be required to mitigate or avoid identified hazards as a condition of approval. If no mitigation is feasible, the project will not be approved.
  - **Policy 6.3.2.5:** Require geotechnical reports that demonstrate adequate slope stability and construction methods for buildings and road improvements that are on slopes greater than 50 percent pursuant to the California Building Code (CBC) Appendix J: Grading Section 108.1-3 on setbacks.

- **Objective 7.1.2: Erosion/Sedimentation.** Minimize soil erosion and sedimentation.
  - **Policy 7.1.2.1:** Development or disturbance of slopes over 30% shall be restricted. Standards for implementation of this policy, including but not limited to exceptions for access, reasonable use of the parcel, and agricultural uses shall be incorporated into the Zoning Ordinance.
  - **Policy 7.1.2.2:** Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.
  - **Policy 7.1.2.3:** Enforce Grading Ordinance provisions for erosion control on all development projects and adopt provisions for ongoing, applicant-funded monitoring of project grading.

Grading, Erosion, and Sediment Control Ordinance

County Code of Ordinances Chapter 110.14 (Grading, Erosion, and Sediment Control) covers grading and requires grading and drainage plans to be developed for major development projects. Chapter 4 of the County Land Development Manual sets forth standards and procedures for grading activities in the county. The purposes of these requirements are to protect lives, property, and public improvements from damage related to unregulated grading and to limit water quality and sediment impacts.

Chapter 4 includes the following standards and procedures:

- All earthwork shall comply with CBC for design and construction standards.
- Complete fills shall comply with the provisions of CBC, unless recommended otherwise in an accepted geotechnical report.
- For projects on the West Slope of the Sierra Nevada, stormwater management, erosion and sediment control and drainage shall comply with the adopted Drainage Manual, SWMP and current SWRCB Order(s) regulating construction activities. This includes the development of a SWPPP.
- Proper design and construction of retaining wall systems.
- Provision of certain technical reports as part of grading permit applications (e.g., geotechnical report, geologic report, and drainage report).

[1] The project is not located in the Tahoe Basin.

El Dorado County Design and Improvement Standards Manual

The County's Design and Improvement Standards Manual, adopted in 1990, provides required erosion and sediment control measures that are applicable to subdivisions, roadways, and other types of developments. Specifically, Volume III: Grading, Erosion and Sediment Control, describes the criteria for when an erosion and sediment control plan is required. When required, erosion and sediment control plans must comply with the adopted County SWMP (El Dorado County 1990) and the NPDES MS4 Order.

3.6.2 Environmental Setting

REGIONAL GEOLOGY

According to the Draft EIR for the El Dorado County General Plan, the county is located in the Sierra Nevada geomorphic province of California, which is characterized by steep-sided hills and narrow, rocky stream channels and which consists of Pliocene and older deposits that have been uplifted as a result of plate tectonics, granite intrusion, and volcanic activity (El Dorado County 2003a). The southwestern foothills are composed of the Mariposa Formation, which includes amphibolite, serpentine, and pyroxenite, whereas the northwestern areas of the county are composed of the Calaveras Formation, which includes metamorphic rock, such as chert, slate, quartzite, and mica schist, with limited serpentine formations. The higher peaks primarily consist of igneous rock and metamorphic rock, with some granite intrusions (El Dorado County 2003a).

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) are a source of potentially hazardous airborne asbestos fibers when activities disturb the ground. NOA is present in the region. As stated in the County's General Plan Draft EIR (2003), asbestos is commonly found in ultramafic rock, including serpentine, which is abundant predominantly in the western half of the county and particularly in the foothills of the Sierra Nevada. Asbestos has been historically mined and used for its insulation and heat-resistant properties. However, exposure and disturbance of rock and soil that contain asbestos can result in the release of fibers into the air that are hazardous to human health and the environment (El Dorado County 2003b). In particular, two types of asbestos are associated with serpentine: chrysolite asbestos, which is present in the western part of the county, and tremolite/actinolite asbestos, which is found in veins associated with faults or shear zones that contain serpentine (El Dorado County 2003b). The presence (and use) of NOA in the county has been well documented. EDCAQMD has produced a map showing the NOA Review Areas of the county.

LOCAL GEOLOGY

The project site is located in the western foothills region of the Sierra Nevada Mountains. This portion of the foothills and the project area are underlain by Jurassic and Triassic age metavolcanic rocks (Kleinfelder 2024). The formation is almost entirely of marine origin and metamorphosed with primary volcanic features, and minor associated sandstone and conglomerate. There is typically very high rock strength in the less weathered portions of the site. The project site is not designated as an important mineral resource area under the El Dorado County General Plan (Figure CO-1), nor is it designated for mineral extraction uses by the County.

Naturally Occurring Asbestos

As previously discussed, NOA is present in the region. The geotechnical report by Kleinfelder (2024) gathered samples within the project site for testing and the results were negative for NOA minerals. There are ultramafic rocks and faulting nearby, such that there remains a potential for NOA to occur in the area (Kleinfelder 2024). El Dorado County's NOA Review Area Map also shows the project site straddling the border of an area that is mapped as a quarter mile buffer for more likely to contain asbestos or fault line (El Dorado County 2015). Although no NOA was detected in site sampling because a portion of the project site lies within a mapped NOA Review Area, construction would be subject to EDCAQMD Rule 223-2. The reader is referred to Section 3.2, "Air Quality," for a further discussion of NOA exposure impacts..

TOPOGRAPHY AND DRAINAGE

The topography of the project site includes rolling hills generally sloping from east to west with ground surface elevations ranging from approximately 739 to 770 feet (Kleinfelder 2024). There are two drainages in the western area of the project site that flow south-southwest and cross Silva Valley Parkway, and there is an old dam in one of the drainages. A seasonal creek runs through the project site from east to west. The Geotechnical Study also concluded that the majority of the slopes on the project site were observed to be less steep with shallow gradients, giving the overall potential for soil instability to be low (Kleinfelder 2024). The Geotechnical Study recommends positive drainage should be established away from the top of the slopes and slope drains should be installed within the fill slopes.

GROUNDWATER

Groundwater is water that exists beneath the land surface. Groundwater was not encountered in the results of the geotechnical investigation by Kleinfelder (2024) conducted at a maximum depth of approximately 9 feet. However, Kleinfelder's investigation in 2019 encountered perched groundwater in excavated test pits in the South Site near the seasonal creek running through the project site, and all test pits encountered perched water near bedrock contact (Kleinfelder 2024). Rainwater collected on shallow, less permeable rock and soil causes perched groundwater across the entire site during and after rainfall. Fluctuation of groundwater levels on the project site are expected with rainy seasons and irrigation of landscaped areas.

SOILS

According to the County General Plan EIR, eight total soil associations are present in western El Dorado County, where the project site is located. The soils underlying the project site are identified as Auburn soils, which are classified as well-drained silt loams and gravelly loams formed in materials weathered from basic rocks and metasedimentary rocks, and serpentine soils, which are classified as excessively drained to somewhat excessively drained rock land and loams formed in material weathered from ultra-basic rocks (El Dorado County 2003a). The US Natural Resources Conservation Service's (NRCS's) Web Soil Survey more specifically categorizes the soils on-site as Auburn silt loam and Auburn very rocky silt loam (Table 3.6-1, Figure 3.6-1) (NRCS 2025).

Natural soil complexes that comprised the original, unaltered soil horizon have been truncated, mixed, or otherwise altered. Where native soils still exist, soil types are expected to be similar to those of nearby areas, consisting of those identified in Table 3.6-1 (NRCS 2025). In their unaltered state, most of these soils have low to moderate shrink-swell potential but rarely can have high shrink-swell characteristics. Taken together, these soils are susceptible to a variety of soil risk factors such as shallow bedrock, caving, and sloughing.

Table 3.6-1 Summary of Soil Characteristics

Soil Group	Type	Shrink-Swell Potential
Auburn silt loam	Silty loam	Low/moderate/high
Auburn very rocky silt loam	Rocky silt loam	Low/moderate/high

Sources: El Dorado County 2003a; NRCS 2025.



Source: Data downloaded from NRCS in 2025; adapted by Ascent in 2025

Figure 3.6-1 Project Area Soils

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with very little horizontal motion. Subsidence can be induced by both natural and human phenomena. Natural phenomena include shifting of tectonic plates and dissolution of limestone resulting in sinkholes. Subsidence related to human activity includes pumping water, oil, and gas from underground reservoirs; collapse of underground mines; drainage of wetlands; and soil compaction. The results of a geotechnical investigation by Kleinfelder (2024) conducted beneath the project site concluded that the site is not located in an area of known significant ground subsidence. There is no reported evidence of subsidence or adverse impacts in the area of the project site, and the potential for subsidence occurring at the side is considered low.

EXPANSIVE SOILS

Expansive soils (also known as shrink-swell soils) are soils that contain expansive clay minerals that can absorb significant amounts of water. The presence of these clay minerals makes the soil prone to large changes in volume in response to changes in water content. When an expansive soil becomes wet, water is absorbed and it increases in volume, and as the soil dries it contracts and decreases in volume. This repeated change in volume over time can produce enough force and stress on buildings, underground utilities, and other structures to damage foundations, pipes, and walls.

The quantity and type of expansive clay minerals affects the potential for the soil to expand or contract. Where native soils still exist, soil types may be expected to be similar to those of the nearby areas. These soil types range in shrink-swell potential from low to high (Table 3.6-1). However, the surficial soils on the project site are generally low-medium plastic fines, and potential soil expansion was considered low in the geotechnical investigation conducted by Kleinfelder (2019).

MASS WASTING AND LANDSLIDES

Mass wasting refers to the collective group of processes that characterize down slope movement of rock and unconsolidated sediment overlying bedrock. These processes include landslides, slumps, rockfalls, flows, and creeps. Many factors contribute to the potential for mass wasting, including geologic conditions as well as the drainage, slope, and vegetation of the site. According to the DOC Earthquake Zones of Required Investigation Map (DOC 2025), created by the California Geological Survey (CGS), the project site is not located in a landslide zone.

A landslide susceptibility database developed by Kleinfelder (2019) indicates that the project site is located in an area where land sliding is considered moderate due to the permanent cut slopes for the roadways that form the northern and southern portions of the site. Given the nature of the slopes and extent of exposed rock in this area, the probability of a landslide in the project area is considered moderate.

Slope stability on-site is further confirmed by the Geotechnical Study, which concluded that the majority of the project site is characterized by slope gradients of 5:1 (horizontal to vertical) and less steep. The potential for slope instability is considered low given the elevation differential and shallow gradients. However, there are 2:1 permanent cut slopes in the northern and southern portions of the site which include exposed rock, which may pose moderate potential for shallow slope instability (Kleinfelder 2019).

SEISMICITY

Most earthquakes originate along fault lines. A fault is a fracture in the Earth's crust along which rocks on one side are displaced relative to those on the other side due to shear and compressive crustal stresses. Most faults are the result of repeated displacement that may have taken place suddenly and/or by slow creep (Bryant and Hart 2007). The state of California has a classification system that designates faults as either active, potentially active, or inactive, depending on how recently displacement has occurred along them. Faults that show evidence of movement within the last 11,000 years (the Holocene geologic period) are considered active, and faults that have moved between 11,000 and 1.6 million years ago (comprising the later Pleistocene geologic period) are considered potentially active.

According to the County General Plan EIR, El Dorado County is considered to have a relatively low potential for seismic activity because it is located beyond the highly active fault zones of the coastal areas of California (El Dorado County 2003a). A review of the US Geological Survey (USGS) Fault Map of California shows that the nearest fault zone is the Foothills Fault System, located along the foothills northeast of the project site, the nearest segment of which is located approximately 8 miles northeast of the project site (USGS 2025). In the County General Plan EIR, this particular portion of the Foothills Fault System is more specifically called the West Bear Mountains Fault (El Dorado County 2003a). The last earthquake produced by the Foothills Fault System was a magnitude 5.7 earthquake that occurred in Oroville on August 1, 1975, approximately 60 miles north of the project site. Except for the 1975 earthquake, a review of available published geologic and seismic hazards maps and articles indicated that there have been no recent earthquakes along this fault line.

Surface Fault Rupture

Surface rupture is the surface expression of movement along a fault. Structures built over an active fault can be torn apart if the ground ruptures. The potential for surface rupture is based on the concepts of recency and recurrence. Surface rupture along faults is generally limited to a linear zone a few meters wide. The Alquist-Priolo Act (see the Regulatory Setting discussion above) was created to prohibit the location of structures designed for human occupancy across, or within 50 feet of, an active fault, thereby reducing the loss of life and property from an earthquake. The project site is not located within an Alquist-Priolo active fault zone (Bryant and Hart 2007), and there is no evidence of active faulting within or near the project site.

Ground Shaking

The intensity of seismic shaking, or strong ground motion, during an earthquake is dependent on the distance and direction from the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions of the surrounding area. Ground shaking could potentially result in the damage or collapse of buildings and other structures. Generally, in El Dorado County the potential intensity of seismic events is considered low to moderate and increases from west to east, with the highest potential ground shaking intensity located in the Lake Tahoe Basin (El Dorado County 2003a). The nearest faults to the project site are the Genoa and Cordelia faults, both of which are located over 50 miles from the project site. Overall, the project site is located in the southeastern portion of the county and is therefore considered to have lower seismic intensity potential.

Liquefaction, Lateral Spreading, and Seismic Compression

Liquefaction is a phenomenon in which loose, saturated, granular soil deposits lose a significant portion of their shear strength because of excess pore water pressure buildup. An earthquake typically causes an increase in pore water pressure and subsequent liquefaction. These soils behave like a liquid during seismic shaking and re-solidify when shaking stops. The potential for liquefaction is highest in areas with high groundwater and loose, fine, sandy soils at depths of less than 50 feet. Based on mapping conducted pursuant to the Alquist-Priolo Act, the project site and surrounding area are not identified as located within an area of potential liquefaction (DOC 2025). A geotechnical investigation conducted (Kleinfelder 2019) beneath the project site identified that regional groundwater surrounding the project site is deep, and therefore the potential for liquefaction is not considered a hazard for the project site.

Liquefaction may also lead to lateral spreading. Lateral spreading (also known as expansion) is the horizontal movement or spreading of soil toward an "open face," such as a streambank, the open side of fill embankments, or the sides of levees. It often occurs in response to liquefaction of soils in an adjacent area. The potential for failure from lateral spreading is highest in areas where there is a high groundwater table, where there are relatively soft and recent alluvial deposits, and where creek banks are relatively high. Because the project site is located in an area relatively distant from any bodies of surface water, and the potential for liquefaction is not considered a hazard, lateral spreading caused by liquefaction is not expected to be a concern.

Seismic compression results from the accumulation of contractive volumetric strains in unsaturated soil during earthquake shaking. According to the Geotechnical Study, loose to medium dense granular material with no fines or with low plasticity fines are most susceptible to seismic compression (Kleinfelder 2019). Based on the density and composition of the underlying soil and bedrock, seismic compression, or dynamic dry settlement, is considered a hazard at the site.

PALEONTOLOGICAL RESOURCES

As stated in the County General Plan EIR, paleontology is the study of the typically fossilized remains of various plants and animal species, which are found predominantly in sedimentary rock formation. El Dorado County's geologic formations are predominantly igneous (volcanic) in nature, and the types of sedimentary deposits where paleontological resources occur are virtually nonexistent in the County (El Dorado County 2003c). The project area is underlain by Jurassic and Triassic age metavolcanic rocks (Kleinfelder 2024). The formation is almost entirely made up of marine origin and consists mostly of basaltic to andesitic breccias, flows, and tuffs with some primary volcanic features recognizable. The formation also contains minor associated sandstone and conglomerate, although none were encountered during a field investigation by Kleinfelder (2024), limiting the potential for paleontological resources are typically found in sedimentary geologic conditions. For these reasons, the project site's potential for the presence of paleontological resources is considered low. However, no comprehensive paleontological studies have been conducted in the county, and, as a result, no information is available regarding the sensitivity of certain areas (El Dorado County 2003c). Therefore, although it is unlikely that paleontological resources would be encountered during construction of the project, there is a potential for inadvertent discovery of previously unknown paleontological resources to occur.

3.6.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The examination of geology, soils, and mineral resources is based on information obtained from reviews of:

- the project description;
- available literature, including documents published by El Dorado County and state and federal agencies;
- applicable elements from El Dorado County General Plan; and
- Geotechnical Study for the Proposed Costco Fuel Facility and Draft Geotechnical Study Proposed Costco Wholesale Warehouse and Fuel Facility (Appendix E).

THRESHOLDS OF SIGNIFICANCE

A geology and soils impact is considered significant if implementation of the project would do any of the following:

- directly or indirectly expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death through the rupture of a known earthquake fault, strong seismic shaking, seismic-related ground failure, soil liquefaction, or landslides;
- result in substantial soil erosion or the loss of topsoil;
- locate project facilities 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-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- locate project facilities on expansive soil, creating substantial direct or indirect risks to property;
- have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- 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; and/or
- 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.

ISSUES NOT DISCUSSED FURTHER

Fault Rupture

Fault rupture impacts are limited to areas in the immediate vicinity of an earthquake fault. As previously discussed, the project site is not located in a state-designated Alquist-Priolo Earthquake Fault Zone, and there are no known fault traces that extend through, or occur in the immediate vicinity of, the project site. The Geotechnical Study confirmed that the project site is not located in an earthquake fault zone, confirmed that no known faults are located on the project site, and states that no evidence of recent or active faulting was observed during the conducted field study (Kleinfelder 2024). Therefore, surface fault rupture on-site is not anticipated to occur. In addition, the project would be required to comply with CBC requirements for residential land uses. Compliance with the CBC would ensure that potential impacts related to fault rupture would be minimized. This issue is not discussed further.

Directly or Indirectly Cause Landslides

As discussed above, the project site is not located in an area susceptible to landslides (DOC 2025). Because of the topography that the project site would have following grading and construction activities, the probability of a landslide and mass wasting is considered low. A landslide susceptibility database developed by Kleinfelder (2019) indicates that the project site is located in an area where land sliding is considered moderate. As part of standard construction activities, the project site would be appropriately graded for commercial development, which would further reduce the gradient slopes on-site. Compliance with CBC, including Chapter 18 (Soils and Foundations) would ensure soil stability on the site is maintained. For these reasons, the risk of slope instability is negligible. This issue is not discussed further.

Onsite Wastewater Disposal System Impacts

As identified in Chapter 2, "Project Description," the project proposes to obtain municipal wastewater service from the El Dorado Irrigation District and would not involve the use on an onsite wastewater disposal system. This issue is not discussed further.

Mineral Resources

The project site is not designated as an important mineral resource area under the El Dorado County General Plan (Figure CO-1), nor is it designated for mineral extraction uses by the County. Project site development would not result in the loss of availability of a known mineral resource of value to the region or the state or the loss of availability of a locally important mineral resource recovery site. This issue is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: Loss, Injury, or Death Resulting from Seismic Hazards

The county is identified as having relatively low potential for seismic activity and a review of published geologic maps, in the General Plan EIR and the Geotechnical Study confirm that project implementation is not likely to cause potential adverse effects associated with strong seismic shaking. Construction and operation of the project would not exacerbate existing seismic hazards. Compliance with CBC requirements would ensure that potential adverse effects related to strong seismic shaking would be further minimized, such that the exposure of people or structures to hazards, risk of loss, injury or death resulting from rupture of a known earthquake fault or strong seismic shaking would be avoided or reduced. This impact would be **less than significant**.

According to the General Plan EIR, El Dorado County is considered to have a relatively low potential for seismic activity and is located beyond the highly active fault zones of the coastal areas of California (El Dorado County 2003a). The USGS Fault Map of California shows that the fault zone nearest to the project site is the Foothills Fault System, located along the foothills northeast of the site, the nearest segment of which is located approximately 8 miles northeast of the project site (USGS 2025). In the General Plan EIR, this particular portion of the Foothills Fault System is more specifically called the West Bear Mountains Fault (El Dorado County 2003a). The last earthquake

produced by the Foothills Fault System was a magnitude 5.7 earthquake that occurred in Oroville on August 1, 1975, approximately 60 miles north of the project site. Except for the 1975 earthquake, a review of available published geologic and seismic hazards maps and articles indicated that there have been no recent earthquakes along this fault line. Nevertheless, the project would be required to comply with the CBC regarding Chapter 16, Structural Design, which identifies both general building structural design requirements and specific seismic safety design requirements for projects. These seismic design criteria are also included as recommendations in the Geotechnical Study (Kleinfelder 2024). Standard regulatory compliance with the CBC and incorporation of the Geotechnical Study recommendations would minimize the project's potential to cause direct or indirect adverse effects, including risk of loss, injury, or death, involving strong seismic shaking.

It is also important to note that environmental impact analyses under CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents unless the project might cause or risk exacerbating environmental hazards or conditions that already exist (CCR Section 15126.2[a]). In those specific instances, it is the project's impact on the environment and not the environment's impact on the project that compels an evaluation of how future residents or users may be affected by exacerbated conditions (*California Building Industry Association v. Bay Area Air Quality Management District* [2015] 62 Cal. 4th 369). Project construction and operation would not create new seismic events or exacerbate existing seismic hazards, because the project improvements would involve limited excavation that would not alter existing geologic, seismic, and fault conditions in the region.

Costco Project

Based on the CGS's Earthquake Fault Zone map, which identifies liquefaction- and landslide-prone areas, the project site is not located in an area prone to liquefaction (DOC 2025). The Geotechnical Study concluded that, due to the distance to earthquake fault and seismic hazard zones, the potential for damage on the site from liquefaction, lateral spreading, seismic settlement, and slope instability/landslides is negligible (Kleinfelder 2024).

As identified in Chapter 2, "Project Description," development of the project would involve grading of the site. Construction of the North Site would import approximately 43,218 cubic yards of fill that would recontour the site to form the fueling pad and parking pad. Grading of the South Site would involve approximately 67,227 cubic yards of cut and 85,900 cubic yards of fill, with up to 18,673 cubic yards imported. Removal of rock would occur for the subterranean parking structure, excavation for the fuel tanks for the proposed fuel facility, as well as trenching for utilities, but would not occur at a depth that would alter fault conditions to seismic hazards. All project structures and final grading would be subject to CBC standards, including Chapter 18, Soils and Foundations, which identifies general building foundation design requirements, and County Code that specifically address stability and safety during seismic events. The reader is referred to Chapter 2, "Project Description," for a summary of the Geotechnical Study that are provided in Appendix E that identify specific geologic stability measures in compliance with CBC. Therefore, the potential for the project to cause adverse effects related to strong seismic shaking would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development; however, the types of commercial uses are not currently known. Similar to the project, future commercial development within the North Site Remainder Area would possibly involve grading and require trenching for the extension of existing utilities but would not occur at a depth that would alter fault conditions to seismic hazards. The future commercial development within the North Site Remainder Area would be subject to CBC standards and County Code that addresses stability and safety during seismic events. Therefore, the potential for the North Site Remainder Area to cause adverse effects related to strong seismic shaking would be **less than significant**.

Conclusions

The project would involve development of commercial uses on vacant land. The potential for loss, injury, or death resulting from seismic hazards associated with the Costco project and North Site Remainder Area would be minimal due to El Dorado County's relatively low seismic activity and the site's distance from major fault zones. Compliance with CBC standards and County regulations would be required for all project structures to incorporate appropriate

seismic design standards, further reducing the risk of seismic-related hazards. Additionally, excavation and grading activities would not occur at depths that could alter fault conditions or exacerbate seismic risks. Because the project would not create or worsen existing seismic hazards, the impact related to seismic activity would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.6-2: Result in Substantial Soil Erosion or the Loss of Topsoil

Because of the natural topographical gradients of the project site and proposed construction grading activities, soil erosion from development of the project's residential uses may occur on the site. However, compliance with SWRCB's Construction General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit Order WQ 2022-0057-DWQ) and County Code of Ordinances Chapter 110.14 (Grading, Erosion, and Sediment Control) would ensure that impacts related to substantial erosion or the loss of topsoil during construction, operation, and maintenance would be **less than significant.**

The Geotechnical Study states that the topography of the project site includes rolling hills generally sloping from east to west with ground surface elevations ranging from approximately 739 to 770 feet (Kleinfelder 2024). A seasonal creek flow through the property from east to west. The surface of the project site is generally covered with weeds and shrubs and animal burrows.

Construction activities associated with development of the project would require earthwork activities, including vegetation removal, site clearing, and grading of soils, all of which could temporarily increase the likelihood of erosion and loss of topsoil from wind or stormwater runoff. For construction projects more than 1 acre in size, such as the project, regulatory compliance with SWRCB's Construction General Permit Order WQ 2022-0057-DWQ would ensure that the potential for erosion or loss of topsoil during project construction would be reduced to less than significant. As part of Order WQ 2022-0057-DWQ, a SWPPP is required for development resulting in more than 1 acre of ground disturbance (SWRCB 2024). Implementation of the SWPPP would involve site-specific BMPs to prevent substantial erosion and stormwater runoff, including implementing a monitoring program, as necessary. (The reader is referred to Section 3.9, "Hydrology and Water Quality," for further discussion of water quality impacts.) The SWPPP would be required to identify temporary BMPs to prevent the transport of earthen materials from construction sites during periods of precipitation or runoff and to prevent wind erosion of earthen materials. Mandatory compliance with adopted regulations would require the project to minimize erosion and loss of topsoil during construction. Operation and maintenance would not require additional soil disturbance and would not result in erosion or loss of topsoil. In addition, after the project is constructed, there would be a reduction in the area of exposed soil compared to current conditions, limiting the potential for soil erosion to occur. The project would also be subject to County Code of Ordinances Chapter 110.14 (Grading, Erosion, and Sediment Control), which establishes BMPs for drainage related to grading activities.

Costco Project

Construction of the project (including off-site transportation improvements to the intersections of Silva Valley Parkway Entrada Lane and White Rock Road Valley View Parkway-Vine Street) would include implementation of SWPPP that would identify best management practices to address soil erosion (e.g., temporary sediment basins, waddles, and silt fencing). As identified in Chapter 2, "Project Description," the Costco site's storm drainage system would include onsite bioretention basins that would capture sediment from being discharged to natural waterways. The potential for increased erosion would be addressed through compliance with the County and SWRCB erosion control requirements and project design. Thus, this impact would be **less than significant**.

North Site Remainder Area

As detailed in Chapter 2, "Project Description," the North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development. Similar to the project, future commercial development within the North Site Remainder Area would require earthwork activities which could

temporarily increase the likelihood of erosion and loss of topsoil from wind or stormwater runoff. However, the potential for increased erosion would be addressed through compliance with the County and SWRCB erosion control requirements and project design. This impact would be **less than significant**.

Conclusions

Construction activities associated with both the project and potential future development of the North Site Remainder Area would involve earthwork activities that could temporarily increase the likelihood of erosion and loss of topsoil. However, compliance with SWRCB's Construction General Permit Order WQ 2022-0057-DWQ and the County's Grading, Erosion, and Sediment Control Ordinance would ensure that appropriate BMPs are in place to minimize erosion during construction. The SWPPP would further reduce the potential for soil loss through site-specific erosion control measures. For the project, additional stormwater management features, such as bioretention basins, would capture sediment and reduce the potential for erosion. Future development within the North Site Remainder Area would be subject to the same regulatory requirements and BMPs. Because the project would not result in significant long-term soil disturbance and would include measures to minimize erosion both during and after construction, impacts related to soil erosion and loss of topsoil would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.6-3: Be Located on Expansive Soil, Creating Substantial Direct or Indirect Risks to Life and Property or 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, Liquefaction, or Collapse

As part of the County's project approval and review process, a geotechnical report has been prepared. Soil exploration and index testing analysis conducted for the Geotechnical Study observed low to moderate potential for expansion of soils. The project site is not located on an unstable geologic unit. Potential for slope instability is considered low given the elevation differential and shallow gradients on the site, and therefore the project site is not susceptible to landslides. Based on the types of soils present at the project site, the potential for liquefaction and lateral spreading is not considered a hazard at the project site. Additionally, the potential for seismic compression is considered low based on the soil density and composition on the site. Any recommendations from the Geotechnical Study related to soil compaction or unstable soils would be incorporated into the project. As a result, this impact would be **less than significant**.

As identified in Chapter 2, "Project Description," the project site would involve grading activities that would recontour the site. As noted above, substantial ground instability and unsuitable soil conditions were not observed on the site.

Regarding expansive soils, according to the County General Plan EIR and the NRCS Web Soil Survey, the soils present on-site have either a low shrink-swell potential or a low to moderate to high shrink-swell potential. However, as discussed in the Geotechnical Study, the soil materials encountered during exploration generally had a low plasticity (Kleinfelder 2024). The Geotechnical Study concluded that, due to the composition of the underlying soils on the site, the potential for seismic compression is considered low, and the potential for soil expansion is considered low to moderate in the upper colluvium layer. Chapter 18, Soils and Foundations, of the CBC identifies both general building foundation design requirements and regulates construction activities on unstable soils, including expansive soils, if applicable. The project would be required to adhere to the regulatory compliance of the CBC regarding soils and foundations and Chapter 18A if expansive soils are encountered during project construction, which would minimize any potential direct or indirect risk to life and property.

Regarding being located on an unstable geologic unit, as previously discussed, the project site is located in a geologic area of the county that contains hard igneous and metamorphic rock, which is not an unstable geologic unit. The Geotechnical Study concluded that the majority of slopes on the project site have low slope gradients and are less steep (shallower), so the potential for slope instability is considered low, except for the slopes on the northern and southern portions of the project site which are steeper and were excavated into highly weathered rock, which the

potential for slope instability is considered moderate (Kleinfelder 2019). Grading of the site would further reduce the existing gradient slopes on-site. Because of the low elevation differential and shallow gradients, the potential for slope instability is considered negligible. The project is also not located on land susceptible to liquefaction or landslides (DOC 2025). As previously discussed, the project site and vicinity (and the county in general) have limited access to groundwater because nonporous, hard metamorphic rock underlies thin soil layers. The bodies of water nearest to the project site are Bass Lake, located approximately 1.9 miles northeast, and Carson Creek, located approximately 550 feet east. Because the project is located relatively distant from the lake and the creek's low size and flow capacity, groundwater is limited, and because the project site is not located in a liquefaction-prone area, the potential for seismic-related ground failure, including lateral spreading caused by liquefaction, is considered negligible.

Costco Project

As identified in Chapter 2, "Project Description," development of the project would involve construction of a commercial development on undeveloped land. Construction of the project would be required to comply with the CBC regarding Chapter 18, Soils and Foundations, which identifies general building foundation design requirements. Further, implementation of the recommendations of the Geotechnical Study pertaining to site grading and improvements, design recommendations, and design review and construction monitoring would further minimize potential impacts related to unstable soils. The reader is referred to Chapter 2, "Project Description," for a summary of the Geotechnical Study that are provided in Appendix E that identify specific geologic stability measures in compliance with CBC. In addition, the project (including off-site transportation improvements identified in Chapter 2, "Project Description,") would be required to comply with the County Code of Ordinances Chapter 110.14, Grading, Erosion, and Sediment Control Ordinance, which requires grading and drainage plans to be developed for major development projects, as well as compliance with Chapter 4 of the County Land Development Manual, which sets forth standards and procedures for grading activities in the county. The purposes of these requirements are to protect lives, property, and public improvements from damage related to unregulated grading and to limit water quality and sediment impacts. Through adherence to County Code and building code requirements, geologic and soil stability measures would be incorporated into the project design consistent with county standards, and impacts related to unstable soils, specifically expansive soils, would be **less than significant.**

North Site Remainder Area

As detailed in Chapter 2, "Project Description," the North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development. However, the types of commercial development are unknown, and no details on how site development would implement recommendations of the geotechnical report have been identified. Final grading would be subject to CBC standards and County Code that specific address stability. Therefore, the potential for the North Site Remainder Area to create geologic and soil stability issues could be **less than significant**.

Conclusions

The project site and the North Site Remainder Area are not located on unstable geologic units or highly expansive soils that would pose substantial risks to life and property. The Geotechnical Study indicates that while some areas of the site exhibit low to moderate potential for soil expansion or slope instability, adherence to CBC requirements, County ordinances, and geotechnical recommendations would mitigate these risks. Compliance with grading, erosion, and sediment control regulations, along with site preparation and construction monitoring, would further minimize any potential for ground instability, including landslides, liquefaction, or lateral spreading. Therefore, impacts related to unstable soils and geologic hazards for the project and North Site Remainder Area would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.6-4: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

The project area is underlain by Jurassic and Triassic age metavolcanic rocks, primarily of marine origin, consisting of basaltic to andesitic breccias, flows, and tuffs, with minor sandstone and conglomerate. The lack of significant sedimentary deposits limits the potential for paleontological resources. Nevertheless, no comprehensive paleontological studies have been conducted in the county, and as a result, no information is available regarding the sensitivity of certain areas. As identified in the project site geotechnical investigations, the site consists of geologic conditions common in the region and does not contain unique geologic features. Although it is anticipated that the project does not contain unique paleontological resources, the potential to discover paleontological resources onsite still exists. Therefore, this impact is considered to be **significant**.

The following analysis applies to both the project and the North Site Remainder Area.

The county's geologic formations are predominantly igneous, and the types of sedimentary deposits in which paleontological resources occur are virtually nonexistent in the county (El Dorado County 2003c). The project area is underlain by Jurassic and Triassic age metavolcanic rocks, primarily of marine origin, consisting of basaltic to andesitic breccias, flows, and tuffs, with minor sandstone and conglomerate (Kleinfelder 2024). However, the lack of significant sedimentary deposits limits the potential for paleontological resources, which are typically found in sedimentary geologic conditions. Because the geology of the project site is defined by igneous rock formations, the project site's potential for the presence of paleontological resources is considered low. Nevertheless, no comprehensive paleontological studies have been conducted in the county, and as a result, no information is available regarding the sensitivity of certain areas (El Dorado County 2003c).

Although it is anticipated that due to the geologic conditions of the region and site, the project (including off-site transportation improvements to the intersections of Silva Valley Parkway/Entrada Lane and White Rock Road/Valley View Parkway-Vine Street) and North Site Remainder Area do not contain unique paleontological resources or sites, the potential to discover paleontological resources on-site during project-related construction activities still exists. Therefore, this impact would be **significant**.

Mitigation Measures

Implement Mitigation Measure 3.4-1a: Develop and Implement a Worker Environmental Awareness Training

The applicant shall retain a qualified professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeologists to prepare a worker environmental awareness training. Training shall be provided to all construction personnel and supervisors who will have the potential to encounter and alter archaeological resources on the project site and off-site transportation improvements. A copy of the worker environmental awareness training shall be provided to the County before construction activities begin. The topics to be addressed in the worker environmental awareness training will include, at a minimum:

- types of cultural resources located on the project site,
- types of evidence that indicates cultural resources might be present (e.g., glass shards, lithic scatters),
- what to do if a worker encounters a possible resource,
- what to do if a worker encounters animal bones or possible human bones, and
- repercussions for removing or intentionally disturbing archaeological resources.

Mitigation Measure 3.6-4: Implement Procedures for the Inadvertent Discovery of Paleontological Resources

If any paleontological resources are encountered during development of the project (including off-site transportation improvements to the intersections of Silva Valley Parkway and Entrada Lane and White Rock Road and Valley View Parkway-Vine Street), the construction contractor shall ensure that all activities in the immediate area of the find are halted and that the applicant is informed. The applicant shall then retain a qualified paleontologist meeting the

Secretary of the Interior's qualifications to evaluate the discovery, prepare a report evaluating the discovery, and include recommendations in the report pursuant to the guidelines established by the Society of Vertebrate Paleontology, including, if applicable, development and implementation of a paleontological resource impact mitigation program for treatment of the discovery.

Significance after Mitigation

Mitigation Measure 3.4-1a would require the applicant to educate all personnel associated with construction activities on-site to receive training to identify potential resources. Mitigation Measure 3.6-4 would require the applicant to retain a qualified paleontologist to evaluate the discovery and implement the recommendations in the survey, study, or report regarding appropriate treatment if a paleontological resource is found during ground-disturbing activities. Implementation of these mitigation measures would reduce the project's potential impact associated with inadvertent discovery of paleontological resources to **less than significant**.

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3.7 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This section presents a summary of regulations applicable to greenhouse gas (GHG) emissions, a summary of climate change science and GHG sources in California, and quantification of project-generated GHGs and discussion about their contribution to global climate change. In addition, mitigation measures are recommended to reduce the project's contribution to climate change. The analysis in this section are based on the EDH Costco Project Greenhouse Gases Technical Report and the EDH Costco Project North Site Remainder Area Technical Report prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) provided in Appendix F.

Comments in response to the notice of preparation (NOP) (see Appendix A for comments received on the NOP) identified that GHG emissions from project construction and operation be addressed in the EIR. These issues are addressed below.

3.7.1 Regulatory Setting

FEDERAL

There is no overarching federal law specifically related to climate change or the reduction of GHG emissions. In March 2025, the current administration announced that the US Environmental Protection Agency (EPA) will undertake 31 actions, focusing primarily on reconsidering actions adopted by previous administrations, including numerous actions and regulations related to climate change and the reduction of GHG emissions. These include, but are not limited to, reconsideration of regulations on power plants, the Mandatory Reporting Rule, the Endangerment Finding, and fuel economy standards, among others. As of the writing of this Draft EIR, none of these regulations have been repealed or replaced with newly adopted regulations. Therefore, these regulations are discussed below.

Massachusetts v. Environmental Protection Agency

The US Supreme Court ruled in Massachusetts v. Environmental Protection Agency, 127 S. Ct. 1438 (2007), that carbon dioxide (CO_2) and other GHGs are pollutants under the federal Clean Air Act (CAA), which EPA must regulate if it determines those GHGs pose an endangerment to public health or welfare.

Endangerment Finding and Cause or Contribute Finding

On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under CAA Section 202(a) (42 United States Code Section 7521).

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations. On July 29, 2025, EPA announced a proposal to rescind the Endangerment Finding and repeal all GHG emission standards for light-duty, medium-duty, and heavy-duty vehicles and engines pursuant to CAA section 202(a). As of the writing this EIR, EPA has not adopted this proposal (EPA 2025a). The proposed rule would remove GHG-related provisions from 40 CFR part 600 without affecting provisions related to CAFE standards and fuel economy labeling. In general, the proposed rule would remove model year (MY) 2012 and later GHG emission standards for passenger cars and light trucks, and MY 2014 and later GHG emission standards for medium-duty vehicles (EPA 2025a). As of the writing of this EIR, EPA has not adopted this proposal (EPA 2025a), and CARB has provided no guidance on how to address this issue in emissions modeling.
- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Mandatory Reporting Rule

The EPA adopted a mandatory GHG reporting rule in September 2009. The rule requires suppliers of fossil fuels or entities that emit industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more of GHG emissions to submit annual reports to the EPA beginning in 2011. Vehicle and engine manufacturers were required to begin reporting GHG emissions starting with MY 2011.

On September 12, 2025, the EPA administrator announced a proposed rule to end the Greenhouse Gas Reporting Program. If finalized, the proposal would remove reporting obligations for most large facilities, all fuel and industrial gas suppliers, and CO_2 injection sites (EPA 2025b).

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act was passed to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the energy performance of the federal government; and increase US energy security, develop renewable fuel production, and improve vehicle fuel economy. The Energy Independence and Security Act included the first increase in fuel economy standards for passenger cars since 1975. The act also included a new energy grant program for use by local governments in implementing energy efficiency initiatives, as well as a variety of green building incentives and programs.

Fuel Economy Standards

The National Highway Traffic Safety Administration (NHTSA) regulates vehicle emissions through the Corporate Average Fuel Economy (CAFE) Standards. On June 24, 2024, NHTSA, on behalf of the US Department of Transportation (DOT), announced it was finalizing CAFE standards for passenger cars and light trucks that increase at a rate of 2 percent per year for passenger cars in MYs 2027-31, 0 percent per year for light trucks in MYs 2027-28, and 2 percent per year for light trucks in MYs 2029-31. NHTSA also announced that it was finalizing fuel efficiency standards for heavy-duty pickup trucks and vans (HDPUVs) for MYs 2030-2032 that increase at a rate of 10 percent per year and MYs 2033-2035 that increase at a rate of 8 percent per year. These new standards went into effect on August 23, 2024. The CAFE Standards apply to all on-road vehicle use.

EPA and NHTSA have set fuel economy and GHG emission standards for medium- and heavy-duty vehicles. In 2011, EPA and NHTSA finalized a joint rule that established a national program to reduce GHG emissions and improve the fuel economy for new medium- and heavy-duty vehicles manufactured in MYs 2014 through 2018. In 2016, EPA and NHTSA finalized Phase 2 standards, which require fuel efficiency improvements and pollution reduction for medium- and heavy-duty vehicles for MYs 2019 through 2027. On March 29, 2024, a final rule was issued to revise existing standards to reduce GHG emissions from heavy-duty vehicles in MY 2027 and set new, more stringent standards for MYs 2028 through 2032 (EPA 2024a).

EPA established a series of increasingly strict emission standards for new non-road diesel engines. Tier 1 standards were phased in on newly manufactured equipment from 1996 through 2000, depending on the engine horsepower category. Tier 2 standards were phased in on newly manufactured equipment from 2001 through 2006. Tier 3 standards were phased in on newly manufactured equipment from 2006 through 2008. Tier 4 standards, which require advanced emission control technology to attain them, were phased in between 2008 and 2015 (EPA 2025c).

On January 20, 2025, President Trump issued an Executive Order (14148) entitled *Initial Rescissions of Harmful Executive Orders and Actions*, which revokes a Biden-era Executive Order 14037 that directed the EPA and the Secretary of Transportation to consider beginning work on rulemakings to establish vehicle emissions standards and fuel economy standards for vehicles with MYs 2027 and later. Executive Order 14148 directed NHTSA to commence review and reconsideration of all existing fuel economy standards for vehicle MYs 2022 and later (USDOT 2025).

Public Laws No. 119-15 and 119-16

On June 12, 2025, Public Law 119-15, enacting House Joint Resolution 87, was signed into law. The law utilized the Congressional Review Act to nullify EPA's rule that had granted California a waiver to enforce stricter emissions standards for heavy-duty vehicles under the CAA. The disapproved rule included programs such as the Advanced Clean Trucks (ACT) regulation and zero-emission requirements for airport shuttles. Passed under the Congressional

Review Act, the law prevents EPA from implementing or reissuing the same or similar rules without new congressional authorization. This effectively blocks California, and other states that follow its standards, from enforcing these specific vehicle emission and warranty regulations. In early May 2025, the U.S. House of Representatives passed House Joint Resolution 88 under the Congressional Review Act, aiming to void EPA's December 2024 waiver under the CAA that allowed California to implement the Advanced Clean Cars (ACC II) regulation. ACC II includes a zero-emission vehicle (ZEV) mandate targeting 100 percent new light-duty ZEV sales by 2035. In late May 2025, the Senate followed suit, approving the resolution; the first ever occurrence that waivers under the CAA have been revoked from a Congressional Review Act. With both chambers' approval, the resolution was signed by the President on June 12, 2025, to formally rescind the state's ability to enforce the ACC II regulation. The implications of this federal resolution on the state's capability to enforce its independent fuel economy standards are uncertain at this time, as the California Attorney General filed a lawsuit against the federal government on June 12, 2025, to challenge House Joint Resolution 88. Whether this action will be successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the ACC II regulation during the legal process. Notably, the mobile source emissions calculations and estimates disclosed in this analysis do not account for this regulatory update as emissions factors have not been updated by the California Air Resources Board (CARB) at this time.

Heavy-Duty Vehicle Program

EPA and NHTSA also set fuel efficiency and GHG standards for medium- and heavy-duty trucks. In 2011, EPA and NHTSA finalized a joint rule that established a national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles. This rule—called the Phase 1 standards—requires fuel efficiency standards for engines in MYs 2014 through 2018. In 2016, EPA and NHTSA adopted the Phase 2 standards, which require fuel efficiency standards for engines in MYs 2018 through 2027 (EPA 2016). On March 29, 2024, EPA issued a final rule to revise existing standards to reduce greenhouse gas emissions from heavy-duty vehicles in model year 2027 and set new, more stringent standards for model years 2028 through 2032. The final rule, known as "Phase 3 greenhouse gas," will apply to heavy-duty vocational vehicles (such as delivery trucks, refuse haulers, public utility trucks, transit, shuttle, school buses, etc.) and tractors (such as day cabs and sleeper cabs on tractor-trailer trucks).

Executive Order 14008

On January 27, 2021, the president issued an Executive Order on Tackling the Climate Crisis at Home and Abroad (Executive Order 14008). Part I of the Order highlights putting the climate crisis at the center of United States foreign policy and national security. Addressing the climate crisis will require significant short-term global reductions in GHG emissions and net-zero global emissions by mid-century or sooner. The United States will pursue green recovery efforts and initiatives to advance the clean energy transition.

Part II of the Order relays the government-wide approach to the climate crisis, which involves reducing climate pollution in every sector of the economy, especially through innovation, commercialization, and deployment of clean energy technologies and infrastructure. A National Climate Task Force was established to focus on addressing the climate crisis through key federal actions to reduce climate change impacts. A 100 percent carbon pollution-free electricity sector is targeted by no later than 2035 and a net-zero emissions economy is to be achieved by no later than 2050. Offshore wind is aimed to be doubled by 2030. Opportunities for federal funding of clean energy technology and infrastructure shall be identified. Federal permitting decisions need to consider the effects of GHG emissions and climate change.

As noted above, President Trump issued Executive Order 14148 that rescinded Executive Order 14008 (White House 2025).

STATE

The state has adopted numerous laws addressing various aspects of climate change, GHG mitigation, energy efficiency, and renewable energy. Much of this establishes a broad framework for the state's long-term GHG and energy reduction goals and climate change adaptation program. Governors have also issued several EOs related to the state's evolving climate change policy. A summary of key laws, regulations, plans, and policies, relevant to the proposed plan is provided below, organized by general categories.

Notably, as discussed in Section 3.2, "Air Quality," the CAA allows California, and other states, to seek a waiver of preemption, which prohibits states from enacting emission standards for new motor vehicles. EPA must grant a waiver, however, before California's rules may be enforced. According to the CAA Section 209(b), "State Standards," EPA shall grant a waiver unless the EPA administrator finds that California:

- was arbitrary and capricious in its finding that its standards are, in the aggregate, at least as protective of public health and welfare as applicable federal standards;
- does not need such standards to meet compelling and extraordinary conditions; or
- such standards and accompanying enforcement procedures are not consistent with Section 202(a) of the CAA.

As of April 2025, CARB has rescinded its waiver requests for several regulations including the In-Use Locomotive Regulation, portions of the Advanced Clean Fleets regulation, and the Transportation Refrigeration Unit (TRU) regulation.

Executive Orders

There are four primary EOs related to the state's GHG reduction efforts. In general, EOs provide direction to state government agencies but do not place mandates on regional or local governments or the private sector.

EO S-03-05

Issued by the California Governor on June 1, 2005, EO S-3-05 set intermittent emissions reduction targets intended to provide incremental progress toward Assembly Bill (AB) 32's GHG emissions reduction target of reducing emissions to 1990 levels by 2020. EO S-3-05 set forth the following GHG reduction targets:

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

EO B-29-15

In January 2014, Governor Brown signed EO B-29-15, which directed the State Water Resources Control Board to impose restrictions to reduce residential potable urban water usage; to implement water efficiency measures at commercial, industrial, and institutional properties; and to prohibit irrigation with potable water for certain uses. In addition, this directed the California DWR to lead a statewide initiative to replace laws and ornamental turfs with drought-tolerant landscapes.

Pursuant to the EO B-29-15, water-related standards were adopted as amendments to the 2013 CalGreen Code and carried over into the later codes.

Following EO-B-29-2015, Governor Brown signed EO-B-37-16 in May 2016 to promote more conscious consumer water use and to improve agricultural water use efficiency and drought planning.

EO B-30-15

On April 15, 2015, Governor Edmund G. Brown Jr. issued EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. EO B-30-15 was issued to align California's GHG emissions reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris, held in 2015.

The emissions reduction target of 40 percent below 1990 levels by 2030 is intended to keep California on track to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050.

EO B-55-18

Established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This EO directs CARB to ensure future Climate Change Scoping Plans (discussed below) identify and recommend measures to achieve the carbon neutrality goal.

EO N-19-19

Among other things, this EO required the Department of Finance to create a Climate Investment Framework; and required the State Transportation Agency to align transportation spending with achieving objectives of the Climate Change Scoping Plan, and to reduce vehicle miles traveled (VMT) through strategic discretionary investments.

EO N-79-20

Signed by the Governor on September 23, 2020, EO N-79-20 provides even more ambitious goals and requirements. These include 100 percent of in-state sales of passenger cars and trucks being ZEVs by 2035; 100 percent of operating medium- and heavy- duty vehicles being ZEVs by 2045; and 100 percent of drayage trucks and off-road vehicles and equipment being ZEVs by 2035. The order also tasks the California Energy Commission (CEC) with providing an updated assessment of the infrastructure needed to support this level of ZEV adoption.

The Governor's Interagency Working Group on ZEVs developed the ZEV Action Plan, issued in 2013 and subsequently updated in 2016 and 2018, to identify actions that support the state's ZEV goals. Some actions in the ZEV Action Plan that are particularly relevant to the Clean Transportation Program include ensuring ZEVs are accessible to a broad range of Californians and making ZEV technologies commercially viable in the medium- and heavy-duty and freight sectors. Many recommendations in the ZEV Action Plan have been captured in the Clean Transportation Program since the inception of the program and continue to be program priorities.

EO N-82-29

Directs the California Natural Resources Agency, in consultation with other state agencies, to establish the California Biodiversity Collaborative, to bring together governmental partners, California Native American tribes, experts, business and community leaders, and other stakeholders from across the state to protect and restore the state's biodiversity. EO N-82-29 declares that the state's goal is to conserve at least 30 percent of California's land and coastal waters by 2030. To further this goal, the EO directed the California Resources Agency and other relevant state agencies, in consultation with the California Biodiversity Collaborative, to develop and report strategies to the governor no later than February 1, 2022.

Legislative GHG Reduction Targets

State law sets forth the following requirements for reducing statewide levels of GHG emissions by 2020 and 2030.

Assembly Bill 32, Health & Safety Code Section 38500 et seq.

Codified the 2020 reduction target of EO S-03-05 (i.e., reduce statewide GHG emissions to 1990 levels by 2020). AB 32 required CARB to develop a Scoping Plan that describes California's strategy for achieving the 2020 target and to update it every five years.

Senate Bill 32, Health & Safety Code Section 38566

Codified the 2030 reduction target of EO B-30-15 (i.e., reduce statewide GHG emissions to 40 percent below 1990 levels by 2030). Adopted in tandem with Senate Bill (SB) 32, AB 197 of 2016 (Chapter 250, Statutes of 2016) required CARB, in implementing SB 32's 2030 GHG reduction target, to (1) prioritize emissions reductions to consider the "social costs" of GHG emissions and (2) prioritize "direct emission reductions" at large stationary sources and at mobile sources.

AB 1279, Health and Safety Code Section 38562.2

On September 16, 2022, the California Legislature enacted AB 1279, which codified stringent emissions targets for the state of achieving carbon neutrality no later than 2045 and negative emissions thereafter, and an 85 percent reduction in 1990 emissions level by 2045. (This superseded the previous GHG emissions reduction target set forth by EO S-3-05.)

State Agency GHG Reduction Plans and Strategies

CARB and other state agencies have adopted several plans and strategies to reduce statewide GHG emissions as described below.

Scoping Plan

CARB released the *Final 2022 Scoping Plan for Achieving Carbon Neutrality* (CARB's 2022 Scoping Plan) on November 16, 2022, as also directed by AB 1279, and adopted this plan on December 16, 2022 (CARB 2022). CARB's 2022 Scoping Plan traces the pathway for the state to achieve a no net increase and an 85 percent reduction in 1990 anthropogenic emissions goals by no later than 2045, as well as the short-term GHG reduction goal of 40 percent below 1990 emissions by 2030 pursuant to SB 32 (CARB 2022). Notably, CARB's 2022 Scoping Plan pathway to carbon neutrality by 2045 demonstrated that the state would need to achieve a 48 percent reduction in statewide emissions by 2030 to meet this ambitious target by 2045; however, this target is not codified.

CARB's 2022 Scoping Plan assesses progress toward the state's statutory 2030 target, outlining different scenarios for achieving statewide carbon neutrality by 2045. Additionally, the Plan identifies key GHG emissions sectors, such as transportation and building energy, where local development should focus on reducing emissions. Appendix D, "Local Actions," of CARB's 2022 Scoping Plan provides lead agencies with guidance on recommended GHG reduction strategies for new developments that support progress towards the state's long-term GHG reduction goals established in AB 1279. These strategies are focused on the three priority areas: transportation electrification, VMT reduction, and building decarbonization. Examples of recommended GHG reduction strategies include but are not limited to installing of EV chargers, increasing access to public transit and clean mobility options, installation of energy-efficient appliances and equipment, and facilitating the deployment of renewable energy.

Mobile Source Strategy

The Mobile Source Strategy was developed by CARB to provide an integrated planning perspective and common vision for transforming the mobile sector to achieve air quality and climate change goals. It uses conceptual scenarios to illustrate the emissions-reduction potential of different vehicle technology mixes and VMT reductions to inform state policy development (CARB 2021). The Mobile Source Strategy addresses on-road vehicles, including passenger cars and light-duty trucks, medium and heavy-duty trucks, and buses, as well as off-road vehicles and equipment, including locomotives, cargo-handling equipment, and construction equipment. It supports multiple planning efforts, including the state implementation plans for criteria air pollutants, the scoping plan, the Short-Lived Climate Pollutant Reduction Strategy (discussed below), and the Sustainable Freight Action Plan (discussed below). CARB is required to update the Mobile Source Strategy every 5 years. The 2020 Mobile Source Strategy continued the multipollutant planning approach to illustrate the pathways forward for the various mobile sectors that are necessary in order to achieve California's numerous goals and targets through 2050. CARB is currently developing the 2025 Mobile Source Strategy. A discussion draft of the 2025 Mobile Source Strategy was released on October 11, 2024 (CARB 2024).

SB 375, Chapter 728, Statutes of 2008

SB 375 provides a planning process that integrates regional transportation, land use, GHG reduction, and housing planning. It requires regional transportation plans (RTPs) to incorporate a sustainable communities strategy (SCS) that demonstrates how the region would achieve regional GHG emission reduction targets for passenger vehicles set by CARB. CARB revised SANDAG's GHG targets in 2018 to 15 percent reduction in passenger vehicle emissions per capita by 2020 and 19 percent by 2035 using a 2005 baseline.

Recent reports on the state's climate goals suggest that the regional 2035 GHG emissions reduction targets under SB 375 are not adequate to fully meet the GHG reduction goals of SB 32 (CARB 2022). Collectively, CARB determined that if the state's 18 MPOs all met the SB 375 GHG emission reduction targets set by CARB in 2018, a 19 percent reduction in per capita vehicle miles travelled (VMT) would be achieved by 2035. In The Updated Final Staff Report to the Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets (CARB 2018), CARB expressed that to meet the statewide reduction goals set forth by SB 32, the state would need to reduce per capita GHG emissions by 25 percent by 2035, resulting in a 6 percent gap between the 19 percent emissions reductions targets set for the regions (averaged for the 18 MPOs and compared to a baseline year of 2005). Notably, CARB is required to update the reduction targets under SB 375 every 8 years and is currently conducting workshops to solicit opinions from stakeholders for the next target update planned for 2026. It is possible that 2035 targets for MPOs, including SANDAG, could be adjusted during this process to account for this gap identified by CARB.

In the *2022 Progress Report California's Sustainable Communities and Climate Protection Act*, CARB states that besides implementing the strategies in the SCSs and their associated VMT reduction, the state will need to identify ways to get even more emission reductions from transportation and land use strategies to reduce VMT sufficiently by 2030 and 2045 (CARB 2022). CARB states that California is still not reducing GHG emissions from personal vehicle travel as needed to meet climate commitments and as targeted under SB 375 (CARB 2022). CARB notes that per capita GHG emissions and per capita VMT continued to increase, though more slowly than what was identified in CARB's previous 2018 Progress Report. Under SB 375, CARB must agree that SCSs are able to meet GHG-reduction targets. For this purpose, in September 2019, CARB published updated SCS Program and Evaluation Guidelines, clarifying the scope of the updated strategy-based SCS evaluation process, which consists of four key components (CARB 2019):

- Tracking implementation under SB 150. Report on the progress regions have made toward meeting their SB 375 GHG-reduction targets.
- Policy commitments. Determine whether the planned strategies and commitments, when fully and effectively implemented, would achieve the GHG-reduction targets and whether there are any risks to not achieving those commitments.
- Incremental progress. Report on whether an MPO's proposed SCS has more or enhanced strategies than the currently adopted SCS.
- Equity. Report on the efforts that MPOs are taking to meet federal and state requirements related to equity.

The policy commitments component is the only component used by CARB as the basis for accepting or rejecting the MPO's SB 375 GHG emission reduction target determination.

Short-Lived Climate Pollutant Strategy

SB 1383 (Chapter 395, Statutes of 2016) requires CARB to develop and implement the SLCP with the following reductions in emissions by 2030 compared to 2013 levels: methane by 40 percent, HFCs by 40 percent, and black carbon (nonforest) by 50 percent. The bill also specifies targets for reducing organic waste in landfills. SB 1383 also requires CARB to adopt regulations to be implemented on or after January 1, 2024, specific to the dairy and livestock industries, requiring a 40 percent reduction in methane emissions below 2013 levels by 2030, if certain conditions are met. Lastly, the bill requires CalRecycle to adopt regulations to achieve specified targets for reducing organic waste in landfills. Per its directive, CARB adopted the SLCP Strategy in 2017, establishing a path to decrease SLCPs from various sectors of the economy. Strategies span from wastewater and landfill practices and methane recovery to reducing natural gas leaks and consumption. The SLCP Strategy also identifies measures that can reduce HFC emissions through incentive programs and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment (CARB 2017).

Climate Adaptation Strategy

The 2022 California Climate Adaptation Strategy Implementation Report outlines the state's key climate resilience priorities, includes specific and measurable steps, and serves as a framework for action across sectors and regions in California.

The priorities outlined in the Strategy are as follows:

- Strengthen Protections for Climate Vulnerable Communities,
- Bolster Public Health and Safety in Light of Increasing Climate Risks,
- Build a Climate Resilient Economy,
- Accelerate Nature-Based Climate Solutions and Strengthen Climate Resilience of Natural Systems
- Make Decisions based on the Best Available Climate Science, and
- Partner and Collaborate to Leverage Resources.

The next iteration of the California Climate Adaptation Strategy is currently in development, with a draft available for review (the period for public comments closed on July 12, 2024) (CNRA 2024).

On-Road Vehicles

Advanced Clean Cars Program (Passenger Vehicles)

AB 1493 of 2002 (known as Pavley I, Chapter 200, Statutes of 2002) provided the nation's first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that lowered GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards referred to as the Advanced Clean Cars (ACC) Program's Low Emission Vehicle (LEV) III Regulation) was adopted for vehicle MYs 2017–2025 in 2012 (13 California Code of Regulations [CCR] Section 1900 et seq.).

The ACC Program also includes the Zero Emission Vehicle Program and the Clean Fuels Outlet Regulation. The Zero Emission Vehicle Program is designed to achieve California's long-term emission reduction goals by requiring manufacturers to offer for sale specific numbers of ZEVs, which include battery electric, fuel cell, and plug-in hybrid electric vehicles (EVs). The Clean Fuels Outlet regulation is intended to ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of new advanced technology vehicles as they come to market. The Advanced Clean Cars II (ACC II) Program was adopted by CARB in August 2022, and provides the regulatory framework for ensuring the sales requirement goal of EO N-79-20 to ultimately reach 100 percent ZEV sales in the state by 2035.

CARB certified the Advanced Clean Cars II Program (ACC II Program) on August 25, 2022. The ACC II Program builds upon the existing ACC program and establishes more stringent ZEV sales requirements for future benchmark years. CARB also established more stringent GHG emission standards and fuel efficiency standards for fossil fuel–powered on-road vehicles than EPA's standards. In addition, the program's ZEV regulation required battery, fuel cell, and plug-in hybrid EVs to account for up to 15 percent of California's new vehicle sales by 2025. In the fourth quarter of 2024, Californians purchased 108,303 ZEVs), representing 25.1 percent of all new vehicle sales in the state (CEC 2025). The ACC II Program also sets sales requirements to ultimately reach the goal of 100 percent ZEV sales in the state by 2035. The implications of this federal resolution on the state's capability to enforce its independent fuel economy standards are uncertain at this time, as the California Attorney General filed a lawsuit against the federal government on June 12, 2025, to challenge Public Law 119-15, enacting House Joint Resolution 87. Whether this action is successful is unknown, as is the possibility that a federal judge will issue a stay to halt the implementation of the ACC II regulation during the legal process. Notably, the mobile source emissions calculations and estimates disclosed in this analysis do not account for the ACC II program; therefore, the mobile source emissions account for this federal action.

Zero Emission Vehicles

In 2012, Governor Brown issued EO B-16-2012, which calls for the increased penetration of ZEVs into California's vehicle fleet in order to help California achieve a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of that statewide target for the transportation sector, the EO also calls upon CARB, the CEC, and the CPUC to establish benchmarks that will: (1) allow over 1.5 million ZEVs to be on California roadways by 2025, and (2) provide the State's residents with easy access to ZEV infrastructure. EO B-16-2012 specifically directed California to "encourage the development and success of ZEVs to protect the environment, stimulate economic growth, and improve the quality of life in the State."

In 2018, Governor Brown also issued EO B-48-18, which launched an eight-year initiative to accelerate the sales of ZEVs through a mix of rebate programs and infrastructure improvements. The EO also sets a new target of five million ZEVs in California by 2030 and includes funding for multiple state agencies to increase EV charging infrastructure and provide purchase rebates/incentives.

In September 2018, the Governor's Interagency Working Group on Zero Emission Vehicles published the 2018 ZEV Action Plan Priorities Update (Governor's Interagency Working Group on Zero-emission Vehicles 2018). This update is the result of Governor Brown's directive to update the 2016 Zero Emission Vehicle Action Plan to help expand private investment in zero emission vehicle infrastructure, particularly in low income and disadvantaged communities. The 2018 Priorities Update serves three fundamental purposes: 1) Provide direction to state agencies on the most important actions to be executed in 2018 to enable progress toward the 2025 targets and 2030 Vision; 2) Give stakeholders transparency into the actions state agencies plan to take (or are taking) this year to further the ZEV market; and 3) Create a platform for stakeholder engagement, feedback, and collaboration.

Low Carbon Fuel Standard

On November 8, 2024, CARB approved amendments to the LCFS regulation to maintain momentum for global, national, and local private sector investments in cleaner fuel and transportation options for consumers, accelerating the deployment of zero-emission infrastructure and clean fuel production to support clean vehicle regulations, and keeping the state on track to meet statutorily mandated air quality and climate targets (CARB 2025c). On January 3, 2025, CARB submitted the final proposed amendments to the LCFS regulation to the Office of Administrative Law (OAL) for review in accordance with Government Code Section 11349.1 (CARB 2025c). On February 18, 2025, OAL issued a routine disapproval of amendments to the LCFS regulation on technical grounds, not on the merits of the regulation. CARB staff made necessary revisions and resubmitted the regulation for OAL approval on May 16, 2025. On June 27, 2025, OAL approved this rulemaking and filed it with the Secretary of State with an effective date of July 1, 2025.

Medium- and Heavy-Duty Vehicles

In 2008, CARB approved the Phase 1 Tractor-Trailer Greenhouse Gas Regulation to reduce GHG emissions by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires (13 CCR Section 2020 et seq.). The regulation applies to certain Class 8 tractors manufactured for use in California and is harmonized with the parallel EPA and NHTSA Phase 1 heavy-duty truck standards. CARB amended the Tractor-Trailer Greenhouse Gas Regulation in 2019 (Phase 2 standards) to align with EPA and NHTSA Phase 2 heavy-duty truck standards.

Advanced Clean Fleets

CARB's 2022 Advanced Clean Fleets (ACF) regulation was developed to reduce diesel PM through the transition of medium- and heavy-duty trucks to become fully electric by 2045. At the time of the writing of this Draft EIR, California has withdrawn its request for a waiver and authorization for the addition of the Advanced Clean Fleets regulation to its emissions control program (CARB 2025d). CARB is not enforcing the existing portions of the Advanced Clean Fleets regulation that require a federal waiver or authorization, such as the portions of the Advanced Clean Fleet regulation that apply to high priority and drayage fleets. However, not all elements of the Advanced Clean Fleets regulation require a federal waiver or authorization (CARB 2025d). State and local government fleets will still be required to be fully electric by 2045, as this portion of the Advanced Clean Fleets regulation does not require a federal waiver. On September 25, 2025, CARB held a board meeting during which it considered amendments to the Advanced Clean Fleets regulation, including a repeal of requirements affecting federal and private fleets, and an amendment to the Low Carbon Fuel Standard regulation. At this meeting, CARB proposed Resolution 25-9 "*Proposed Amendments to the Advanced Clean Fleets and Low Carbon Fuel Standard Regulations,*" At the time of the writing of this EIR, a final decision has not been made in regard to this proposal.

Off-Road Equipment

Transport Refrigeration Units

CARB's 2022 amendments to the 2004 TRU Airborne Toxic Control Measure increases the stringency of TRU fine particulate matter ($PM_{2.5}$) regulations and requires the electrification of diesel-powered TRU trucks by 2029. While the regulation targets emissions of $PM_{2.5}$, the regulation would have the co-benefit of reducing GHG emissions by increasing utilization of electric TRUs and thereby reducing fossil fuel consumption. On January 3, 2025, EPA granted California Clean Air Act authorization of elements of its TRU Regulation. However, in its action, EPA did not act on the zero-emission elements of the TRU Regulation regarding requirements for the turnover of at least 15 percent of the diesel-fueled truck TRU fleet to zero-emission TRU by December 31, 2023, (and each year thereafter). On January 13, 2025, CARB withdrew its request for authorization of these zero-emission TRU requirements (CARB 2025a).

CARB Zero-Emission Forklift Regulation

In June 2024, CARB approved for adoption the Zero-Emission Forklift (ZEF) Regulation. The measure was identified in CARB's Mobile Source Strategy, SIP, and Sustainable Freight Action Plan as one of several near-term actions intended to help California meet its air quality and climate goals through zero-emission technology. The regulation requires California fleets to phase out forklifts that utilize large spark-ignition (LSI) engines with a lift capacity of up to 12,000 pounds over time. The regulation implements a restriction on the purchase of LSI forklifts starting on January 1, 2026, and phase-out requirements starting on January 1, 2028, for existing LSI forklifts.

Until EPA grants such authorization or determines authorization is not necessary, CARB staff will not enforce the ZEF regulation against any privately-owned or operated fleets. CARB will not prohibit manufacturers, dealers, or rental agencies from producing, offering for sale, selling, or renting LSI forklifts in California if the forklifts meet all other federal and state regulations. CARB will not enforce the ZEF regulation for acts or omissions by the above-identified private parties that occur prior to EPA authorization of the ZEF regulation (CARB 2025b).

Energy Sources

Renewables Portfolio Standard

SB 1078 (Sher 2002) established California's Renewables Portfolio Standard (RPS). The program sets continuously escalating renewable energy procurement requirements for the state's load-serving entities. Generation must be procured from RPS-certified facilities. SB 2 (1X) of 2011 obligated all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. The California Public Utilities Commission (CPUC) and CEC are jointly responsible for implementing the program. All electricity retail sellers had an interim target between compliance periods to serve at least 38.5 percent of their load with RPS-eligible resources by December 31, 2022. In general, retail sellers either met or exceeded the interim 38.5 percent target and are on track to achieve their compliance requirements. In 2018, SB 100 (Public Utilities Code Sections 399.11, 399.15, 399.30 and, Section 454.53) was signed into law, which again increases the RPS to 60 percent by 2030 and requires all the state's electricity to come from carbon-free resources by 2045.

SB 100 established a new RPS target of 50 percent by 2026, increases the RPS target in 2030 from 50 to 60 percent, and establishes a goal of 100 percent zero-carbon energy sources by 2045. SB 1020 superseded the goals of SB 100 by requiring that 90 percent of all retail sales of electricity to California end-use customers are procured from renewable energy and zero-carbon resources by December 31, 2035. The requirement increases to 95 percent by December 31, 2040, and to 100 percent by December 31, 2045. Under SB 1020, state agency facilities must use 100 percent renewable and zero-carbon energy resources by December 31, 2035.

Building Efficiency

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

California's energy consumption of new residential and nonresidential buildings is regulated by the California Code of Regulations Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). CEC updates the California Energy Code every three years with more stringent design requirements for reduced energy consumption, resulting in fewer GHG emissions. The 2022 California Energy Code went into effect on January 1, 2023. The 2022 California Energy Code advances the onsite energy generation progress started in the 2019 California Energy Code by encouraging electric heat pump technology and use, establishing electric-ready requirements when natural gas is installed, expanding solar photovoltaic (PV) system and battery storage standards, and strengthening ventilation standards to improve indoor air quality.

The 2025 Building Energy Efficiency Standards (2025 California Energy Code) were adopted on September 11, 2024, and will go into effect for commercial uses on January 1, 2026. While not applicable to the project, a commercial land use, it is notable that the 2025 California Energy Code will not go into effect for residential uses until January 1, 2031. This was affected following the signing of AB 130 and SB 131 by the Governor on June 30, 2025 as part of the effort to address housing needs in the state. Regarding commercial buildings, the 2025 California Energy Code puts particular emphasis on encouraging efficient electric heat pump technology for space and water heating in newly constructed select nonresidential building types, replacing end-of-life rooftop heating, ventilation, and air-conditioning units of a specific size with high efficiency systems, establishing electric-ready requirements for commercial kitchens, updating solar and storage standards for buildings to make clean energy available for onsite use while minimizing exports to the electrical grid.

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code, also known as the CALGreen Code, is a portion of the California Building Code developed by CEC that consists of both voluntary and mandatory requirements related to green

building standards for statewide residential and non-residential construction. The voluntary provisions of the CALGreen Code often guide the adoption of local reach codes by incorporated cities and unincorporated counties. The current version is the 2022 CALGreen Code, which took effect on January 1, 2023. Compared to the 2019 CALGreen Code, the 2022 CALGreen Code strengthened sections pertaining to EV and bicycle parking, water efficiency and conservation, and material conservation and resource efficiency, among other sections of the CALGreen Code. The CALGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. These codes are adopted by local agencies that enforce building codes and are used as guidelines by state agencies for meeting the requirements of EO B-18-12.

The 2025 CALGreen Code was adopted on September 11, 2024, and goes into effect for commercial uses on January 1, 2026. Similar to the discussion of the 2025 California Energy Code above, while not applicable to the project, which is a commercial land use, it is notable that the 2025 CALGreen Code will not go into effect for residential uses until January 1, 2031. This was affected following the signing of AB 130 and AB 131 by the Governor on June 30, 2025 as part of the effort to address housing needs in the state. Relative to the 2022 CALGreen Code, the 2025 version includes increased requirements for EV charging infrastructure (i.e., a higher percentage of parking spaces that must be equipped with EV chargers and more stringent requirements for the types of chargers that must be installed) in both residential and non-residential buildings. The 2025 CALGreen Code also includes required analysis of Embodied Carbon in Building Materials, which was not required under the 2022 CALGreen Code. Lastly, the 2025 CALGreen Code includes updates to energy efficiency standards aimed at further reducing energy consumption in buildings and promoting the use of renewable energy sources.

REGIONAL

SACOG Metropolitan Transportation Plan and Sustainable Communities Strategy

SB 375 requires SACOG to incorporate the Sustainable Communities Strategy (SCS) into its Metropolitan Transportation Plan (MTP) that achieves the GHG emission reduction targets set by CARB. The SACOG 2020 MTP/SCS was adopted on November 18, 2019. In November of 2022, SACOG's Board of Directors authorized SACOG staff to pursue state legislation to extend the MTP/SCS schedule, which moved the plan adoption date from Spring 2024 to Fall 2025. Since then, Assembly member Aguiar-Curry introduced a bill (AB 350) that provides SACOG with the legislative authorization needed to keep the current SCS in compliance with state law for an additional two years. This legislation went into effect on January 1, 2024.

SACOG is currently developing a major update to the regional plan, which is called the 2025 Blueprint (SACOG 2025a). The Draft 2025 Blueprint Plan, released in June 2025, is available for review and public comment (SACOG 2025b). The goals and policies of the Draft 2025 Blueprint Plan build upon the commitments of the 2020 MTP/SCS and on the Triple Bottom Line Framework, which refers to an equitable plan, a focus on economic opportunity, and the purpose to help foster a safe and resilient environment for all residents. The Draft 2025 Blueprint Plan outlines several factors that support emission reductions to meet the GHG reduction target for the region set by CARB: shortened vehicle trips and carpooling, increased transit, bike, and walk trips, improvements to transportation pricing, intelligent transportation systems and transportation management, local electric vehicles incentives, and telework (SACOG 2025b).

LOCAL

El Dorado County Air Quality Management District

While the El Dorado County Air Quality Management District (EDCAQMD) provides guidance for assessing impacts related to air quality within its jurisdiction, EDCAQMD currently does not have recommended GHG thresholds or guidance based on the statewide GHG targets mandated by SB 32 and AB 1279. Also, at the time of writing this Draft EIR, El Dorado County does not have an adopted Climate Action Plan (CAP) consistent with State CEQA Guidelines Section 15185.5(b). On March 25, 2008, the El Dorado County Board of Supervisors adopted the "Environmental Vision for El Dorado County" under Resolution No. 29-2008, brought forward by the Youth Commission. The Resolution sets

forth goals and calls for implementation of positive environmental changes to reduce global impact, improve air quality and reduce dependence on landfills, promote alternative energies, increase recycling, and encourage local governments to adopt green and sustainable practices (El Dorado County n.d.).

El Dorado County Regional Transportation Plan

El Dorado County Transportation Commission (EDCTC) is responsible for the development of a county-specific RTP. The Sacramento Area Council of Governments (SACOG) and EDCTC work together to ensure the county-specific RTP and SACOG's metropolitan transportation plan (MTP) are consistent.

The current RTP is the El Dorado County RTP 2020-2040, which was adopted in November 2020. The overall goals of this RTP are: integrate local and regional land use, air quality and transportation planning; encourage sustainable transportation options, embrace new technologies and develop climate adaptation and resiliency strategies; optimize the existing roadway system; promote public transit system; promote and preserve aviation facilities and services; promote active transportation system; develop and support an integrated transportation system; secure maximum available funding for maintenance, expansion and improvements of all facilities and services.

EDCTC began the planning process for the development of the 2025-2045 RTP in November 2023 and has held several meetings with the Regional Transportation Plan Advisory Committee to discuss the progress made to date. EDCTC recently published the Draft Policy Element of 2025-2045 RTP for stakeholder and public review, and will be releasing the Draft Environmental Impact Report for the 2025-2045 RTP for public comment later this year prior to the adoption of this RTP (EDCTC 2025). The vision for the Draft 2025-2045 RTP is to enhance mobility, embrace innovation, ensure equitable access, celebrate rural heritage and identify, empower community engagement, and facilitate sustainable living. Additionally, the Draft 2025-2045 RTP continues to focus on the goals that were established in the 2020-2040 RTP.

El Dorado County General Plan

The El Dorado County General Plan does not specifically include policies or goals to reduce GHG emissions. However, the General Plan provides countywide goals and policies aimed at improving energy efficiency, transportation efficiency, and reducing air emissions, all of which would reduce or sequester GHGs.

3.7.2 Environmental Setting

THE PHYSICAL SCIENTIFIC BASIS OF GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on Earth.

Human-caused emissions of GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is very likely that human-induced GHG increases were the main driver of tropospheric warming since comprehensive satellite observations started in 1979, and virtually certain that human-induced GHG forcing is the primary driver of the observed changes in hot and cold extremes on the global scale (IPCC 2023).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality

effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration.

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is considered to be enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

GREENHOUSE GAS EMISSIONS SOURCES AND SINKS

Emissions of CO_2 are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and forest fires. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water) and are two of the most common processes for removing CO_2 from the atmosphere.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

IPCC predicts that the global mean surface temperature increase by the end of the 21st century (2081–2100), relative to 1986–2005, could range from 0.5 to 8.7°F. Additionally, IPCC projects that global mean sea-level rise will continue during the 21st century, very likely at a faster rate than observed from 1901 to 2015. By 2100, the rise will likely range from 18 to 33 inches (0.43 to 0.84 meters), relative to 1986–2005 (IPCC 2023).

The year 2024 was the warmest year since global records began in 1850 at 1.29 degrees Celsius (°C, or 2.32°F) above the 20th century average of 13.9 degrees Celsius (°C) (57.0°F). This value is 0.10°C (0.18°F) more than the previous record set in 2023. The 10 warmest years in the 174-year record have all occurred during the last decade (2014–2024) (NOAA 2025a).

The IPCC began its seventh assessment cycle in July 2023. The initial Scoping Meeting to prepare the draft outline of the three Working Groups that will contribute to the Seventh Assessment Report took place in December 2024. The Synthesis Report is planned to be released by late 2029.

According to *California's Fourth Climate Change Assessment*, with global GHGs reduced at a moderate rate, California would experience average daily high temperatures that are warmer than the historic average by 2.5 °F from 2006 to 2039, by 4.4°F from 2040 to 2069, and by 5.6°F from 2070 to 2100; if GHG emissions continue at current rates California will experience average daily high temperatures that are warmer than the historic average by 2.7°F from 2006 to 2039, by 5.8°F from 2040 to 2069, and by 8.8°F from 2070 to 2100 (OPR et al. 2018).

Since its previous climate change assessment in 2012, California has experienced several of the most extreme natural events in its recorded history: a severe drought from 2012 to 2016; an almost non-existent Sierra Nevada winter snowpack in 2014-2015; increasingly large and severe wildfires; and back-to-back years of the warmest average temperatures (OPR et al. 2018). According to OEHHA, California experienced the driest 4-year statewide precipitation on record from 2012 through 2016 (OEHAA 2024). The six warmest years in California have all occurred since 2014 (2014, 2015, 2016, 2017, 2018, and 2020 [NOAA 2022]).; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018). In contrast, the northern Sierra Nevada experienced one of its wettest years on record during the 2016–2017 water year (CNRA 2018).

These changes in precipitation exacerbate wildfires throughout California through a cycle of high vegetative growth coupled with dry, hot periods which lowers the moisture content of fuel loads. As a result, the frequency, size, and devastation of forest fires have increased. In November 2018, the Camp Fire destroyed the town of Paradise in Butte

County and caused 85 fatalities, becoming the state's deadliest fire in recorded history, and the largest fires in the state's history have occurred in the 2018–2020 period. Most recently in January of 2025, the Los Angeles area fires burned an area of approximately 50,000 acres, killing more than two dozen people, destroying over 15,000 homes and businesses, and creating unhealthy air quality for millions of people (NOAA 2025b). Moreover, changes in the intensity of precipitation events following wildfires can also result in devastating landslides. In January 2018, following the Thomas Fire, 0.5 inches of rain fell in 5 minutes in Santa Barbara causing destructive mudslides formed from the debris and loose soil left behind by the fire.

As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and the Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018). Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet and the glaciers atop Greenland, the sea level along California's coastline is expected to rise 54 inches by 2100 if GHG emissions continue at current rates (OPR et al. 2018).

Temperature increases and changes to historical precipitation patterns will likely affect ecological productivity and stability. Existing habitats may migrate from climatic changes where possible, and those habitats and species that cannot retreat will be severely threatened. Altered climate conditions will also facilitate the movement of invasive species to new habitats, thus potentially outcompeting native species. Altered climatic conditions dramatically endanger the survival of arthropods (e.g., insects, spiders) which could have cascading effects throughout ecosystems (Lister and Garcia 2018). Conversely, a warming climate may support the populations of other insects such as ticks and mosquitos, which transmit diseases harmful to human health such as the Zika virus, West Nile virus, and Lyme disease.

Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure, crop production, forests and rangelands, and public health (CNRA 2018; OPR et al. 2018). The effects of climate change will also have an indirect adverse impact on the economy as more severe natural disasters cause expensive physical damage to communities and the state.

GREENHOUSE GAS EMISSION SOURCES

In 2022, the United States emitted about 6.3 billion $MTCO_2e$ or about 19 MT/person/year, calculated by dividing the emissions total by the United States Census Bureau population estimate for 2022 (EPA 2024b, United States Census Bureau 2022). This represents a reduction below 2005 total emission levels of approximately 17 percent. Of the five major sectors nationwide – residential, commercial, industrial, electric power generation, and transportation – transportation accounts for the highest fraction of GHG emissions (approximately 37 percent of emissions from these five sectors). These emissions are entirely generated from direct fossil fuel combustion. Approximately 57 percent of these transportation emissions resulted from passenger car and light duty truck use. The remaining emissions came from other transportation activities, including the combustion of diesel fuel in medium- and heavy-duty vehicles, and jet fuel in aircraft. According to the Inventory of U.S. Greenhouse Gas Emissions and Sinks, from 1990 to 2022 as a whole, transportation emissions from fossil fuel combustion increased by approximately 19 percent (EPA 2024b).

In 2022, emissions from statewide emitting activities were 371.1 $MMTCO_2e$, 10.2 $MMTCO_2e$ lower than 2021 levels and 59.9 $MMTCO_2e$ below the 2020 GHG limit of 431 $MMTCO_2e$. In 2014, statewide GHG emissions dropped below the 2020 GHG limit and have remained below the limit since that time. Per capita GHG emissions in California have dropped from a 2001 peak of 13.8 metric tons per person to 9.7 metric tons per person in 2021, a 30.0 percent decrease. Overall trends in the AB 32 GHG Inventory also continue to demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) is declining. The continuation of the downward GHG emissions trend from 2021 to 2022 indicates that the increase in emissions from 2020 to 2021 is likely an anomaly caused by broader economic trends related to the COVID-19 pandemic and associated recovery (CARB 2024).

As discussed previously, GHG emissions are attributable in large part to human activities. Table 3.7-1 summarizes the statewide GHG inventory for California; transportation, industry, and electricity generation are the largest GHG emission sectors.

Table 3.7-1 Statewide GHG Emissions by Economic Sector (2022)

Sector	Percent
Transportation	39
Industrial	23
Electricity generation (in-state)	11
Electricity generation (imports)	5
Agriculture	8
Residential	8
Commercial	6
Not specified	<1

Note: Percentages may not sum exactly due to rounding.

Source: CARB 2024.

In El Dorado County, the primary source of GHG is fossil fuel combustion in the transportation sector (estimated at 70 percent of countywide GHG emissions). Second are residential sources (approximately 20 percent), and commercial/industrial sources are third (approximately 7 percent). The remaining sources are waste/landfill (approximately 3 percent) and agricultural (<1 percent) (El Dorado County n.d.)

3.7.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The GHG emission analysis provided below is based on the EDH Costco Project Greenhouse Gases Technical Report and the EDH Costco Project North Site Remainder Area Technical Report provided in Appendix F.

Construction

Short-term construction-generated GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.29, as recommended by EDCAQMD and other air districts in California (CAPCOA 2023). Based on the anticipated land use types (i.e., discount club, enclosed parking with elevator, gasoline/service station, parking lot, and roadway widening) and construction activities (e.g., site clearing, grading, paving, building construction) and phasing buildout, construction-related GHG emissions were estimated for each year that construction would occur. Construction of the Costco project was assumed to occur beginning in early July 2026 and ending in mid-May 2027, or approximately 11 months. Construction was assumed to occur 7 days per week. Notably, two scenarios are considered for the construction of the project that have different material movement amounts in the grading phase. Scenario 1 assumes that the excavated material from portions of the project site would be used as fill during grading. Scenario 2 conservatively assumes that all the excavated material would be exported offsite and soil would be imported for fill during grading. To provide a conservative analysis, the worst-case emissions scenario (i.e., Scenario 2) is used in the evaluation of construction-related GHG emissions as this scenario would involve greater GHG emissions related to the increase in material hauling trips relative to Scenario 1.

On-road construction GHG emissions (e.g., emissions from worker and vendor commuting, concrete trucks, and trucks used for construction debris and soil/material hauling) were calculated in CalEEMod based on model defaults for worker trips and vehicle miles traveled (VMT) and with emission factors from EMFAC2021. The number of haul trips was estimated by CalEEMod based on the volume of soil to be imported/exported, and the amount of demolition debris generated. The number of concrete truck trips was based on project-specific information.

Additionally, the GHG emissions associated with on-site idling of concrete trucks during the building construction phase were estimated using concrete truck trip rates, idling duration per trip, and emission factors from EMFAC2021. Refer to Appendix F for additional construction modeling details.

The construction GHG analysis also factors the frontage and off-site roadway improvements associated with the Costco project identified in Chapter 2, "Project Description."

The North Site Remainder Area future development would occur on roughly 13.79 acres of land to the northeast of the Costco project and is assumed to include up to 138,000 square feet of commercial/retail development. Construction was assumed to occur over an approximately 12-month period, with construction activities commencing in May 2027 and concluding in May 2028. Because the material movement volumes required for construction within the North Site Remainder Area are currently unknown, excavation and hauling volumes (and thus associated GHG emissions) were assumed to be the same as those used to estimate GHG emissions from the Costco project's construction Scenario 2.

Operation

Operation-related GHG emissions for the Costco project were estimated using CalEEMod for the following sources: area sources (e.g., landscape maintenance equipment), energy use (i.e., electricity and natural gas consumption), water use, solid waste generation, refrigerant use, and stationary sources (i.e., emergency generators).

Electricity and natural gas demand for the Costco project land uses were based on model defaults except for the proposed gasoline dispensing facility (GDF), which does not use natural gas in its operation, To account for the GDF's energy use, CalEEMod default natural gas usages were converted into equivalent electricity usages by applying the ratio of efficiencies between natural gas and equivalent electric appliances. The total energy demand for the project incorporates 2019 Title 24 standards. Notably, the project would meet or exceed the California Energy Code and CALGreen standards in effect at the time of building permit application. Therefore, compliance with the 2019 Title 24 standards provides a conservative estimate of the project's energy demand due to newer requirements being more stringent and requiring greater energy efficiency than the 2019 standards. Indirect GHG emissions associated with electricity consumption for the Costco project would be zero, as Costco has a Clean Energy Contract with Pacific Gas and Electric (PG&E) to acquire 100% renewable electricity.

Landscape maintenance equipment activity, water consumption, solid waste generation, and refrigerant use were based on model defaults. This analysis incorporates GHG emissions reductions associated with the water efficient project design features including low-flow water fixtures and water-efficient landscape. GHG emissions from two diesel-powered generators, each rated at 250 hp, were calculated assuming 50 hours per year of testing and maintenance.

Operation-related mobile-source GHG emissions for the Costco project were modeled based on a combination of off-model calculations using EMFAC2021, project-specific information, and data provided in the traffic study prepared for the project. Specifically, the estimated total trip generation rates and VMT of passenger vehicles (customer and employees), and idling durations for vehicles queuing at the GDF were provided in the traffic study (Kittleson & Associates 2025). The CalEEMod default fleet mix for passenger vehicles in El Dorado-Mountain County was adjusted using the default VMT distribution for passenger vehicle technology/fuel categories in EMFAC2021 to determine the Project-specific fleet mix of the passenger vehicles visiting the project. Passenger vehicles visiting the proposed GDF represent vehicles used by patrons of the GDF and are assumed to only include plug-in hybrids and gasoline-fueled vehicles. The project would employ approximately 300 employees. Project-specific trip rate and trip length estimates were used for fuel delivery trucks and warehouse/tire center delivery trucks. The proposed GDF is expected to receive approximately five fuel truck deliveries per day. It is anticipated that the proposed warehouse would result in a maximum of 13 delivery truck trips per day. The VMT of delivery trucks was calculated as the product of trip rates and trip lengths (see Appendix F). The idle duration for delivery trucks was assumed to be 15 minutes for each round trip, consistent with CARB's Air Toxic Control to Limit Diesel-Fueled Commercial Motor Vehicle Idling.

EMFAC2021 does not incorporate reductions associated with ACC II and ACF regulations. Hence, Public Law 119-16's disapproval of California's Clean Air Act (CAA) waiver for ACC II and CARB's repeal of the ACF regulation do not impact this analysis. While EMFAC2021 incorporates reductions associated with the ACT regulation, this analysis

assumes that all Project-related delivery trucks are diesel-fueled. Hence, Public Law No. 119-15's disapproval of California's CAA waiver for the ACT regulation does not impact this analysis.

Similar to the Costco project, operational GHG emissions related to future development within the North Site Remainder Area were modeled using CalEEMod for the following sources: area sources (e.g., landscape maintenance equipment), energy use (i.e., electricity and natural gas consumption), water use, solid waste generation, and mobile sources. The North Site Remainder Area developments' landscape equipment activity, energy use, water consumption, and solid waste generation were based on model defaults. Indirect emissions associated with electricity consumption were estimated using GHG emissions factors for PG&E, the utility provider in the project area for the North Site Remainder Area. Operation-related mobile-source CAP emissions were modeled based on the estimated VMT within the North Site Remainder Area which were derived from the transportation analysis prepared for the project (Kittleson & Associates 2025). The reader is referred to Section 3.14, "Transportation," for a further discussion of the VMT impact analysis for the project. Detailed model assumptions and inputs for these operational GHG emission calculations for the future development within the North Site Remainder Area are presented in Appendix F.

THRESHOLDS OF SIGNIFICANCE

The issue of global climate change is inherently cumulative, as the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the project's impact on climate change is addressed as a cumulative impact.

State CEQA Guidelines Section 15064 and relevant portions of Appendix G recommend that a lead agency consider a project's consistency with relevant, adopted plans, and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. Under Appendix G of the State CEQA Guidelines, implementing a project would result in a cumulatively considerable contribution to climate change if it would:

- generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or (evaluated as **Impact 3.7-1**)
- conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs (evaluated as **Impact 3.7-2**).

In California, some counties, cities, and air districts have developed guidance and thresholds for determining the significance of GHG emissions that occur within their jurisdiction. El Dorado County is the CEQA lead agency for the project and is, therefore, responsible for determining whether an impact would be considered significant.

EDCAQMD currently does not have recommended GHG thresholds or guidance based on the statewide GHG targets mandated by SB 32 and AB 1279. Also, at the time of writing this Draft EIR, El Dorado County does not have an adopted CAP consistent with State CEQA Guidelines Section 15183.5(b). Thus, no applicable local plan relating to the regulation of GHGs is available to evaluate GHGs associated with the project.

With respect to GHG emissions, CEQA Guidelines Section 15064.4 provides guidance to lead agencies for determining the significance of impacts from GHG emissions. Section 15064.4(a) provides that a lead agency will make a good-faith effort based, to the extent possible, on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Section 15064.4(a) further provides that a lead agency will have the discretion to determine, within the context of a particular project, whether to quantify GHG emissions from a project or rely on qualitative analysis or performance-based standards. Pursuant to the CEQA Guidelines in Section 15064.4(a), the analysis presented herein quantifies GHG emissions resulting from the project and describes, calculates, and estimates those emissions. CEQA Guidelines Section 15064.4(b) provides that when assessing the significance of impacts from GHG emissions, a lead agency should focus the analysis on the incremental contribution of the project's emissions to the effects of climate change and consider an appropriate timeframe for the project. The lead agency's analysis should reasonably reflect evolving scientific knowledge and state regulatory schemes and consider (1) the extent to which the project may increase or reduce GHG emissions compared with existing conditions, (2) whether the project's GHG emissions exceed a threshold of significance that the lead agency determines applies to the project, and (3) the extent to which the project complies with regulations or requirements

adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The analysis of the potential impacts of the project's GHG emissions follows this approach.

The State CEQA Guidelines do not provide numeric or quantitative thresholds of significance for evaluating GHG emissions. Instead, they leave the determination of the significance threshold up to the lead agency and give it the discretion to consider thresholds previously adopted or recommended by other public agencies or experts, provided that the lead agency's decision is supported by substantial evidence (CEQA Guidelines Sections 15064.7[b] and 15064.7[c]). Additionally, any public agency may also use an environmental standard as a threshold of significance, as it would promote consistency in significance determination and integrate environmental review with other environmental program planning and regulations (CEQA Guidelines Section 15064.7[d]).

In California, when numerical GHG thresholds are established, they are developed based on the overall statewide GHG emissions reduction targets that have been legislated but are adjusted based on anticipated growth and development in a particular region such that when a project meets the established threshold, it can be said that a project is also consistent with the established state's GHG target on which the threshold was based. The state's targets are based on future milestone years (i.e., 2030 and 2045); thus, by default, the local thresholds must also be based on the same targets.

Generate GHG Emissions Threshold

Because EDCAQMD currently does not recommend numerical GHG thresholds or guidance based on the statewide GHG target mandated by SB 32 or AB 1279, nor has the County adopted a CAP consistent with State CEQA Guidelines Section 15183.5(b), numerical thresholds from other air districts may be used to assess project related GHG impacts. The Placer County Air Pollution Control District (PCAPCD) has issued guidance for addressing GHG emissions in CEQA documents (PCAPCD 2017). According to Chapter 2, "Thresholds of Significance," of the PCAPCD CEQA Handbook, a project would have a cumulatively considerable impact on climate change if it would exceed the following construction and operational GHG thresholds:

- De Minimis Level for the operational phases of 1,100 $MTCO_2e$/year. This only applies to the operational phase of land use projects. Projects that exceed this level must conduct further analysis and apply thresholds below, as discussed herein.
- Efficiency Matrix, which gives per unit (capita or 1,000 square feet [sf]) threshold for different residential and nonresidential projects, for the operational phase of land use development projects only when emissions exceed the De Minimis Level but do not exceed the bright-line threshold. This approach is only applicable to land use projects with residential and/or commercial components. For residential projects, a 4.5 and 5.5 $MTCO_2e$/capita efficiency matrix is applied for urban and rural development, respectively; for non-residential projects, a 26.5 and 27.3 $MTCO_2e$/1,000 sf efficiency matrix is applied for urban and rural development, respectively.
- Bright-line Threshold of 10,000 $MTCO_2e$/year applies to the construction and operational phase of land use development projects as well as to operational emissions of stationary projects. This threshold is applied when the De Minimis level is exceeded and the Efficiency Matrix doesn't apply.

In the absence of numerical GHG thresholds or an adopted CAP consistent with State CEQA Guidelines Section 15183.5(b) in El Dorado County, PCAPCD's quantitative GHG significance thresholds are used to evaluate **Impact 3.7-1**.

Objective 2.1.1 of the El Dorado County General Plan states that "The urban limit line establishes a line on the General Plan land use maps demarcating where the urban and suburban land uses will be developed. The Community Region boundaries as depicted on the General Plan land use map shall be the established urban limit line." (El Dorado County 2019). According to Policy 2.1.1.2, Community Regions are to be established to:

> "…define those areas which are appropriate for the highest intensity of self-sustaining compact urban-type development or suburban type development within the County based on the municipal spheres of influence, availability of infrastructure, public services, major transportation corridors and travel patterns, the location of major topographic patterns and features, and the ability to provide and maintain appropriate transitions at Community Region boundaries. These boundaries shall be shown on the General Plan land use map." (El Dorado County 2019.)

Per Figure LU-1, "Land Use Diagram," contained within the El Dorado County General Plan, the project site is located within the Community Region boundaries (El Dorado County 2019). The project is considered an urban non-residential project; therefore, PCAPCD's efficiency matrix of 26.5 $MTCO_2e$/1,000 sf has been applied in this analysis to assess significant against the Project relative to **Impact 3.7-1**, as noted above.

Conflict With Any Applicable Plan, Policy or Regulation Threshold

Relative to Impact 3.7-2, this section evaluates whether the Project would conflict with the 2022 Scoping Plan Update, SACOG's 2020 MTP/SCS, and El Dorado County RTP 2020-2040, which are discussed in detail below.

ISSUES NOT DISCUSSED FURTHER

All issues pertaining to GHG emissions are discussed below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment

Project-generated emissions of construction GHGs would be below PCAPCD's brightline threshold of 10,000 $MTCO_2e$. Operational emissions related to the project would exceed PCAPCD's 1,100 $MTCO_2e$/year de minimis threshold for project operations; however, the project's calculated operational efficiency metric would be below PCAPCD's efficiency matrix threshold for urban, non-residential projects. The project would not result in GHG emissions that would exceed PCAPCD thresholds during project construction or operation. This impact would be **less than significant.**

GHG emissions associated with the project would be generated during both construction and operational activities, which are discussed separately, below.

Costco Project

Construction

Construction-related activities for the Costco project would generate GHG emissions from the use of heavy-duty off-road equipment (e.g., graders, backhoes, excavators, pavers, dozers), materials transport, and worker and vendor commute trips associated with construction of the proposed land uses identified above in "Methodology." As also stated above in "Methodology," to provide a conservative analysis, the worst-case construction emissions scenario (i.e., Scenario 2) is used in the evaluation of construction-related GHG emissions as this scenario would involve greater GHG emissions related to the increase in material hauling trips relative to Scenario 1. Table 3.7-2 summarizes emissions for each year of construction and compares the annual construction emissions to PCAPCD's brightline threshold for GHGs. Refer to Appendix F for construction assumptions and detailed input parameters and results.

Table 3.7-2 Costco Project-Generated Construction Greenhouse Gas Emissions

Construction Year	GHG Emissions ($MTCO_2e$/year)
2026	1,708
2027	634
PCAPCD Brightline Threshold	10,000
PCAPCD Threshold Exceeded for Any Construction Year?	No

Notes: GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Refer to Appendix F for construction assumptions and detailed input parameters and results.

Source: Modeled by Ramboll in 2025 (see Appendix F).

As shown in Table 3.7-2, GHG emissions generated by the Costco project construction in 2026 and 2027 would be 1,708 $MTCO_2e$ and 634 $MTCO_2e$, respectively. Total construction emissions would be 2,342 $MTCO_2e$. Thus, even if all eleven months of Project construction occurred in a single calendar year, the annual construction emissions would be below PCAPCD's brightline threshold of 10,000 $MTCO_2e$/year.

Operations

Costco project operation would result in the generation of long-term operational GHG emissions as a result of area sources (landscape equipment), energy use (building natural gas), mobile sources (customer and employee cars, delivery trucks, and transport refrigeration units), water use, solid waste generation, refrigerant use, ongoing vegetation sequestration changes, and emergency generators. Table 3.7-3 below summarizes the projected annual operational GHG emissions for 2027 which is assumed to be the first year of operation.

As stated above, indirect GHG emissions associated with electricity consumption for the Costco project would be zero, as Costco has a Clean Energy Contract with PG&E to acquire 100 percent renewable electricity.

The Costco project includes the installation of 10 DC fast chargers with a combined power output of 1,800 kilowatts (kW). These EV chargers will be powered by 100 percent renewable electricity as Costco has a Clean Energy Contract with PG&E. Table 3.7-3 includes an estimate of the GHG emissions avoided through the use of EV chargers during project operation that would encourage and facilitate EV use rather than vehicles powered by fossil fuels.

Table 3.7-3 Costco Project-Generated Operational Greenhouse Gas Emissions

Emissions Source	GHG Emissions ($MTCO_2e$/year)
Area	4
Energy[1]	78
Generators	10
Mobile	4,731
Waste	224
Water	17
Vegetation	11
Refrigerants	<1
On-site Vehicle Chargers[2]	-2,908
Total Operational GHG Emissions ($MTCO_2e$/year)	**2,167**
PCAPCD De Minimis Threshold	**1,100**
De Minimis Threshold Exceeded	**Yes**
PCAPCD Bright-line Threshold	**10,000**
Bright-line Threshold Exceeded?	**No**

Notes: Totals may not add due to rounding; GHG = greenhouse gas; $MTCO_2e$/year = metric tons of carbon dioxide equivalent per year.

[1] Emissions associated with energy use are attributed to the natural gas combustion. The project would source 100 percent of its electricity from renewable sources through Costco's Clean Energy Contract with PG&E. Thus, GHG emissions from electricity consumption would be zero.

[2] GHG emission reductions associated with the use of on-site DC fast chargers that would facilitate the use of EVs rather than vehicles powered by fossil fuels. These EV chargers will be powered by 100 percent renewable electrical power supplied by PG&E, as Costco has a Clean Energy Contract with PG&E.

Refer to Appendix F for operational assumptions and detailed input parameters and results.

Source: Modeled by Ramboll in 2025 (see Appendix F)..

As shown in Table 3.7-3, operation of the Costco project would result in approximately 2,167 $MTCO_2e$/year. This would exceed PCAPCD's 1,100 $MTCO_2e$/year de minimis threshold for project operations but would not exceed PCAPCD's bright-line threshold of 10,000 $MTCO_2e$/year.

According to the PCAPCD CEQA Handbook, when a project's total GHG emissions are between 1,100 MT CO_2e/year (De Minimis Level) and 10,000 $MTCO_2e$/year (Bright-line threshold), an efficiency matrix analysis is required to further identify if the project's efficiency would exceed set emissions efficiency metrics based on the proposed location and land use type. As identified in the PCAPCD CEQA Handbook, the efficiency metric applicable to the project (an urban non-residential project) would be 26.5 $MTCO_2e$/1,000 sf.

The project's efficiency metric was calculated as the total operational emissions (2,167 $MTCO_2e$, as shown in Table 3.7-3, above) divided by the building kilo square footage of the project (165.2 ksf). Table 3.7-4, below, compares the project's calculated GHG efficiency metric to PCAPCD's efficiency matrix threshold for urban non-residential projects.

Table 3.7-4 Summary of Costco Project Operational Efficiency Metric

Operational Efficiency Metric	$MTCO_2e$/1,000 sf
Costco project[1]	13.1
PCAPCD Threshold[2]	26.50
PCAPCD Threshold Exceeded?	No

Notes: $MTCO_2e$/year = metric tons of carbon dioxide equivalent per year; sf = square feet. PCAPCD = Placer County Air Pollution Control District.

[1] Efficiency metric is calculated as the total operational emissions divided by the building kilo square footage of the project (165.2 ksf).

[2] Efficiency metric identified for urban non-residential projects in the PCAPCD CEQA Handbook (PCAPCD 2017)

Refer to Appendix F for operational assumptions and detailed input parameters and results.

Source: Modeled by Ramboll in 2025 (see Appendix F).

As shown in Table 3.7-4, the project's calculated operational efficiency metric would be below PCAPCD's efficiency matrix threshold for urban non-residential projects.

Thus, the Costco project's GHG emissions would be **less than significant**.

North Site Remainder Area

The Costco project proposes no development for the North Site Remainder Area. However, development of the North Site Remainder Area would be made more reasonably foreseeable by the proposed annexation of the entire North Site Remainder Area to the El Dorado Irrigation District and the El Dorado Fire District. Since such annexations are assumed to facilitate possible future development of the Remainder Area, even though there is not even a conceptual or contemplated plan for build out of that land, the analysis conservatively assumes that such land would be developed consistent with the General Plan and zoning designations and density (approximately 138,000 square feet of commercial uses).

Construction

Construction-related activities related to future development within the North Site Remainder Area would generate GHG emissions from the use of heavy-duty off-road equipment (e.g., graders, backhoes, excavators, pavers, dozers) materials transport, and worker and vendor commute trips associated. For purposes of this analysis it is assumed that the construction of the future development within the North Site Remainder Area would occur immediately after the construction of the Costco project is completed. It is also assumed that the Costco project would be fully operational during the construction of the future development of the North Site Remainder Area.

Table 3.7-5 summarizes emissions for each year of construction for the North Site Remainder Area development and compares the annual construction emissions to PCAPCD's brightline threshold for GHGs. Refer to Appendix B for construction assumptions and detailed input parameters and results.

Table 3.7-5 North Site Remainder Area Construction-Generated Greenhouse Gas Emissions

Construction Year	GHG Emissions ($MTCO_2e$/year)
2027	1,232
2028	197
PCAPCD Brightline Threshold	10,000
PCAPCD Threshold Exceeded?	No

Notes: GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent.

Refer to Appendix F for construction assumptions and detailed input parameters and results.

Source: Modeled by Ramboll in 2025 (see Appendix F).

As shown in Table 3.7-5, GHG emissions generated during construction of development within the North Site Remainder Area in 2027 and 2028 would be 1,232 $MTCO_2e$ and 197 $MTCO_2e$, respectively, with a total of 1,429 $MTCO_2e$ being generated across the entire construction phase. Thus. even if all construction activity occurred in a single calendar year, the annual construction emissions would still remain below PCAPCD's brightline threshold of 10,000 $MTCO_2e$/year.

Additionally, combined annual GHG emissions generated during construction of the Costco project and the North Site Remainder Area development would be 1,708 $MTCO_2e$ in 2026, 1,866 $MTCO_2e$ in 2027, and 197 MT CO_2e in 2028. Therefore, combined annual construction emissions would be less than the PCAPCD's bright-line GHG significance threshold of 10,000 $MTCO_2e$/year for construction.

Operations

Operation of the commercial/retail uses within the North Site Remainder Area would result in the generation of long-term operational GHG emissions as a result area sources (landscape equipment), energy use (building natural gas and electricity consumption), mobile sources, water use, solid waste generation, refrigerant, ongoing vegetation sequestration changes. The first year of operation would be 2028. Notably, operation of the future development within the North Site Remainder Area would occur during operation of the Costco project. Thus, operational emissions from the Costco project and development within the North Site Remainder Area are combined and compared against the operational GHG efficiency metric threshold. Table 3.7-6 below summarizes the projected annual operational GHG emissions.

Table 3.7-6 Combined Costco Project and North Site Remainder Area Operational Greenhouse Gas Emissions

Proposed Project Land Use	Emissions Category	Emissions ($MTCO_2e$/yr) [1,2]
Costco project	Area	3.9
Costco project	Energy[1]	78
Costco project	Mobile	4,731
Costco project	Water	17
Costco project	Waste	224
Costco project	Refrigerants	0.13
Costco project	Vegetation	11
Costco project	Generators	10
Costco project	On-site Vehicle Chargers[2]	-2,908
North Site Remainder Area	Area	2.0
North Site Remainder Area	Energy[1]	122.9
North Site Remainder Area	Mobile	1601.2
North Site Remainder Area	Water	15.1

Proposed Project Land Use	Emissions Category	Emissions ($MTCO_2e$/yr) [1,2]
North Site Remainder Area	Waste	45.2
North Site Remainder Area	Refrigerants	0.1
North Site Remainder Area	Vegetation	0.0
	Operational Emissions	**3,954**
	PCAPCD De Minimis Threshold	**1,100**
	De Minimis Threshold Exceeded	**Yes**
	PCAPCD Bright-line Threshold	**10,000**
	Bright-line Threshold Exceeded?	**No**

Notes: Totals may not add due to rounding; GHG = greenhouse gas; $MTCO_2e$/year = metric tons of carbon dioxide equivalent per year. Sf = square feet; yr = year.

[1] Emissions associated with energy use are attributed to natural gas combustion and electricity consumption Indirect GHG emissions associated with electricity consumption for the Costco project would be zero, as Costco has a Clean Energy Contract with Pacific Gas and Electric (PG&E) to acquire 100% renewable electricity. Indirect emissions associated with electricity consumption were estimated using GHG emissions factors for PG&E, hence these emissions will not be zero.

[2] GHG emission reductions associated with the use of on-site DC fast chargers that would facilitate the use of EVs rather than vehicles powered by fossil fuels. These EV chargers will be powered by 100 percent renewable electrical power supplied by PG&E, as Costco has a Clean Energy Contract with PG&E.

Refer to Appendix F for operational assumptions and detailed input parameters and results.

Source: Modeled by Ramboll in 2025 (see Appendix F).

As shown in Table 3.7-6, combined operational emissions would be approximately 3,954 $MTCO_2e$/year. This would exceed PCAPCD's 1,100 $MTCO_2e$/year de minimis threshold for project operations but would not exceed PCAPCD's bright-line threshold of 10,000 $MTCO_2e$/year.

According to the PCAPCD CEQA Handbook, when a project's total GHG emissions are between 1,100 MT CO_2e/year (De Minimis Level) and 10,000 $MTCO_2e$/year (Bright-line threshold), an efficiency matrix analysis is required to further identify if the project's efficiency would exceed set emissions efficiency metrics based on the proposed location and land use type. As identified in the PCAPCD CEQA Handbook, the efficiency metric applicable to the project (an urban non-residential project) would be 26.5 $MTCO_2e$/1,000 sf.

The project's efficiency metric was calculated as the total operational emissions divided by the sum of the building kilo square footage of the regional shopping center and the building kilo square footage of the Costco project (total of 303.2 ksf). Table 3.7-7, below, compares the project's calculated GHG efficiency metric to PCAPCD's efficiency matrix threshold for urban non-residential projects.

Table 3.7-7 Summary of Operational Efficiency Metrics for Combined Emissions of Costco Project and North Site Remainder Area

Operational Efficiency Metric	$MTCO_2e$/1,000 sf
Calculated Efficiency Metric [1]	13.04
PCAPCD Threshold[2]	26.50
PCAPCD Threshold Exceeded?	No

Notes: $MTCO_2e$/year = metric tons of carbon dioxide equivalent per year; sf = square feet. PCAPCD = Placer County Air Pollution Control District.

[1] Efficiency metric is calculated as the total operational emissions divided by the combined building kilo square footage of the Costco project and the anticipated North Site Remainder Area development (303.2 ksf).

[2] Efficiency metric identified for urban non-residential projects in the PCAPCD CEQA Handbook (PCAPCD 2017)

Refer to Appendix F for operational assumptions and detailed input parameters and results.

Source: Modeled by Ramboll in 2025 (see Appendix F).

As shown in Table 3.7-7, the calculated operational efficiency metric for both the Costco project and the North Site Remainder Area development would be below PCAPCD's efficiency matrix threshold for urban non-residential projects.

Thus, the North Site Remainder Area GHG emissions in combination with the Costco project would be **less than significant**.

Conclusions

Project-generated emissions of construction GHGs would be below PCAPCD's brightline threshold of 10,000 $MTCO_2e$ in the three calendar years that construction activities would take place. Operational emissions related to the project would exceed PCAPCD's 1,100 $MTCO_2e$/year de minimis threshold for project operations, but would not exceed PCAPCD's bright-line threshold of 10,000 $MTCO_2e$/year. As detailed above, when a project's total GHG emissions are between the de minimis level and Bright-line threshold, the PCAPCD CEQA Handbook states that an efficiency analysis is required to further identify if the project's efficiency would exceed set emissions efficiency metrics based on the proposed location and land use type. The project's calculated operational efficiency metric would be below PCAPCD's efficiency matrix threshold for urban non-residential projects.

For these reasons, the project would not result in GHG emissions that would exceed PCAPCD thresholds during project construction or operation. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.7-2: Conflict With an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

The Proposed Project would include design features such as transportation infrastructure improvements, installation of EV chargers that meet CalGreen voluntary Tier 1 requirements, building-energy and water efficiency features, and employment opportunities near existing residential development and public transit, all of which support the GHG reduction goals of CARB's 2022 Scoping Plan Update, SACOG's 2020 MTP/SCS, or the El Dorado County RTP 2020-2040. Thus, the project would not conflict with the implementation of these plans and would include design features to support their GHG reduction goals. This impact would be **less than significant.**

The following analysis applies to both the Costco project and the North Site Remainder Area.

CARB's 2022 Scoping Plan, SACOG's 2020 MTP/SCS, and El Dorado County RTP 2020-2040 are the applicable GHG reduction plans used to evaluate GHG emissions from the project. CARB's 2022 Scoping Plan assesses progress towards achieving the SB 32 2030 target and extends upon earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels, as well as providing the framework to achieve statewide carbon neutrality by 2045 through implementation of zero-emission technologies in every GHG-emitting sector, a substantial reduction in fossil fuel dependence, combined with investments in carbon capture and sequestration and nature-based solutions. Each of these documents and the project's consistency are addressed below.

CARB's 2022 Scoping Plan

CARB's 2022 Scoping Plan identified key actions necessary to achieve the state's climate goals, including moving to zero-emission transportation; phasing out the use of fossil gas for heating homes and buildings; transitioning to low-GWP chemicals and refrigerants; providing communities with sustainable options for walking, biking, and public transit to reduce reliance on cars; continued investment in solar powered–infrastructure, wind turbine capacity, and other resources that provide clean, renewable energy to displace fossil-fuel fired electrical generation; and scaling up new renewable energy options that are available or may be available in the future.

Based on these key actions, Appendix D of CARB's 2022 Scoping Plan includes recommendations intended to build momentum for local government actions that align with the state's climate goals, with a focus on local GHG reduction strategies and approval of new land use development projects, including through environmental review through CEQA. While CARB has not provided specific guidance on GHG reduction strategies for commercial projects

to contribute towards the state's climate goal, it does offer a list of strategies that local governments can implement to further the progress towards the state's climate goals under three priority areas: Transportation Electrification, VMT Reduction, and Building Decarbonization. Commercial land use development projects that incorporate design features and strategies consistent with the recommended strategies for these priority areas can demonstrate alignment with CARB's 2022 Scoping Plan. Table 3.7-8 lists these GHG reduction strategies by priority area and evaluates the project against these criteria.

A brief description of how the project aligns with the recommended GHG reduction strategies in each priority area is provided below.

Transportation Electrification

This priority area aims at reducing fossil fuel consumption and GHG emissions from the transportation sector by promoting the installation of EV charging facilities to promote the widespread use of EV vehicles as well as provide the electrical infrastructure during the development phase of a project that allows future expansion of electrical EV facilities. Developing land use projects in this way now will help the state achieve longer-term EV adoption targets.

The project would meet the Voluntary Tier 1 Electric Vehicle Charging Standards as defined in the 2025 CALGreen Code by installing ten DC fast chargers with a total power output of 1,800 kilowatts. These chargers would utilize 100 percent renewable electrical power as part of its Clean Energy Contract with PG&E. Thus, the project would support CARB's 2022 Scoping Plan's vehicle electrification priority area.

VMT Reduction

This priority area aims at reducing fossil fuel consumption and GHG emissions from the transportation sector by promoting land use planning principles and project design features that can reduce VMT. While the project does generate an increase in VMT as identified in Section 3.14, "Transportation," the VMT analysis does not take into account the Costco trips "replacing" existing trips currently going to other retailers. Furthermore, the project commercial uses are expected to serve the existing population of the area by providing more convenient access to services. The Costco project would also allow customers to have multiple needs served in one trip, including but not limited to: eye exams, purchase of household goods and groceries, furniture store, appliance store, and refueling. It is likely that Costco members make fewer total retail shopping trips in a month or a year when they have the option of shopping at Costco than they would make if they did not have a Costco nearby.

The project includes several features that would reduce VMT. The project (Costco project and North Site Remainder Area development) is an infill development that would create new employment opportunities and would be located near existing transit routes (i.e., El Dorado Transit bus route [50 Express] and bus stop [El Dorado Transit Park & Ride]), therefore placing jobs that are accessible via public transit. Additionally, the project site is located adjacent to existing residences, thus providing retail and jobs near a housing-rich area served by El Dorado Transit. Besides this, the overall project (Costco project and North Site Remainder Area development) would implement Mitigation Measures 3.14-2a through 3.14-2c which further reduce vehicle miles travelled by employees by developing and implementing measures such as commute trip marketing, a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. The reader is referred to Section 3.14, "Transportation," for a further discussion of VMT impacts of the project.

Table 3.7-8 Consistency with CARB's 2022 Scoping Plan Update

Priority Areas[1]	Priority GHG Reduction Strategies[1]	Does it Conflict?
Transportation Electrification	▶ Convert local government fleets to ZEVs and provide EV charging at public sites. ▶ Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).	Does Not Conflict. These strategies would be developed and implemented by local government fleets and the County rather than an individual project. However, the Proposed Project will meet the Voluntary Tier 1 Electric Vehicle Charging Standards as defined in the 2025 California Green Building Standards Code[2] by installing ten DC fast chargers that provide a total power of 1,800 kW. Additionally, these charges will be powered by 100% renewable electrical power supplied by Pacific Gas & Electric (PG&E), as Costco has a Clean Energy Contract with PG&E.
VMT Reduction	▶ Reduce or eliminate minimum parking standards. ▶ Implement Complete Streets policies and investments, consistent with general plan circulation element requirements. ▶ Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc. ▶ Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking. ▶ Implement parking pricing or transportation demand management pricing strategies. ▶ Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing the allowable density of a neighborhood). ▶ Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements).	Does Not Conflict. These strategies would be developed and implemented by the County rather than an individual project. However, the Proposed Project includes several features and mitigation measures that align with this priority area as noted below: ▶ The Proposed Project will implement Mitigation Measure 3.14-2a and Mitigation Measure 3.14-2b which would reduce vehicle miles travelled by employees by developing and implementing the following measures: (1) commute trip reduction marketing, (2) a ridesharing program for employees, (3) on-site end-of-trip bicycle facilities, and (4) pedestrian network improvements in the vicinity of the Project site. ▶ The Project site is an infill development located near an El Dorado Transit bus route (50 Express) and bus stop (El Dorado Transit Park & Ride), therefore placing jobs that are accessible via public transit. Additionally the Project is located adjacent to homes, thereby providing retail and jobs near a housing-rich area served by El Dorado Transit. ▶ While the Project does generate an increase in VMT,[3] the VMT analysis does not take into account the Costco trips "replacing" existing trips currently going to other retailers. Furthermore, the Project is expected to serve the existing population of the area by providing more convenient access to Costco services. The Project will allow customers to have multiple needs served in one trip, including but not limited to: eye exams, purchase of household goods and groceries, furniture store, appliance store, liquor store, and refueling at a gasoline dispensing facility. The VMT modeling does not measure the benefit of one Costco trip replacing multiple trips, and given these factors, it is likely that Costco members make fewer total retail shopping trips in a month or a year when they have the option of shopping at Costco than they would make if they did not have a Costco nearby.

Priority Areas[1]	Priority GHG Reduction Strategies[1]	Does it Conflict?
Building Decarbonization	▶ Adopt all-electric new construction reach codes for residential and commercial uses. ▶ Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers). ▶ Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances. ▶ Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing). ▶ Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).	Does Not Conflict. These strategies would be developed and implemented by the County rather than an individual project. However, the Proposed Project will incorporate several sustainability and energy efficiency measures including green building practices as required by the 2025 California Green Building Standards Code.[2] Refer to Section 1.2 of this report for a detailed listing of these measures. Notably, the proposed Project operations will be powered 100% renewable electrical power supplied by PG&E, as Costco has a Clean Energy Contract with PG&E. The use of renewable electricity would facilitate deployment of renewable energy production.

Notes: CARB = California Air Resources Board; CEQA = California Environmental Quality Act; DC = direct current; EV = electric vehicle; GHG = greenhouse gas; kW = kilowatt; ZEV = zero emission vehicle.

1 Priority areas and GHG reduction strategies obtained from 2022 CARB Scoping Plan Update, Appendix D, Local Actions. Available online at: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf. Accessed: September 2025.

2 2025 California Green Building Standards Code, Title 24, Part 11. Available online at: https://codes.iccsafe.org/content/CAGBC2025P1. Accessed: September 2025.

3 Kittelson & Associates. 2025. El Dorado Costco CEQA Analysis. July 23.

Source: Data compiled by Ramboll in 2025.

Furthermore, a significant VMT impact does not equate to a significant GHG impact because VMT alone does not account for vehicle characteristics, fuel type, emission standards, and fleet-level standards, all of which directly influence GHG emissions. For example, all-electric vehicles generate VMT while resulting in no tailpipe GHG emissions. The project would implement off-site transportation improvements in coordination with the County to address compliance with the El Dorado County Transportation and Circulation Element policies. These improvements are identified in Chapter 2, "Project Description," and would improve transportation efficiency which would avoid GHG emissions from fossil fuel combustion in vehicles. Additionally, as noted in the previous section "Transportation Electrification", the Project also includes ten DC fast chargers with a total power output of 1,800 kilowatts which would replace fossil-fueled miles traveled with electric miles traveled. Thus, the project would not conflict with CARB's 2022 Scoping Plan's "VMT reduction" priority area.

Building Decarbonization

The Costco project would include multiple design features meant to reduce GHG emissions from building operations consistent with the California Building Energy Efficiency Standards and the 2025 CALGreen Code. For example, the Costco project would include energy-efficient LED lighting, water-efficient landscaping through inclusion of climate-adapted plant species and use deep-root watering bubblers for parking lot trees to minimize usage and ensure that water goes directly to the intended planting areas, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, and gas water heaters that would be direct-vent and have a 94 percent efficiency or greater. Additionally, because Costco has a clean energy contract with PG&E, all electricity consumed by the Costco project would be 100 percent renewable electrical power. The North Site Remainder Area development would also be subject to the requirements of the California Building Energy Efficiency Standards and the CALGreen Code in effect at the time of construction. Given the project's sustainability and energy efficiency measures, the use of 100 percent renewable electrical power by the Costco project, and the renewable electricity use that would facilitate development of renewable energy production, the project would not conflict with the building decarbonization priority area in Appendix D of CARB's 2022 Scoping Plan.

SACOG 2020 MTP/SCS

Senate Bill 375 requires SACOG to incorporate a Sustainable Communities Strategy (SCS) into its MTP that achieves the GHG emission reduction targets set by CARB. In general, the goals and policies of the current Sustainable Communities Strategy (2020 MTP/SCS) are to improve housing, employment, mobility, and transportation systems and infrastructure. The SCS adopted by SACOG in November 2019 contains five primary factors expected to reduce GHG emissions from passenger vehicles and achieve the GHG emissions reduction target for the region set by the CARB: shortened vehicle trips, increased transit, bike and walk trips, express lanes and pay as you go-fees, intelligent transportation systems and transportation management, and electric vehicles.

The project (Costco project and North Site Remainder Area development) includes several design features that would support the goals of the SACOG 2020 MTP/SCS to reduce VMT and fossil fuel consumption, as well as supporting sustainable transportation infrastructure to accommodate projected population and job growth. The project is an infill development that would create new employment opportunities and would be located near existing transit routes (i.e., El Dorado Transit bus route [50 Express] and bus stop [El Dorado Transit Park & Ride]), therefore placing jobs that are accessible via public transit. Additionally, the project site is located adjacent to existing residences, thus providing retail and jobs near a housing-rich area served by El Dorado Transit.

Table 3.7-9 Consistency with 2020 SACOG MTP/SCS

Priority Policy Areas[1]	Supporting Policies[1]	Does it Conflict?
Build vibrant places for today's and tomorrow's residents	▶ Policy 1: Provide incentives, information, tools, technical assistance, and encouragement to support implementation of the Sacramento region's Sustainable Communities Strategy. ▶ Policy 2: Pursue funding opportunities that support the infrastructure improvements needed to support new housing and employment opportunities in existing urban, suburban, and rural communities.	Does Not Conflict. These policies would be implemented by the County rather than an individual project. However, the Proposed Project would create new employment opportunities, and is located near an El Dorado Transit bus route (50 Express) and bus stop (El Dorado Transit Park & Ride), therefore placing jobs that are accessible via public transit. Additionally the Project is located adjacent to homes, therefore the Project would provide retail and jobs near a housing-rich area served by El Dorado Transit.
Foster the next generation of mobility solutions	▶ Policy 3: Implement pilot projects aimed at making microtransit and micromobility (such as bike and scooter share) work for urban, suburban, rural, and low-income areas of the region. ▶ Policy 4: Pursue flexibility in state and federal funding sources to enable testing and implementation of innovative mobility solutions that are affordable, accessible, and reduce greenhouse gas emissions. ▶ Policy 5: Support innovative education and transportation demand management programs covering all parts of the region, to offer a variety of alternatives to driving alone. ▶ Policy 6: Pursue new funding and planning opportunities to support electric vehicle infrastructure and programs for both private vehicles and public transit fleets. ▶ Policy 7: Support transit agencies and local governments looking to secure funds to improve the frequency, hours of service, and coverage of productive bus service (including bus rapid transit, express bus, and more frequent fixed-route service). ▶ Policy 8: Support more seamless travel through better traveler information for trip planning, reliable service and coordination between operators for transit, shared mobility and other first/last mile connections.	Does Not Conflict. These policies would be implemented by the County rather than an individual project. However, the Proposed Project includes a number of features and mitigation measures that align with these policies as noted below: ▶ The Proposed Project will implement Mitigation Measure 3.14-2a and Mitigation Measure 3.14-2b which would reduce vehicle miles travelled by employees by developing and implementing the following measures: (1) commute trip reduction marketing, (2) a ridesharing program for employees, (3) on-site end-of-trip bicycle facilities, and (4) pedestrian network improvements in the vicinity of the Project site. ▶ The Project site is an infill development located near an El Dorado Transit bus route (50 Express) and bus stop (El Dorado Transit Park & Ride), therefore placing jobs that are accessible via public transit. Additionally the Project is located adjacent to homes, thereby providing retail and jobs near a housing-rich area served by El Dorado Transit. ▶ The Proposed Project will meet the Voluntary Tier 1 Electric Vehicle Charging Standards as defined in the 2025 California Green Building Standards Code[2] by installing ten DC fast chargers that provide a total power of 1,800 kW. Additionally, these charges will be powered by 100% renewable electrical power supplied by Pacific Gas & Electric (PG&E), as Costco has a Clean Energy Contract with PG&E.
Modernize the way we pay for transportation infrastructure	▶ Policy 9: Pursue new and reformed transportation funding methods and sources to implement the MTP/SCS that are stable, predictable, flexible, and adequate to operate, maintain, and expand the transportation system. Mileage-based fees/PayGo should replace, not be on top of, existing state fuel taxes. ▶ Policy 10: Find solutions and reliable funding sources to meet the maintenance needs of roads that support rural economies, natural resource-based industries, agriculture, farm-to-market routes, and freight corridors.	Does Not Conflict. These policies would be implemented by the County rather than an individual project. The Proposed Project would not conflict with the County's ability to implement these strategies.

Priority Policy Areas[1]	Supporting Policies[1]	Does it Conflict?
	▶ Policy 11: Initiate a leadership role in testing and piloting roadway pricing mechanisms, such as facility-based tolling and mileage-based fees, in partnership with the state, federal, and local agencies and private sector organizations. ▶ Policy 12: Take steps to implement tolling or pricing of specific lanes on major facilities, such as freeways, to improve traffic management, reliability, and operations of those facilities and to help raise funding for the cost of building and maintaining large capital investments. ▶ Policy 13: All new major expansion projects on the region's freeways and expressways should be planned for eventual deployment of pricing options to both manage demand and provide a financing mechanism for capital costs. Any pricing strategy pursued should be sensitive to changes in roadway demand during different parts of the day (peak/off-peak) with the objective of managing demand and providing travel choice. ▶ Policy 14: Revenues generated from facility-based pricing should be used to build and maintain a regional network of paid express lanes and, where surplus revenue is available, on strategic transit services (e.g., express buses) or other mobility solutions that can reduce vehicle miles traveled and provide multiple travel options along priced corridors. ▶ Policy 15: New taxes and fees, including mileage based fees, intended to raise additional funding for transportation purposes should prioritize closing the gap for system maintenance and state-of-good repair needs before investing in system expansion. ▶ Policy 16: When implementing pricing strategies, both paid express lanes and mileage-based fees/PayGo, the region should make every effort to avoid negatively impacting lower income and rural households. For regional implementation of PayGo, explore innovative options for setting fees, such as including off-setting incentives for non-vehicular travel, off-sets to fees for disadvantaged households, and keying fee rates to maintenance and fix-it-first goals.	
Build and maintain a safe, resilient, and multimodal transportation system	▶ Policy 17: Reduce the growing system maintenance funding gap by prioritizing spending flexible revenues on state-of-good repair improvements before investing in system expansion. ▶ Policy 18: System expansion investments that are not directly paid for by new development should be focused on fixing major bottlenecks that exist today, and/or incentivize development opportunities in infill areas.	Does Not Conflict. These policies would be implemented by the County rather than an individual project. However, the Proposed Project includes a number of features and mitigation measures that align with these policies as noted below: ▶ The Proposed Project will implement Mitigation Measure 3.14-2a for Costco Employees and Mitigation Measure 3.14-2b which would reduce vehicle miles traveled by employees by developing and implementing the following measures: (1) commute trip reduction marketing, (2) a ridesharing program for employees, (3) on-site end-of-trip bicycle facilities, and (4) pedestrian network improvements in

Priority Policy Areas[1]	Supporting Policies[1]	Does it Conflict?
	▶ Policy 19: Transit expansion, particularly light rail and other fixed infrastructure transit options, should be targeted at communities with supportive land use policies and development patterns that will generate transit ridership and improve the cost recovery rates for transit service. ▶ Policy 20: Prioritize cost effective safety improvements that will help the region eliminate fatal transportation related accidents. ▶ Policy 21: Transportation infrastructure investments should be planned and built in a way that makes the system more resilient to extreme weather events and natural disasters. ▶ Policy 22: Invest in bicycle and pedestrian infrastructure to encourage healthy, active transportation trips and provide recreational opportunities for residents and visitors. ▶ Policy 23: Prioritize and incentivize transportation investments that benefit environmental justice communities. ▶ Policy 24: Invest in transportation improvements that improve access to major economic assets and job centers. ▶ Policy 25: Prioritize investments in transportation improvements that reduce greenhouse gas emissions and vehicle miles traveled.	the vicinity of the Project site. Note, the pedestrian network improvements include (1) constructing sidewalks along the project frontage on Clarksville Crossing and Silva Valley Parkway and (2) constructing sidewalks north of the project frontage on the east side of Silva Valley Parkway to connect to the existing sidewalk near Oak Meadow Elementary School and providing connectivity with the surrounding neighborhood. ▶ The Proposed Project will implement offsite transportation improvements in coordination with the County to address compliance with the El Dorado County Transportation and Circulation Element policies. This would include (1) the addition of a new signalized intersection on Silva Valley Parkway, shared with the South Site's main driveway, (2) the addition of a new signalized intersection with Silva Valley Parkway shared with the North Site, (3) installation of a partial traffic signal at the intersection of Silva Valley Parkway and Clarksville Crossing, (4) installation of 150-foot dual northbound left turn lanes at the proposed signalized intersection of Silva Valley Parkway and the project driveway, and (5) the addition of a northbound right turn lane, change in the right turn phase to be permissive and overlap, and increase of the westbound left turn storage length at the intersection of White Rock Road and Valley View Parkway-Vine Street. These improvements to the transportation infrastructure would help meet the existing and future needs of the Project. ▶ The Project site is an infill development located near an El Dorado Transit bus route (50 Express) and bus stop (El Dorado Transit Park & Ride), therefore placing jobs that are accessible via public transit. Additionally the Project is located adjacent to homes, thereby providing retail and jobs near a housing-rich area served by El Dorado Transit. ▶ The Proposed Project will meet the Voluntary Tier 1 Electric Vehicle Charging Standards as defined in the 2025 California Green Building Standards Code[2] by installing ten DC fast chargers that provide a total power of 1,800 kW. Additionally, these charges will be powered by 100% renewable electrical power supplied by Pacific Gas & Electric (PG&E), as Costco has a Clean Energy Contract with PG&E. This will reduce the greenhouse gas emissions from on-road vehicles travelling in the County.

Notes: DC = direct current; kW = kilowatt; MTP = Metropolitan Transportation Plan; SACOG = Sacramento Area Council of Governments; SCS = Sustainable Communities Strategy.

[1] Priority policy areas and supporting policies obtained from 2020 SACOG MTP/SCS. Available online at: https://www.sacog.org/home/showpublisheddocument/76/638212804736270000. Accessed: September 2025.

[2] 2025 California Green Building Standards Code, Title 24, Part 11. Available online at: https://codes.iccsafe.org/content/CAGBC2025P1. Accessed: September 2025.

Source: Data compiled by Ramboll in 2025.

As identified above and in Table 3.7-9, the Costco project would also meet the Voluntary Tier 1 Electric Vehicle Charging Standards as defined in the 2025 CALGreen Code by installing ten DC fast chargers, thereby reducing GHG emissions from fossil fuel combustion in on-road vehicles traveling in the County. The North Site Remainder Area development would also be subject to the requirements of the CALGreen Code in effect at the time of construction.

As also detailed above and in Table 3.7-9, the project (Costco project and North Site Remainder Area development) would implement Mitigation Measure 3.14-2a which further addresses vehicle miles travelled by employees by developing and implementing measures such as commute trip reduction marketing, a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site.

Lastly, the project would implement off-site transportation improvements in coordination with the County to address compliance with the El Dorado County Transportation and Circulation Element policies. These improvements are identified in Chapter 2, "Project Description," and would improve transportation efficiency which would avoid GHG emissions from fossil fuel combustion in vehicles.

Based on these project features, the project would not conflict with the implementation of the SACOG's 2020 MTP/SCS and would include elements that support the goals of the plan.

El Dorado County RTP 2020-2040

Although El Dorado County is within the SACOG planning area, it has its own Regional Transportation Planning Agency, EDCTC, which is responsible for the development of a county-specific Regional Transportation Plan (RTP). SACOG and EDCTC work together to ensure the county-specific RTP and SACOG's MTP are consistent.

The current RTP is the El Dorado County RTP 2020-2040, which was adopted in November 2020. The overall goals of this RTP are: integrate local and regional land use, air quality and transportation planning; encourage sustainable transportation options, embrace new technologies and develop climate adaptation and resiliency strategies; optimize the existing roadway system; promote public transit system; promote and preserve aviation facilities and services; promote active transportation system; develop and support an integrated transportation system; secure maximum available funding for maintenance, expansion and improvements of all facilities and services.

The El Dorado County 2020-2040 RTP was developed to improve highways, streets, and regional/inter-regional roadways, public transit, aviation, freight movement, non-motorized transportation, transportation systems management, integrated land use, air quality, and transportation planning, and funding.

The project (Costco project and North Site Remainder Area development) would support the objectives of the El Dorado County Regional Transportation Plan by providing sidewalks, bike lanes, and pedestrian connections. As stated above, the project would create new employment opportunities near existing residences and public transit, thereby creating a network of jobs, commercial shopping, and homes connected by public transit.

Further, as described above and in Table 3.7-10, the project would include pedestrian network improvements as part of Mitigation Measure 3.14-2a which further addresses vehicle miles travelled by employees by developing and implementing measures such as commute trip reduction marketing, a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. Lastly, the project would implement off-site transportation improvements in coordination with the County to address compliance with the El Dorado County Transportation and Circulation Element policies. These improvements are identified in Chapter 2, "Project Description," and would improve transportation efficiency which would avoid GHG emissions from fossil fuel combustion in vehicles.

Table 3.7-10 Consistency with El Dorado County Regional Transportation Plan 2020-2040

Goal [1]	Objective [1]	Does it Conflict?
Integrate local and regional land use, air quality, and transportation planning to create a transportation system which supports the needs of the system user, enhances the economy, preserves the environment, and protects the community character.	Objective A: Provide transportation planning support services to local jurisdictions regarding the transportation impacts of local land use decisions. Objective B: Support local, state, and regional jurisdictions to ensure the transportation infrastructure meets existing and future needs.	Does Not Conflict. Although this goal is not the responsibility of an individual commercial development project, the Proposed Project will implement several offsite transportation improvements in coordination with the County to address the existing and future needs of the region in the immediate vicinity of the Project site. These include (1) the addition of a new signalized intersection on Silva Valley Parkway, shared with the South Site's main driveway, (2) the addition of a new signalized intersection with Silva Valley Parkway shared with the North Site, (3) installation of a partial traffic signal at the intersection of Silva Valley Parkway and Clarksville Crossing, (4) installation of 150-foot dual northbound left turn lanes at the proposed signalized intersection of Silva Valley Parkway and the project driveway, and (5) the addition of a northbound right turn lane, change in the right turn phase to be permissive and overlap, and increase of the westbound left turn storage length at the intersection of White Rock Road and Valley View Parkway-Vine Street. Additionally, the Proposed Project would develop the following pedestrian network improvements as part of Mitigation Measure 3.14-2b: (1) constructing sidewalks along the project frontage on Clarksville Crossing and Silva Valley Parkway and (2) constructing sidewalks north of the project frontage on the east side of Silva Valley Parkway to connect to the existing sidewalk near Oak Meadow Elementary School and providing connectivity with the surrounding neighborhood.
Encourage sustainable transportation options, embrace new technologies and develop climate adaptation and resiliency strategies.	Objective A: Support transportation planning and programs which aid in achieving regional air quality goals and develop strategies to lessen the impacts of severe weather events and wildfire. Objective B: Support the necessary infrastructure and develop innovative programs to support multimodal, technology-based shared ride solutions.	Does Not Conflict. Although this goal is not the responsibility of an individual commercial development project, the Project would support multimodal transport by implementing Mitigation Measure 3.14-2a and Mitigation Measure 3.14-2b. These mitigation measures include the implementation of the following measures: (1) commute trip reduction marketing, (2) a ridesharing program for employees, (3) on-site end-of-trip bicycle facilities, and (4) pedestrian network improvements in the vicinity of the Project site. Note, the pedestrian network improvements include (1) constructing sidewalks along the project frontage on Clarksville Crossing and Silva Valley Parkway and (2) constructing sidewalks north of the project frontage on the east side of Silva Valley Parkway to connect to the existing sidewalk near Oak Meadow Elementary School and providing connectivity with the surrounding neighborhood. Additionally, the Project site is an infill development located near an El Dorado Transit bus route (50 Express) and bus stop (El Dorado Transit Park & Ride), therefore placing jobs that are accessible via public transit. The Project is also located adjacent to homes, thereby providing retail and jobs near a housing-rich area served by El Dorado Transit. Besides this, the Proposed Project will meet the Voluntary Tier 1 Electric Vehicle Charging Standards as defined in the 2025 California Green Building Standards Code[2] by installing ten DC fast chargers that provide a total power of 1,800 kW. Additionally, these charges will be powered by 100% renewable electrical power supplied by Pacific Gas & Electric (PG&E), as Costco has a Clean Energy Contract with PG&E. This will reduce emissions from on-road vehicles travelling in the County and aid in achieving the regional air quality goals.

Goal [1]	Objective [1]	Does it Conflict?
Optimize the existing local, interregional and regionally significant roadway system to support improved maintenance, increased throughput, improved safety and multi-modal mobility.	Objective A: Maintain the existing transportation system at a standard which furthers its life and viability and continues to support the region's current and future transportation needs. Objective B: Develop and retrofit transportation facilities and corridors to improve safety, enhance community character, and improve multi-modal mobility.	Does Not Conflict. Although this is a goal is not the responsibility of an individual commercial development project, the Proposed Project will implement several offsite transportation improvements in coordination with the County to support the existing and future transportation needs of the region in the immediate vicinity of the Project site. These include (1) the addition of a new signalized intersection on Silva Valley Parkway, shared with the South Site's main driveway, (2) the addition of a new signalized intersection with Silva Valley Parkway shared with the North Site, (3) installation of a partial traffic signal at the intersection of Silva Valley Parkway and Clarksville Crossing, (4) installation of 150-foot dual northbound left turn lanes at the proposed signalized intersection of Silva Valley Parkway and the project driveway, and (5) the addition of a northbound right turn lane, change in the right turn phase to be permissive and overlap, and increase of the westbound left turn storage length at the intersection of White Rock Road and Valley View Parkway-Vine Street. Additionally, the Project would support multimodal transport by implementing Mitigation Measure 3.14-2a and Mitigation Measure 3.14-2b. These mitigation measures include the implementation of the following measures: (1) commute trip reduction marketing, (2) a ridesharing program for employees, (3) on-site end-of-trip bicycle facilities, and (4) pedestrian network improvements in the vicinity of the Project site. Note, the pedestrian network improvements include (1) constructing sidewalks along the project frontage on Clarksville Crossing and Silva Valley Parkway and (2) constructing sidewalks north of the project frontage on the east side of Silva Valley Parkway to connect to the existing sidewalk near Oak Meadow Elementary School and providing connectivity with the surrounding neighborhood.
Promote a convenient, desirable, and reliable regional and interregional public transit system for residents and visitors travelling within, to, and beyond El Dorado County.	Objective A: Focus transit service provision to the region's diverse characteristics. Objective B: Promote a transit system that is responsive to the needs of transit-dependent persons.	Does Not Conflict. Although this goal is not the responsibility of an individual commercial development project, the Project is an infill development located near an El Dorado Transit bus route, therefore placing jobs that are accessible via public transit. The El Dorado bus route connects to the larger Sacramento Metropolitan transit network and encourages use of local transit and rail to commute to the Project. The Project is also located adjacent to homes, thereby providing retail and jobs near a housing-rich area served by El Dorado Transit.
Promote and preserve aviation facilities and services that complement the regional transportation system, support emergency response, and enhance economic activities.	Objective A: Promote the operation, preservation, and maintenance of a regional system of public use general aviation airports.	Does Not Conflict. While this goal is not the responsibility of an individual commercial development project, the Proposed Project would not conflict with the EDCTC's ability to meet this goal.

Goal [1]	Objective [1]	Does it Conflict?
Promote a safe, convenient, and efficient active transportation system for all users.	Objective A: Plan and develop a continuous, safe, and easily accessible pedestrian and bikeway network throughout the region connecting urban, suburban, and rural communities. Objective B: Support local jurisdictions in providing an active transportation system that emphasizes the health, safety, and wellbeing of people as part of a multi-modal transportation system.	Does Not Conflict. Although this goal is not the responsibility of an individual commercial development project, the Proposed Project would support the development of an active transportation system in the vicinity of the Project site by implementing Mitigation Measure 3.14-2b. This mitigation measure includes the implementation of (1) on-site end-of-trip bicycle facilities, and (2) pedestrian network improvements. The pedestrian network improvements include (1) constructing sidewalks along the project frontage on Clarksville Crossing and Silva Valley Parkway and (2) constructing sidewalks north of the project frontage on the east side of Silva Valley Parkway to connect to the existing sidewalk near Oak Meadow Elementary School and providing connectivity with the surrounding neighborhood.
Develop and support an integrated transportation system that incorporates corridor-based solutions and public awareness programs which support alternative transportation modes and reduce the impacts of single-occupant vehicle travel.	Objective A: Support local jurisdictions and partners in developing corridor-based solutions to congestion reduction and support alternatives to the single occupant vehicle. Objective B: Support advancement of Transportation Demand Management in a manner which reflects the needs of the region and remains current with new technologies in transportation.	Does Not Conflict. Although this goal is not the responsibility of an individual commercial development project, the Proposed Project would support the development of alternative transportation models by implementing Mitigation Measure 3.14-2a and Mitigation Measure 3.14-2b. These mitigation measures includes the implementation of the following measures: (1) commute trip reduction marketing, (2) a ridesharing program for employees, (3) on-site end-of-trip bicycle facilities, and (4) pedestrian network improvements in the vicinity of the Project site. Note, the pedestrian network improvements include (1) constructing sidewalks along the project frontage on Clarksville Crossing and Silva Valley Parkway and (2) constructing sidewalks north of the project frontage on the east side of Silva Valley Parkway to connect to the existing sidewalk near Oak Meadow Elementary School and providing connectivity with the surrounding neighborhood. Additionally, the Project site is an infill development located near an El Dorado Transit bus route (50 Express) and bus stop (El Dorado Transit Park & Ride), therefore placing jobs that are accessible via public transit. The Project is also located adjacent to homes, thereby providing retail and jobs near a housing-rich area served by El Dorado Transit.
Secure maximum available funding and pursue new sources of funds for maintenance, expansion, and improvement of all modes of transportation facilities and services.	Objective A: Obtain funding for vital transportation needs through all sources. Objective B: Identify innovative and sustainable funding strategies for vital transportation needs where conventional funding sources are insufficient.	Does Not Conflict. While this goal is not the responsibility of an individual commercial development project, the Proposed Project would not conflict with the EDCTC's ability to meet this goal.

Notes: EDCTC = El Dorado County Transportation Commission; DC = direct current; kW = kilowatt.

[1] Priority policy areas and supporting policies obtained from El Dorado County Regional Transportation Plan 2020-2040. Available online at: https://www.edctc.org/files/2859e4e3f/RTP+2040.pdf. Accessed: September 2025.

[2] 2025 California Green Building Standards Code, Title 24, Part 11. Available online at: https://codes.iccsafe.org/content/CAGBC2025P1. Accessed: September 2025.

Source: Data compiled by Ramboll in 2025.

Therefore, the project would not conflict with the implementation of the El Dorado County 2020-2040 RTP and would include elements that support the goals of the plan.

Conclusion

As identified above, implementation of the overall project (Costco project and North Site Remainder Area development) would not conflict with CARB's 2022 Scoping Plan, SACOG's 2020 MTP/SCS, or the El Dorado County RTP 2020-2040. Thus, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

3.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes the potential impacts of the El Dorado Hills Costco EIR (project) related to hazardous and hazardous materials. The reader is referred to Sections 3.2, "Air Quality," and 3.6, "Geology, Soils, and Paleontological Resources," for a discussion and analysis of naturally occurring asbestos. Wildfire and evacuation are addressed in Section 3.17, "Wildfire and Evacuation." The evaluation provided in this section is based, in part, on the Phase I Environmental Assessment (Phase I ESA), Proposed Costco Wholesale Warehouse and Gasoline Station prepared for the project site by Kleinfelder on June 14, 2024 (Appendix G).

Comments related to hazards and hazardous materials received in response to the Notice of Preparation (NOP) for the project included concerns about potential fire and explosion hazards associated with the fuel facility; toxic exposure risks to nearby residences and Oak Meadow Elementary School; possible soil and groundwater contamination from fuel spills; and health effects related to naturally occurring asbestos (NOA). The NOP and comments submitted in response to it are included in Appendix A. As noted above, these issues are addressed in this section as well as Sections 3.2, "Air Quality," 3.6, "Geology, Soils, and Paleontological Resources," and 3.17, "Wildfire and Evacuation."

3.8.1 Regulatory Setting

FEDERAL

Management of Hazardous Materials

Various federal laws address the proper handling, use, storage, and disposal of hazardous materials, as well as requiring measures to prevent or mitigate injury to health or the environment if such materials are accidentally released. The US Environmental Protection Agency (EPA) is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws.

- The Toxic Substances Control Act of 1976 (15 US Code [USC] Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint hazards in paint, dust, and soil.
- The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave").
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.
- The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.
- The Spill Prevention, Control, and Countermeasure (SPCC) rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans. The SPCC rule is part of the Oil Pollution Prevention regulation, which also includes the Facility Response Plan rule.

Transport of Hazardous Materials

The US Department of Transportation (USDOT) regulates transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials transport regulations are enforced by the Federal Highway Administration, the US Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration.

Worker Safety

The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

Toxic Release Inventor

The EPCRA and the Pollution Prevention Act of 1990 established a publicly available database that has information on toxic chemical releases and other waste management activities called the Toxic Release Inventory (TRI). It is available to the public to review. The TRI is updated annually and lists chemical releases by industry groups and federal facilities managed by EPA.

Federal Aviation Administration

Through Title 14 of the Code of Federal Regulations Part 77 (14 CFR 77), the Federal Aviation Administration (FAA) establishes standards and notification requirements for objects affecting navigable airspace. This notification serves the basis for evaluating the effect of construction or alteration from projects on FAA operating procedures; determining the potential hazardous effect of proposed construction on air navigation; identifying mitigation measures to enhance safe air navigation; and charting new objects (FAA 2025). Notification allows the FAA to identify potential aeronautical hazards in advance, thus preventing or minimizing the adverse impacts to the safe and efficient use of navigable airspace.

14 CFR 77

Part 77 of Title 14 of the Code of Federal Regulations outlines the safe, efficient use, and preservation of navigable airspace. The purpose of 14 CFR 77 is to establish: (a) requirements to provide notification to the FAA of certain proposed construction, or the alteration of existing structures; (b) the standards used to determine obstruction to air navigation, and navigational and communication facilities; the process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities, or equipment; and (d) the process to petition the FAA for discretionary review of determinations, revisions, and extensions of determinations.

Underground Storage Tank Regulations (RCRA Subtitle I, 40 CFR Part 280)

EPA regulates underground storage tank (UST) systems containing petroleum to prevent soil and groundwater contamination. Federal UST rules (under RCRA Subtitle I) require proper tank design and installation (spill/overfill prevention and corrosion protection), continuous leak detection, and regular monitoring and reporting of any releases. Owners/operators must promptly report leaks, maintain records, and follow correct tank closure procedures, ensuring early detection and prevention of fuel leaks at gas stations.

Spill Prevention, Control, and Countermeasure Rule (40 CFR Part 112

Under the Clean Water Act, the SPCC rule requires facilities with aboveground oil storage aggregate capacity greater than 1,320 gallons (in containers 55 gallons or larger) to develop and implement an SPCC Plan to prevent petroleum spills from reaching navigable waters. Fueling stations that exceed this threshold (e.g., large aboveground diesel or gasoline tanks) must have a spill containment plan with secondary containment, inspections, and spill response measures as specified in

40 CFR 112. Completely buried tanks subject to UST rules are generally exempt from SPCC. This federal requirement is aimed at preventing oil discharges to water bodies through proactive containment and countermeasures.

Clean Air Act – Gasoline Vapor Emissions (NESHAP for Gasoline Dispensing Facilities, 40 CFR Part 63 Subpart CCCCCC)

The EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) for gasoline dispensing facilities set nationwide requirements to control gasoline vapor emissions (which contain toxics like benzene). These rules mandate vapor emission control practices during gasoline transfer to storage tanks (Stage I vapor recovery or similar measures) to limit hazardous air pollutant releases. In practice, compliance with California's vapor recovery program generally meets or exceeds the federal NESHAP, ensuring that fuel vapors from storage and dispensing are captured and treated to protect air quality.

Hazardous Materials Transportation (USDOT Regulations)

USDOT regulates the transport of fuel by tanker trucks and other carriers under the Hazardous Materials Regulations (49 CFR Parts 171–180). These regulations govern the packaging, placarding, operator training, and highway route controls for gasoline and diesel transport. For example, they require proper tanker design (including emergency shutoff valves), driver hazmat endorsements, and adherence to routing restrictions to ensure safe fuel delivery. In California, the California Highway Patrol (CHP) enforces these rules and state-specific laws (e.g., California Vehicle Code provisions) requiring hazardous material transport licenses and route approvals for fuel tankers, to prevent accidents and spills during fuel transport.

STATE

Management of Hazardous Materials

In California, both federal and state community right-to-know laws are coordinated through the Governor's Office of Emergency Services. The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- emergency planning,
- emergency release notification,
- reporting of hazardous chemical storage, and
- inventory of toxic chemical releases.

The corresponding state law is Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). Under this law, qualifying businesses are required to prepare a Hazardous Materials Business Plan, which would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. At such time as the applicant begins to use hazardous materials at levels that reach applicable state and/or federal thresholds, the plan is submitted to the administering agency.

The California Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency, has primary regulatory responsibility over hazardous materials in California, working in conjunction with EPA to enforce and implement hazardous materials laws and regulations. As required by Section 65962.5 of the California Government Code, DTSC maintains a hazardous waste and substances site list for the State, known as the Cortese List. Individual regional water quality control boards (RWQCBs) are the lead agencies responsible for identifying, monitoring, and cleaning up leaking USTs.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

The State of California has adopted USDOT regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in 26 California Code of Regulations (CCR). State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are CHP and the California Department of Transportation. Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the Governor's Office of Emergency Services, which coordinates the responses of other agencies in the project area.

Management of Construction Activities

Through the Porter-Cologne Water Quality Act and the National Pollution Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during project construction. For a detailed description of the Porter-Cologne Water Quality Act, the NPDES program, and the role of the Central Valley RWQCB, see Section 3.10, "Hydrology and Water Quality."

The State Water Board adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than one acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

Worker Safety

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts onsite evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

Title 8 of the CCR also includes regulations that provide for worker safety when blasting and explosives are utilized during construction activities. These regulations identify licensing, safety, storage, and transportation requirements related to the use of explosives in construction.

Certified Unified Program Agency Program

In the 1990s, the regulation of hazardous materials and local emergency response was spread across more than one thousand local and state agencies in California alone. The Certified Unified Program Agency (CUPA) Program was created by Senate Bill 1082 in 1993 to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency management programs (CalCUPA Forum 2025). The CUPA Program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. Cities and counties can apply to become a CUPA and receive delegated authority from state agencies to enforce laws in their jurisdiction. The El Dorado County Department of Environmental Management, Hazardous Waste Division, is approved by the California Environmental Protection Agency as the CUPA for El Dorado County (El Dorado County 2025).

California UST Program (Health and Safety Code Chapter 6.7; 23 CCR, Div. 3, Ch. 16)

California's UST laws and regulations impose strict standards on underground fuel tanks beyond federal requirements. All underground gasoline or diesel tanks must be double-walled (secondary containment for tanks and piping) and include continuous leak detection monitoring systems. UST owners must obtain permits from the local agency, install approved leak detection (e.g., interstitial monitoring with alarms), perform monthly inspections and

annual compliance tests, and have spill/overfill containment at fill points. State law (Health and Safety Code [HSC] Section 25284–25292) also requires enhanced leak prevention measures and phased out old single-wall USTs. These UST regulations are enforced by local agencies to ensure proper design, monitoring, and prevention of fuel leaks or unauthorized discharges.

Aboveground Petroleum Storage Act (HSC Chapter 6.67; 19 CCR Sections 1600–1616)

The Aboveground Petroleum Storage Act (APSA) is California's aboveground storage tank program, which aligns with federal SPCC requirements. It applies to facilities with ≥1,320 gallons of aggregate aboveground petroleum storage capacity (or smaller facilities with a tank in an underground area, per HSC Section 25270.2(o)). Regulated tank facilities (which can include large aboveground gasoline or diesel tanks at fueling sites, if present) must implement spill prevention measures and prepare an SPCC Plan in accordance with 40 CFR 112. California's Office of the State Fire Marshal oversees APSA, but local CUPAs implement it. Facilities must conduct inspections, employee training, and file annual tank facility statements. (Fueling stations that use only USTs are generally not subject to APSA, but any aboveground tanks for fuel or used oil could trigger APSA if capacity thresholds are met.)

Gasoline Vapor Recovery Regulations (CARB Vapor Recovery Program – HSC Sections 41950-41962)

California requires gasoline dispensing stations to install and use Phase I and Phase II vapor recovery systems to control hydrocarbon emissions. Phase I vapor recovery captures gasoline vapors during fuel delivery from tanker trucks into storage tanks, and Phase II vapor recovery captures vapors displaced when fueling vehicles. The California Air Resources Board (CARB) certifies vapor recovery equipment for compliance with stringent standards (per HSC Section 41954). All gas station vapor recovery systems and components (pumps, nozzles, hoses, vapor return lines) must be CARB-certified and maintained per CARB Executive Orders. Enhanced Vapor Recovery standards in California also require features like bootless nozzles, onboard refueling vapor recovery-compatible vacuum assist systems, and periodic testing of vapor containment efficiency. These regulations, implemented via CARB rules and local air district permits, dramatically reduce smog-forming volatile organic compounds and toxic fumes from fueling operations.

Hazardous Materials Business Plan Program (HSC Chapter 6.95, Article 1; 19 CCR Section 2729 et seq.)

Gas stations must comply with California's Hazardous Materials Business Plan (HMBP) requirements because they handle hazardous materials (petroleum fuel) above reporting thresholds (55 gallons). The HMBP is a comprehensive emergency preparedness and disclosure program designed to protect public health and safety. Facilities must annually inventory their hazardous materials (e.g., gasoline, diesel volumes), provide a site map, and prepare an Emergency Response Plan and employee training program for hazardous material release scenarios. The plan is submitted electronically to the local CUPA and made available to local fire and emergency responders. Compliance with the HMBP law (HSC Sections 25500–25519) ensures that fueling stations have spill response procedures and coordination with first responders in the event of a fuel spill, fire, or other emergency on-site.

California Fire Code – Motor Fuel-Dispensing Facilities

California's Fire Code (Title 24 Part 9, based on the International Fire Code) contains specific safety standards for motor fuel-dispensing stations (Chapter 23). These include requirements for dispenser location and spacing, emergency breakaway couplings on fuel hoses, automatic shut-off valves and emergency electrical shutoffs, canopy fire suppression (if applicable), and provisions for spill control and drainage around fueling areas. Compliance is typically enforced through local fire department plan checks and inspections. For example, the Fire Code mandates that all dispensing equipment and storage tank installations meet fire safety standards and that appropriate Class B fire extinguishers are readily available at fuel islands. Gas stations must obtain Fire Department approvals for their Hazardous Materials storage and comply with any Hazardous Materials Management Plan requirements that local fire authorities impose in addition to the HMBP.

California Highway Regulations for Fuel Transport

In addition to USDOT rules, California law (e.g., Vehicle Code Section 31303) restricts the transport of hazardous materials like fuel on certain highways and requires designated route approvals. CHP enforces state and federal regulations for fuel tanker trucks, including inspection programs and incident response planning. Fuel haulers in California must have a Hazardous Materials Transportation License (issued by CHP) and comply with safe routing, parking, and attendance rules to minimize accident risks. These state-level transport regulations work in concert with 49 CFR to ensure fuel deliveries to gas stations are conducted safely and with proper emergency preparedness.

LOCAL

El Dorado County General Plan

The Public Health, Safety, and Noise Element of the El Dorado County General Plan sets forth planning strategies for fire hazards, seismic hazards, flood hazards, noise, hazardous materials, air quality, airport safety, and highway safety (El Dorado County 2024). This includes objectives and policies focused on protecting residents from existing and potential hazards in El Dorado County. Hazards and hazardous materials objective, and policies applicable to the project include the following:

- Objective 6.6.1: Regulation of Hazardous Materials. Regulate the use, storage, manufacture, transport, and disposal of hazardous materials in accordance with State and Federal regulations.
  - Policy 6.6.1.1: The Hazardous Waste Management Plan shall serve as the implementation program for management of hazardous waste in order to protect the health, safety, property of residents and visitors, and to minimize environmental degradation while maintaining economic viability.
  - Policy 6.6.1.2: Prior to the approval of any subdivision of land or issuing of a permit involving ground disturbance, a site investigation, performed by a Registered Environmental Assessor or other person experienced in identifying potential hazardous wastes, shall be submitted to the County for any subdivision or parcel that is located on a known or suspected contaminated site included in a list on file with the Environmental Management Department as provided by the State of California and federal agencies. If contamination is found to exist by the site investigations, it shall be corrected and remediated in compliance with applicable laws, regulations, and standards prior to the issuance of a new land use entitlement or building permit.
- Objective 6.8.1: Safety Hazards Exposure. Minimize the public's exposure to airport-related safety hazards by requiring new development around airports to be compatible with that use.
  - Policy 6.8.1.1: All development within the Airport Influence Area of the Placerville Airport, the Cameron Airpark Airport, and the Georgetown Airport shall comply with El Dorado County Airport Land Use Commission's policies and maps as set forth in the Airport Land Use Compatibility Plan for each airport. All development within the Airport Influence Area of the South Lake Tahoe Airport shall comply with the Airport Land Use Compatibility Plan (ALUCP) for the areas around the South Lake Tahoe Airport. Where there is a difference between the County development standards and the development standards of the Airport Land Use Compatibility Plan, as applied to proposed development, the standards that will most reduce airport-related hazards shall apply. (Resolution 124-2019, August 6, 2019.)

El Dorado County Emergency Operation Plan

The El Dorado County Emergency Operations Plan (EOP) addresses the county's planned response to emergency situations covering severe weather (wildfire, flooding), hazardous materials incidents, dam failure, landslide/avalanche, structure fire/explosion, earthquake, civil unrest, terrorism, nuclear risk, mass casualty incidents, transportation emergencies, school emergencies, public health emergencies, and agricultural disasters. The EOP is the principal guide for county agencies and other local government entities to prevent, prepare, respond, and recover from emergency disasters affecting the county and is intended to facilitate multi-agency and multi-jurisdictional coordination, particularly between local, state, and federal agencies in emergency operations. The EOP also provides guidance for those with emergency management responsibilities within the county and provides yearlong preparedness, guidance, and well as

specific guidance to those activated in the event of an emergency to save lives, enhance the health of citizens, protect property, and the environment.

El Dorado County Environmental Management Department

The El Dorado County Environmental Management Department is responsible for ensuring compliance with applicable state laws, regulations, and County ordinances concerning public health and safety issues. This includes departmental units, such as the Environmental Health unit, which addresses food facilities, domestic wells, small water systems, septic systems, public pools and spas, and public health issues; Hazardous Materials unit, which addresses the implementation of hazardous materials and household hazardous waste programs to ensure proper management and disposal; and the Solid Waste unit, which addresses the implementation of the County's solid waste and recycling programs to ensure safe handling and proper disposal of residential and commercial solid waste.

El Dorado County Hazardous Waste Management Plan

In 1990, California counties prepared hazardous waste management plans to identify potential areas for the siting of hazardous waste facilities. The El Dorado County Hazardous Waste Management Plan (CHWMP) was prepared in accordance with the California Department of Health Services guidelines (El Dorado County 1990). The goals of the CHWMP are to (1) protect the health, safety, and property of the residents and visitors of El Dorado County and minimize damage to the environment from the adverse effects of hazardous wastes while maintaining the economic viability of the County and the State; (2) to manage hazardous wastes in a way that is consistent with sound management approaches in this order of priority: source reduction, recycling and reuse, treatment (on-site and off-site), and residuals disposal; (3) to develop a plan that will fulfill the criteria established by California Department of Health and Safety to meet State legislated local hazardous waste management plans (AB 2948, Tanner) and acquire the funding sources to implement the plan; and (4) to assess and accommodate the current and future needs for hazardous waste management practices and facilities for proper recycling, transfer, treatment, and storage of hazardous wastes, and disposal of treated residuals (El Dorado County 1990). The CHWMP was published in 1990, and the majority of the activities identified in the plan have since been implemented.

Hazardous Materials Emergency Response Program

The Hazardous Materials Emergency Response Program is a 24-hour on-call service that provides a safe and efficient emergency response to hazardous materials events in the county (El Dorado County 2024a). The Solid Waste and Hazardous Materials Division leads this program, with close coordination with law enforcement, fire and health agency officers, and staff. Special attention is given to the oversight of hazardous materials used and transported frequently in the county by local businesses, and preparedness activities and training is provided for possible biological, nuclear, incendiary, chemical, and explosive hazards used in criminal or terrorist activities.

Hazardous Materials Area Plan

The Hazardous Materials Area Plan (Area Plan) fulfills the CUPA regulatory requirements, per state law, and can be used as a resource document in conjunction with the El Dorado County Emergency Operations Plan and other state agency plans (El Dorado County 2009). The Area Plan describes the county's pre-incident planning and preparedness for hazardous materials releases, clarifies the roles and responsibilities of federal, state, and local agencies during a hazardous materials incident, and describes the county's hazardous materials incident response program, training, communications, and post-incident recovery procedures (El Dorado County 2009).

El Dorado County Certified Unified Program Agency

The El Dorado County Environmental Management Department is the CUPA responsible for administering state hazardous materials and tank programs locally. As the CUPA, it issues permits and performs inspections for UST systems, ensuring that new tank installations, monitoring systems, and leak prevention measures meet state standards. It also oversees Hazardous Materials Business Plans and the Aboveground Petroleum Storage Act requirements in the county. In essence, the CUPA serves as the one-stop regulatory agency coordinating the six statewide Unified Program elements, including UST, AST, hazardous material inventory/disclosure, and emergency planning, to enforce compliance at fueling facilities. Gas station operators in El Dorado County must obtain a CUPA

permit for UST operation and are subject to annual inspections of tank integrity, leak detection records, and proper HMBP documentation. The CUPA also enforces UST release reporting and facilitates any required cleanup oversight in coordination with state water quality agencies if a leak occurs.

El Dorado County Air Quality Management District – Permit and Vapor Recovery Enforcement

The local air quality management district (AQMD) regulates air emissions from gas stations. In El Dorado County, gas dispensing facilities are required to obtain an Authority to Construct and Permit to Operate for fuel dispensing equipment and vapor recovery systems. The AQMD's Rule 238 – Gasoline Transfer and Dispensing applies to any transfer of gasoline into storage tanks and from storage tanks into vehicle fuel tanks within the county. This rule (similar to rules in other air districts) mandates the use of CARB-certified Phase I and Phase II vapor recovery systems at all gasoline stations, with periodic compliance testing to ensure vapor capture efficiency. The AQMD conducts inspections and audits of gas stations to verify that vapor recovery nozzles, hoses, and storage tank fittings are maintained in good working order and that required vapor tightness tests are passed. By local regulation, station owners must immediately repair any defective vapor control equipment and may not operate dispensers if vapor recovery is compromised. These measures, enforced by the El Dorado County AQMD, ensure the state's stringent air quality standards for fuel vapors are met at the local level.

Local Fire Department / Building Permits

Fueling station projects in El Dorado County must also comply with all local building and fire code requirements. The El Dorado Hills Fire Department (or relevant fire protection district) reviews construction plans for compliance with the California Fire Code (as adopted by the County) and issues permits for the installation or modification of fuel storage and dispensing systems. This includes verifying that proper safety distances, secondary containment for dispensers, crash protection (bollards), and emergency shut-off controls are provided per code. Before operation, the fire authorities will inspect the gas station to ensure leak detection alarms, ventilation, and fire suppression devices are in place and functioning. Additionally, local ordinances may require a Hazardous Materials permit or a Hazardous Materials Management Plan from the fire department, which in practice is satisfied by the CUPA's Business Plan. Ongoing inspections by fire officials (often in coordination with CUPA) help ensure that on-site hazardous materials are managed safely and that the station's employees are trained in emergency procedures, such as proper response to spills or fires. Compliance with these local safety regulations is required for the station to receive final occupancy approval and to operate legally.

3.8.2 Environmental Setting

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the CFR as "a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:

> … because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

KNOWN AND POTENTIAL CONTAMINATION

North Site

A site reconnaissance conducted for the 2024 Phase I ESA evaluated the entire 24.83 acres of the North Site (including the North Site Remainder Area) and identified the site as undeveloped and characterized by hilly annual grassland vegetation with scattered remnants of former ranch structures. An ephemeral stream begins on this portion of the property and flows toward the southwest; a low earthen embankment and a metal culvert were observed along this stream near the northern site boundary. In the central part of the North Site, a square concrete basin (likely a former watering trough) is present beneath a bush. Aside from minor windblown trash, no debris piles, staining, distressed vegetation, or other indications of hazardous-material release were noted during the site reconnaissance on the North Site.

Historically, the North Site was part of a larger cattle-grazing ranch on the property. No intensive agricultural, industrial, or commercial activities occurred in this area; the land remained an open, undeveloped hillside used for livestock grazing. One small ranch structure existed elsewhere on the property in the mid-20th century, but historical maps show no buildings on the North Site itself. By 1980, any former ranch buildings on the property had been removed.

The North Site is not listed on any federal, state, or local hazardous materials database (e.g., it does not appear on the Cortese List or related cleanup site lists). An adjacent property at the North Site's northwest corner, the Oak Meadow Elementary School at 7701 Silva Valley Parkway, is listed in the DTSC *EnviroStor* database due to a past evaluation of NOA, arsenic, and lead in soil. Investigations at the school site found asbestos and metal concentrations at or below background levels, and the DTSC issued a "No Further Action" determination with no releases requiring cleanup. Aside from the Oak Meadow Elementary case, no off-site hazardous material release sites are documented within 0.25 mile of the North Site.

South Site

The South Site is also an undeveloped grassland. An ephemeral stream traverses this area as it continues southwest from the North Site; on the South Site a small concrete dam structure spans the stream channel. The Phase I ESA noted several remnants of the former ranch homestead in this portion, including sections of concrete foundations/walls, a rectangular concrete basin, and a pile of concrete rubble from a demolished structure. Only minor debris was observed (for example, a discarded vacuum cleaner and an old trash can were found on the ground), and no evidence of chemical spills, underground storage tanks, or unauthorized waste dumping was identified on the South Site.

Historically, the South Site contained the primary ranch structures associated with the former grazing use of the property. Mid-20th-century maps (circa 1940s) show a single rural structure (residence or barn) in this vicinity of the property, which had been removed by about 1980. Aside from that long-demolished ranch building, the South Site was used exclusively for open grazing land and was not developed with any other uses.

The South Site is not listed in any of the regulatory agency databases for hazardous materials or contamination (no recorded hazardous material release or cleanup cases). No off-site contaminated sites were identified within a 0.25-mile radius of the South Site. The nearest database-listed facilities (such as the Oak Meadow school site and other sites identified in the Phase I ESA's radius search) are well outside the 0.25-mile range and have been either resolved or determined not to pose a threat to the project site.

AIRPORTS

The agency with jurisdiction over managing appropriate development of areas surrounding public airports in El Dorado County is the County's designated airport land use commission (ALUC), the El Dorado County Transportation Commission (EDCTC). The EDCTC ALUC provides technical and advisory support to the Georgetown and Placerville Airports and the Cameron Park Airport District. The project site is not located within 2 miles of a public airport or public use airport, and due to this distance, the project site is not located within any of the three airport land use compatibility plans (Georgetown, Placerville, and Cameron Park Airport District) for the county. The nearest airport, the Cameron Park Airport, is located 3.8 miles northeast of the project site.

SCHOOLS

There is one existing school within 0.25-mile of the project site: the Oak Meadow Elementary School, located adjacent to the North Site of the project site, at 7701 Silva Valley Parkway.

3.8.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following reports and data sources document potential hazardous conditions at the project site and were reviewed for this analysis:

- review of applicable elements from the El Dorado County General Plan and county websites regarding hazardous materials plans, programs, departments, and emergency operations;
- the Phase I ESA for the Proposed Costco Wholesale Warehouse and Gasoline Station by Kleinfelder on June 13, 2024 (Appendix G); and
- available literature, including documents published by federal, State, and County governments.

Project construction and operation were evaluated against the hazardous materials information gathered from these sources to determine whether any risks to public health and safety or other conflicts would occur.

THRESHOLDS OF SIGNIFICANCE

An impact related to hazards and hazardous materials is considered significant if implementation of the project would do any of the following:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
- implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

ISSUES NOT DISCUSSED FURTHER

Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5

As discussed above in Section 3.8.2 "Environmental Setting," the Phase I ESA completed a records search to determine the vicinity of any documentation of hazardous sites or hazardous materials sites listed and compiled

pursuant to Government Code Section 65962.5 and found one off-site facility within 0.25-miles of the project site: the Oak Meadow Elementary School, located approximately 1,600 feet northwest of the project site. Documentation indicated that there is a potential for NOA, arsenic, and lead in the soil and that the former onsite activities included agricultural livestock. The status of the case was listed as requiring "No Further Action" as of 2000, as no releases to soil or groundwater were reported. The case is closed and this facility is not considered a REC. An updated search using DTSC's EnviroStor database and the SWRCB's GeoTracker database confirmed the conclusions of the Phase I ESA regarding Oak Meadow Elementary School. There are no other documented hazardous materials or hazardous waste sites, leaking underground storage tank sites, or cleanup sites within 0.25-miles of the project site. As a result, project implementation would not create a significant hazard to the public or environment due to the presence of known hazardous materials releases (DTSC 2025a; DTSC 2025b; SWRCB 2025). This issue is not discussed further.

Emergency Response / Evacuation Plan

Impacts associated with impairing an adopted emergency response or emergency evacuation plan are evaluated in Section 3.17, "Wildfire and Evacuation."

Wildland Fire

Impacts associated with exposing people or structures, either directly or indirectly, to wildland fires are evaluated in Section 3.17 'Wildfire and Evacuation."

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Create a Significant Hazard through Routine Transport, Use, or Disposal of Hazardous Materials or 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

Project construction activities and subsequent operations would involve hazardous materials. All hazardous materials used during construction and operation would be subject to the federal, state, and local requirements that provide protection measures to avoid impacts to the environment and public health. The Phase 1 ESA identified multiple concrete structures (including a pit and trough) where potential for dumping of hazardous materials may have occurred. In addition, construction of off-site roadway improvements may encounter unknown hazardous materials. This impact would be **significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

Construction

The development of the Costco project, off-site transportation improvements identified in Chapter 2, "Project Description," and the North Site Remainder Area would involve the demolition of remnant concrete structures onsite, grading of the site and development of commercial buildings and parking. Construction activities would involve the transport, use, storage, and disposal of hazardous materials and petroleum products, such as asphalt, diesel fuel, lubricants, paints and solvents, cleaning agents, and cement products containing strong basic or acidic chemicals, which are commonly used at construction sites. The project would also include improvements to roadway transportation connections from Silva Valley Parkway and Clarksville Crossing, water/wastewater distribution and conveyance, and electrical service, all of which would occur within existing rights-of-way that contain soil and roadway base material (e.g., aggregate, rock, concrete, asphalt, and soil), water, wastewater, and electrical infrastructure.

Construction materials would be transported, handled, stored, and disposed of in accordance with applicable safety laws, regulations, and manufacturers' instructions. For example, construction activities associated with the project would be subject to Cal/OSHA's regulations on the proper handling of hazardous materials and worker safety and training, and subject to the SWRCB's NPDES Construction General Permit (Order WQ 2022-0057-DWQ) requiring spill prevention and containment plans to avoid spills and releases of hazardous materials and wastes into the environment. In addition, construction Best Management Practices would also be implemented and may include that

would be implemented include, for example, the designation of special storage areas and labeling, containment berms, coverage from rain, and concrete washout areas. Further, USDOT Office of Hazardous Materials Safety and CHP both prescribe strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR. These standard accident prevention and hazardous materials recovery training and procedures are regulatory compliance actions enforced by the state and followed by private state-licensed, certified, and bonded transportation companies and contractors. Regulatory compliance with Cal/OSHA, the SWRCB Construction General Permit, USDOT, and CHP regulations would minimize the potential risk of a spill or accidental release of hazardous materials through routine transport, use, or disposal during construction and protect public health. Therefore, construction hazardous material use impacts would be less than significant.

The reader is referred to Section 3.2, "Air Quality," regarding potential public health impacts from exposure to NOA from construction activities.

Operation

Operation of the Costco project would involve a new Costco warehouse store (on the South Site) and a members-only fuel facility with employee parking (on a portion of the North Site). The fuel facility on the North Site would include an open-air canopy (approximately 13,000 square feet in size) and a 200-square-foot controller enclosure.

As identified in Chapter 2, "Project Description," the Costco project does not propose development of the North Site Remainder Area. However, it is assumed this area would include approximately 138,000 square feet of commercial development in the future. While the type of commercial uses are not currently known, future uses could involve the use and transportation of hazardous materials.

All hazardous materials transport, storage, and dispensing during operations would be subject to standard regulations. For instance, the routine transportation of fuels to the site must comply with USDOT and CHP hazardous materials transport regulations (Title 49 CFR and Title 13 CCR) regarding proper vehicle placarding, driver training, and spill prevention. On-site storage of hazardous materials (fuel in USTs, etc.) must comply with California CUPA regulations and Cal/OSHA worker safety requirements. The dispensing of gasoline and diesel at the fuel facility must adhere to safety standards such as: Cal/OSHA Title 8 CCR, Chapter 4 (Sections 3319 and 2540.7) governing fueling operations and service station safety; Title 13 CCR, Chapter 5 standards for motor vehicle fuels; and 29 CFR 1917.156 for fuel handling and storage. For example, fuel dispensers would be equipped with automatic shutoff valves and other safety devices, and all USTs would be double walled with leak detection systems and spill/overfill prevention in accordance with Title 23 CCR Section 2635(b). The fuel storage tanks would include appropriate design, secondary containment, monitoring equipment, and signage to protect public health and safety in the event of a leak, fire, or spill. An operational SWPPP would also be in place (as required by the NPDES Construction General Permit and County requirements) to ensure that any project-generated pollutants (including potential fuel or oil spills) are prevented from entering stormwater runoff.

For removal of hazardous waste from the site, as described above, hazardous waste generators are required to use a certified hazardous waste transportation company, which must ship hazardous waste to a permitted facility for treatment, storage, recycling, or disposal (DTSC 2025c). Furthermore, the Chapter 6.95 of the California Health and Safety Code (Health and Safety Code) requires all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials, to submit a hazardous materials business emergency plan (HMBEP) to its local CUPA, in this case the County Department of Environmental Management, Hazardous Waste Division. The HMBEP must include an inventory of the hazardous materials used in the facility, and emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. The HMBEP must also include the Material Safety Data Sheet for each hazardous and potentially hazardous substance used, which summarizes the physical and chemical properties of the substances and their health impacts. In the event of an accidental release of hazardous materials, the HMBEP requires immediate notification to all appropriate agencies and personnel of a release, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information of all company emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

Conclusions

Project adherence to these safety laws and regulations would minimize the potential risk of improper transport, use, storage, and disposal of hazardous materials and hazardous waste. Operation of 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 would not create a significant hazard to the public or environment involving the release of hazardous materials into the environment. However, because construction activities could potentially disturb contamination on the project site and associated off-site roadway improvements. This impact is considered **significant**.

Mitigation Measures

Mitigation Measure 3.8-1: Require Soil Sampling If Stained Soil or Unusual Soil Odor Is Encountered During Removal of On-Site Concrete Structures and Construction of Off-Site Improvements

If stained soils or unusual soil odors are encountered, halt work conditions would be implemented on the portions of the area with stained or odorous soils and a qualified geotechnical soils engineer shall conduct soil sample testing to confirm if there are any constituents that exceed established screening level thresholds. If any screening level thresholds are exceeded, the applicant shall coordinate with the County and other applicable regulatory agencies (e.g., RWQCB and DTSC) to remediate the extent of soil contamination until such contamination is below all acceptable constituent screening levels.

Significance after Mitigation

Implementation of Mitigation Measure 3.8-1 would reduce this potential hazard impact by ensuring that any encountered contaminated soils during construction of off-site improvements would be remediated to the satisfaction of DTSC's requirements and established screening levels. Application of this mitigation measure would be consistent with General Plan Objective 6.6.1. Implementation of this mitigation measure would reduce this impact to **less than significant**.

Impact 3.8-2: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25-Miles of an Existing or Proposed School

The Oak Meadow Elementary School is located adjacent and northwest of the project site. In addition, as part of warehouse retail operations and the proposed fuel facility, the project would transport hazardous materials within 0.25-miles of Oak Meadow Elementary School. Nevertheless, the handling and transportation of hazardous materials during construction would be subject to the requirements of the USDOT, CHP, and EDCAQMD, which would minimize the potential for the project to result in emitting hazardous emissions or acutely hazardous materials, substances, or waste within 0.25-miles of an existing or proposed school. This impact would be **less than significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

During project construction, materials (including fuels, oils, solvents, etc.) would be transported to and used on the site, which lies within 0.25 miles of Oak Meadow Elementary School. The reader is referred to Impact 3.8-1 regarding the potential for on-site and off-site contamination that may be encountered during construction and implementation of Mitigation Measure 3.8-1 to address this impact.

During operation of the Costco project, fuel delivery tankers would travel along Silva Valley Parkway. Other hazardous materials would be transported along Silva Valley Parkway that would support the Costco project as well as future commercial uses associated with the North Site Remainder Area. As identified in Chapter 2, "Project Description," Costco truck routes would consist of US 50, Silva Valley Parkway (from US 50 to Clarksville Road), Clarksville Road, and White Rock Road (from Clarksville Road to US 50).

All hazardous materials transport to and from the project site would adhere to USDOT and CHP requirements for safe handling. USDOT/CHP regulations dictate proper packaging, labeling, and routing of hazardous materials, and only licensed hazardous material haulers would be used. During operations, the storage and dispensing of fuel and other hazardous materials will similarly follow all applicable safety laws (as detailed under Impact 3.8-1). The fuel facility's

design features (such as vapor recovery systems on fuel pumps, underground double-walled tanks, and spill containment at filler points) will minimize routine emissions of gasoline vapors. Oak Meadow Elementary School is immediately northwest of the fuel facility location, but the facility would include vapor recovery and spill prevention measures that meet or exceed regulatory requirements to protect air quality. The reader is referred to Section 3.2, "Air Quality," for a further discussion of the health risk evaluation associated with exposure to toxic air contaminants.

Overall, compliance with USDOT, CHP, and EDCAQMD safety requirements will ensure that any transport of hazardous materials to or from the site – whether during construction or operation – is handled with proper care. Likewise, on-site use of hazardous substances will be managed with standard controls (spill kits, employee training, safety data sheets, etc.). These precautions will minimize the chance of any hazardous emissions or releases that could impact Oak Meadow Elementary or any other sensitive receptor.

Conclusions

Therefore, compliance with USDOT, CHP, and EDCAQMD safety requirements would ensure that the transportation of any hazardous materials to and from the project site along local public streets would be handled with proper care and minimize any impact related to the handling of hazardous materials, substances, or waste within 0.25-mile of an existing or proposed school during both construction and operation. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.8-3: For a Project Located within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, within 2 Miles of a Public Airport or Public Use Airport, Would the Project Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Project Area

The project site is not located within 2 miles of a public airport or public use airport. The nearest airport is the Cameron Park Airport, 3.8 miles northeast of the project site. Because of this distance, the project site is not located within any ALUCP. Therefore, construction and operation of the project is not anticipated to be exposed to a safety hazard or excessive noise. This impact would be **less than significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

The jurisdiction of providing appropriate development of areas surrounding public airports in El Dorado County is the County's designated ALUC, the EDTC. As previously discussed, the EDCTC ALUC provides technical and advisory support to the Georgetown and Placerville Airports and the Cameron Park Airport District. The project site is not located within 2 miles of a public airport or public use airport, and as such, the project site is not located within any of the three ALUCPs. The nearest airport, the Cameron Airpark Airport, is located approximately 3.8 miles northeast of the project site. Therefore, the project would not result in a significant impact with respect to safety hazards or excessive noise for people residing or working in the project site area.

Given the modest height of the Costco building and fuel canopy relative to the surrounding terrain and existing structures (e.g., nearby power line poles and oak trees), it is not expected that the project would trigger any FAA restriction or concerns with air navigation (for instance, no obstruction of radar or communication signals). No component of the project will generate significant glare or lighting that could confuse pilots, and no activities would attract birds or other wildlife hazards to aircraft. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

3.9 HYDROLOGY AND WATER QUALITY

This section identifies the regulatory context and policies related to hydrology and water quality, describes the existing hydrologic conditions at the project site, and evaluates potential hydrology and receiving water-quality impacts of the proposed project. Potential effects on the capacity of water-supply, sewer/wastewater, and drainage/stormwater facilities are addressed in Section 3.16, "Utilities and Service Systems."

Comments received on the notice of preparation (NOP) regarding hydrology and water quality included potential water contamination, potential groundwater contamination, stormwater runoff, and site drainage. These comments are addressed where appropriate throughout this section. The NOP and comments submitted in response to it are included in Appendix A.

3.9.1 Regulatory Setting

FEDERAL

Clean Water Act

The US Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. Various elements of the CWA address water quality. These are discussed below.

CWA Water Quality Criteria/Standards

Pursuant to federal law, EPA has published water quality regulations under Title 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of state regulations below, the State Water Resources Control Board (State Water Board) and its nine regional water quality control boards (RWQCBs) have designated authority in California to identify beneficial uses and adopt applicable water quality objectives.

CWA Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of the pollutant that the water body can receive and still comply with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. In California, implementation of TMDLs is achieved through water quality control plans, known as basin plans, of the State RWQCBs. See "State Plans, Policies, Regulations, and Laws," below.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source waste discharges and nonpoint source stormwater runoff. Each NPDES permit identifies 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.

"Nonpoint source" pollution originates over a wide area rather than from a definable point. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or

discrete conveyances. Two types of nonpoint source discharges are controlled by the NPDES program: discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit system (see the discussion of "State Plans, Policies, Regulations, and Laws" section below).

National Flood Insurance Act

The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from, and mitigating against disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that aid with mitigating future damages from natural hazards. FEMA prepares Flood Insurance Rate Maps (FIRMs) that delineate the regulatory floodplain to assist local governments with the land use planning and floodplain management decisions needed to meet the requirements of NFIP. Floodplains are divided into flood hazard areas, which are areas designated per their potential for flooding, as delineated on FIRMs. Special Flood Hazard Areas are the areas identified as having a one percent chance of flooding in each year (otherwise known as the 100-year flood). In general, the NFIP mandates that development is not to proceed within the regulatory 100-year floodplain if the development is expected to increase flood elevation by 1 foot or more.

STATE

California Porter-Cologne Act

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Board and each of the nine RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Clean Water Act. The applicable RWQCB for the proposed project is the Central Valley RWQCB. The State Water Board and the Central Valley RWQCB have the authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substances, sewage, or oil or petroleum products.

Under the Porter-Cologne Act, each RWQCB must formulate and adopt a water quality control plan (known as a "basin plan") for its region. The basin plan for the Central Valley Region includes a comprehensive list of waterbodies within the region and detailed language about the components of applicable Water Quality Objectives (WQOs). The Basin Plan recognizes natural water quality, existing and potential beneficial uses, and water quality problems associated with human activities throughout the Sacramento and San Joaquin River Basins. Through the Basin Plan, the Central Valley RWQCB executes its regulatory authority to enforce the implementation of TMDLs, and to ensure compliance with surface WQOs. The Basin Plan includes both narrative, and numerical WQOs designed to provide protection for all designated and potential beneficial uses in all its principal streams and tributaries. Applicable beneficial uses include municipal and domestic water supply, irrigation, non-contact and contact water recreation, groundwater recharge, fresh water replenishment, hydroelectric power generation, and preservation and enhancement of wildlife, fish, and other aquatic resources.

The Central Valley RWQCB also administers the adoption of waste discharge requirements, manages groundwater quality, and adopts projects within its boundaries under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities.

Anti-Degradation Policy

SWRCB has adopted an Anti-Degradation Policy, otherwise known as Resolution No. 68-16. This policy requires that the quality of existing high-quality water be maintained unless the State finds that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in policies as of the date on which such

policies became effective. The policy also requires best practicable treatment or control of discharges to high-quality waters to assure that pollution or nuisance will not occur, and that the highest water quality consistent with maximum benefit to the people of the state will be maintained.

NPDES Construction General Permit for Stormwater Discharges Associated with Construction Activity

Dischargers whose projects disturb one or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under SWRCB's Construction General Permit (Order WQ 2022-0057-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation.

Coverage under the Construction General Permit is obtained by submitting permit registration documents to SWRCB that include a risk-level assessment and a site-specific stormwater pollution prevention plan (SWPPP) that identifies an effective combination of erosion control, sediment control, and non-stormwater best management practices (BMPs). The Construction General Permit requires that SWPPP defines a program of regular inspections of the BMPs and, in some cases, sampling of water quality parameters.

NPDES Stormwater Permit for Discharges from Small Municipal Separate Storm Sewer Systems

EPA defines a municipal separate storm sewer system (MS4) as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater that is designed or used for collecting or conveying stormwater. As part of the NPDES program, EPA initiated a program requiring that entities having MS4s apply to their local RWQCB for stormwater discharge permits. The program proceeded through two phases. Under Phase I, the program-initiated permit requirements for designated municipalities with populations of 100,000 or more to obtain NPDES permit coverage for their stormwater discharges. Phase II expanded the program to municipalities with populations of fewer than 100,000, as well as Small MS4s outside the urbanized areas that are designated by the permitting authority to obtain NPDES permit coverage for their stormwater discharges.

Generally, Phase I MS4s are covered by individual permits, and Phase II MS4s are covered by a general permit. Each regulated MS4 is required to develop and implement a stormwater management program (SWMP) to reduce the contamination of stormwater runoff and prohibit illicit discharges. El Dorado County is a Phase II Small MS4 Traditional Renewal Permittee under MS4 Order No. 2013-0001-DWQ.

California Water Code

The California Water Code is enforced by the California Department of Water Resources (DWR). The mission of DWR is "to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments." DWR is responsible for promoting California's general welfare by ensuring beneficial water use and development statewide.

Groundwater Management

Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as AB 3030, and has since been modified by SB 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SB 1168, SB 1319, and AB 1739) in 2014. The intent of the Acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan.

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720.3). By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1). Pursuant to the SGMA, any local agency that has

water supply, water management or land use responsibilities within a groundwater basin may elect to be a "groundwater sustainability agency" for that basin (Water Code Section 10723). The western slope of El Dorado County does not contain groundwater basins and is not subject to SGMA.

REGIONAL

Central Valley Water Quality Control Plan

The project would be located within the area under the jurisdiction of Central Valley RWQCB and its Basin Plan. SWRCB and the Central Valley RWQCB share the responsibility, under the Porter-Cologne Act (discussed above), to formulate and adopt water policies and plans and to adopt and implement measures to fulfill CWA requirements. The Central Valley Water Quality Control Plan (Basin Plan), last amended December 2020, identifies surface water and groundwater resources in the watershed and establishes beneficial uses and numeric water quality objectives for each resource.

Central Valley RWQCB Dewatering Requirements

CWA Section 402 includes waste discharge requirements for dewatering activities. While small amounts of construction-related dewatering are covered under the Construction General Permit, the Central Valley RWQCB has regulations specific to dewatering activities that typically involve reporting and monitoring requirements.

If dewatering is required as part of a project, then the project applicant would need to comply with the Central Valley RWQCB dewatering requirements. Coverage under the Construction General Permit typically covers uncontaminated dewatering activities, which are considered in the permit to be authorized non–stormwater discharges. As part of the Construction General Permit, all dewatering discharges are required to be filtered or treated, using appropriate technology, from sedimentation basins. Authorized non–stormwater dewatering discharges may require a permit because some RWQCBs have adopted General Permits for dewatering discharges. The Central Valley RWQCB has adopted a NPDES Low Threat Discharge and Dewatering General Permit. Therefore, a project applicant or the project applicant's contractor would also need to obtain coverage under the NPDES Low Threat Discharge and Dewatering permit, which will require the dewatering discharge to be treated prior to discharge to any local water way.

If dewatering activities lead to discharges to the storm drain system or other water bodies, water treatment measures may be designed and implemented as necessary so that water quality objectives are met prior to discharge to waters of the state. As a performance standard, these measures would be selected to achieve the maximum removal of contaminants found in the groundwater and will represent the best available technology that is economically feasible. Implemented measures may include using infiltration areas and retaining dewatering effluent until particulate matter has settled before the water is discharged. The contractor should perform routine inspections of the construction area to verify that the water quality control measures are properly implemented and maintained; the contractor will also conduct observations of the water (e.g., check for odors, discoloration, or an oily sheen on groundwater). Other pre-discharge sampling and reporting activities required by the Central Valley RWQCB are typically conducted, if necessary. The final selection of water quality control measures would be subject to review by the Central Valley RWQCB, if necessary. If the groundwater is found to not meet water quality standards and treatment measures are not effective, the water may need to be hauled off-site for treatment and disposal at an appropriate waste treatment facility.

LOCAL

El Dorado County General Plan

The County General Plan Public Services and Utilities Element (El Dorado County 2015) and Conservation and Open Space Element (El Dorado County 2017) include the following objectives and policies that are applicable to the project:

- Objective 5.4.1 Drainage and Flood Management Program: Initiate a County-wide drainage and flood management program to prevent flooding, protect soils from erosion, and minimize impacts on existing drainage facilities.

- **Policy 5.4.1.1:** Require storm drainage systems for discretionary development that protect public health and safety, preserve natural resources, prevent erosion of adjacent and downstream lands, prevent the increase in potential for flood hazard or damage on either adjacent, upstream or downstream properties, minimize impacts to existing facilities, meet the National Pollution Discharge Elimination System (NPDES) requirements, and preserve natural resources such as wetlands and riparian areas.
- **Policy 5.4.1.2:** Discretionary development shall protect natural drainage patterns, minimize erosion, and ensure existing facilities are not adversely impacted while retaining the aesthetic qualities of the drainage way.

- **Objective 7.1.2 Erosion/Sedimentation:** Minimize soil erosion and sedimentation.
  - **Policy 7.1.2.2:** Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.
  - **Policy 7.1.2.3:** Enforce Grading Ordinance provisions for erosion control on all development projects and adopt provisions for ongoing, applicant-funded monitoring of project grading.
- **Objective 7.3.1 Water Resource Protection:** Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.
  - **Policy 7.3.1.1:** Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.
- **Objective 7.3.2 Water Quality:** Maintenance of and, where possible, improvement of the quality of underground and surface water.
  - **Policy 7.3.2.2:** Projects requiring a grading permit shall have an erosion control program approved, where necessary.
  - **Policy 7.3.2.3:** Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).
- **Objective 7.3.4:** Drainage - Protection and utilization of natural drainage patterns.
  - **Policy 7.3.4.1.** Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.
  - **Policy 7.3.4.2.** Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

Grading, Erosion, and Sediment Control Ordinances

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance) (Chapter 110.14 of the County Code of Ordinances) establishes provisions for public safety and environmental protection associated with grading activities on private property. Section 110.14.090 of the Grading Ordinance, which has incorporated the recommended standards for drainage BMPs from the High Sierra Resource Conservation and Development Council's BMP handbook, prohibits grading activities that would cause flooding where it would not otherwise occur or would aggravate existing flooding conditions.

El Dorado County Design and Improvement Standards Manual

The purpose of the Design and Improvement Standards Manual is to standardize development practices used in the hillside environment that is prevalent in El Dorado County and to minimize the environmental effects of construction. Volume II of the manual includes drainage and design criteria for stormwater and Volume III of the manual provides guidance on how to implement the erosion and sediment control standards in Chapter 110.14 of the El Dorado County Code.

El Dorado County Drainage Manual

The County's Drainage Manual provides standard procedures for designs of drainage improvements. The Drainage Manual supersedes the stormwater drainage system design standards in the County's Design Improvements Standards Manual. The Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The analysis must include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. This analysis is usually required on projects undergoing discretionary review. However, under the Building Code and Grading Ordinance, the County also reviews ministerial development, including required drainage plans, to ensure that appropriate runoff design and controls are in place. The analysis addresses the following topics:

- A calculation of pre-development runoff conditions and post-development runoff scenarios using appropriate engineering methods. This analysis would evaluate potential changes to runoff through specific design criteria, and account for increased surface runoff.
- An assessment of existing drainage facilities within the project area, and an inventory of necessary upgrades, replacements, redesigns, and/or rehabilitation, including the sizing of on-site stormwater detention features and pump stations.
- A description of the proposed maintenance program for the on-site drainage system.
- Standards for drainage systems to be installed on a project- or parcel-specific basis.
- Proposed design measures to ensure structures are not located within 100-year floodplain.

Drainage systems must be designed on a site-specific basis in accordance with the findings of the studies and County requirements. As a performance standard, measures to be implemented would provide for no net increase in peak stormwater discharge relative to current conditions to ensure that 100-year flooding and its potential impacts are maintained at or below current levels and that people and structures are not exposed to additional flood risk.

Stormwater Management Plan and Stormwater Quality Ordinance

The County stormwater management plan (SWMP) was adopted by the County in 2004 as a means of compliance with the applicable Small MS4 Permit and includes a Construction Site Runoff Control Program and a Post Construction Runoff Control Program. The purpose of the Construction Site Runoff Control Program of the SWMP is to control the discharge of pollutants from all construction sites greater than or equal to 1 acre. The SWMP requires full compliance with the Construction General Permit and El Dorado County's Grading, Erosion and Sediment Control Ordinance, Design Manual, and Drainage Manual. The Construction Site Runoff Control Program also describes the typical construction site practices expected to be implemented for common construction activities, as well as the minimum construction site practices required to protect water quality. The minimum measures include scheduling, preservation of existing vegetation, stockpile management, non-stormwater management, and disturbed soil area management.

The purpose of the Post Construction Runoff Control Program of the SWMP is to protect water quality and control runoff from all development or redevelopment projects greater than or equal to 1 acre during the operation period of the developments. This is achieved through the construction, implementation, and long-term operation and maintenance of BMPs. The SWMP requires full compliance with El Dorado County's Grading, Erosion and Sediment Control Ordinance, Design Manual, and Drainage Manual. The SWMP states that a site-specific storm water mitigation report (SWMR) documenting permanent stormwater quality mitigation measures must be developed during the planning/design stage of a proposed project; however, for practical purposes, the documentation of these measures is included in a project's drainage study, rather than in the SWMR.

In May 2015, the County adopted a County-Wide Storm Water Ordinance (Ordinance No. 5022) to ensure compliance with the new Small MS4 permit requirements in the entire unincorporated County. Chapter 8.79 of the County Code of Ordinances contains the stormwater regulations, which establishes the County's authority to implement and enforce the SWMP and to ensure compliance with state and federal stormwater laws and regulations. It also sets forth requirements that development projects incorporate BMPs to control the volume, rate, and potential

pollutant loading of stormwater runoff. As provided by Section 8.79.150.G, the required BMPs may be contained in any land use entitlement, conditions of approval, grading plans, improvement plans, or any construction or building-related permit to be issued relative to such development. The requirements became effective in June 2015. The "West Slope Development and Redevelopment Standards and Post Construction Stormwater Plan Requirements," discussed below, provide details of the applicability and requirement.

West Slope Development and Redevelopment Standards and Post Construction Stormwater Plan Requirements

The West Slope Development and Redevelopment Standards provide the requirements to comply with the MS4 permit. The requirements include the following:

- Limit clearing, grading and soil compaction.
- Minimize impervious surfaces.
- Direct runoff to landscaping and/or use porous pavements.
- Conserve natural areas as much as possible consistent with local General Plan.
- Comply with County slope and stream setback ordinances/requirements.
- Comply with Chapter 15.14 of El Dorado County Grading, Erosion, and Sediment Control Ordinance.
- Implement and direct water to one or more Site Design Measures (BMPs).
- Remaining runoff from the 85th percentile 24-hour storm event (approximately 1.13 inches of water) shall be directed to one or more Storm Water Treatment and Baseline Hydromodification Measures using volumetric and/or flow-based sizing criteria.
- Identify potential sources of pollutant and implement corresponding source control measures.
- Provide ongoing maintenance of water retention and treatment facilities.
- Implement Hydromodification Management Measures (Section E.12.f. of the MS4 Permit).

Verification showing post project flows will not exceed pre-project flow rate for the 2-year, 24-hours storm (can be included in a Drainage Report).

3.9.2 Environmental Setting

HYDROLOGY AND DRAINAGE

Regional Hydrology

The climate of the El Dorado Hills area is Mediterranean, with cool wet winters and warm dry summers. Total rainfall in 2023 was about 31.6 inches, with the highest precipitation occurring in January, and less than one inch of precipitation occurring from April through September (NOAA Regional Climate Centers 2025). The mean annual rainfall is estimated to be 26 inches of rain per year (Appendix H). El Dorado County contains four major watersheds: the Tahoe Watershed, the Middle Fork American River, the South Fork American River, and the Cosumnes River. The project site is located within the South Fork American River Watershed, and drains into the Cosumnes River Watershed. The South Fork American River watershed encompasses the central portion of the county and extends from the Echo Summit west to Folsom Reservoir. Major tributaries within the South Fork American River Watershed include Silver Fork American River, Silver Creek, Slab Creek, Rock Creek, and Weber Creek. Other water features within the watershed include Caples Lake, Silver Lake, Lake Aloha, Weber Reservoir, Ice House Reservoir, Union Valley Reservoir, Junction Reservoir, Camino Reservoir, Brush Creek Reservoir, Slab Creek Reservoir, and Chili Bar Reservoir (El Dorado County 2003).

The Cosumnes River watershed is within the southern portion of El Dorado County and south of the South Fork American River Watershed. The Cosumnes River Watershed extends from Iron Mountain Ridge west to where the Cosumnes River enters Sacramento County. Tributaries to the Cosumnes River include the South, Middle, and North Fork Cosumnes Rivers, Canyon Creek, Deer Creek, and Carson Creek. Bass Lake and Sly Park Reservoir are also located in the Carson Creek watershed, which is tributary to the Cosumnes River watershed (El Dorado County 2003).

Hydrology in the area is dominated by irrigation runoff and seasonal stormwater runoff from surrounding developments and direct precipitation. Precipitation primarily occurs as snowfall in the upper elevations of the watershed and rainfall in the lower elevations (El Dorado County 2003).

Geologic conditions and associated fragmented/fractured rock groundwater systems limit access to groundwater within the county. Recharge, movement, and storage of water in rock fractures are also limited. As such, the long-term reliability of groundwater within the county is difficult to estimate (El Dorado County 2003).

Local Hydrology

Hydrology, Runoff, and Drainage

Drainage generally trends northeast–southwest across the project site. The project area contains aquatic resources and other waters of the United States, as described in the aquatic resources delineation report prepared by Helix Environmental Planning (2025). This includes 0.193 acres of seasonal wetlands, 0.007 acres of seep, 0.006 acre of wetland swale, 0.234 acres of ephemeral drainages, 0.360 acres of intermittent drainage and 0.221 acres of perennial drainage (Helix Environmental 2025:9-11). Much of the area mapped as seasonal wetland is adjacent to the ephemeral drainage in the North Site, though there is one area of seasonal wetland on the south site. Two seasonal wetlands appear to be the result of historic excavation as there are mounds adjacent to them. The wetland swale is located in the North Site and conveys water from a seasonal wetland to an ephemeral drainage. The largest area of ephemeral drainage is located on the west side of the North Site. The intermittent drainage bisects the south parcel. There is a brick check dam across part of the intermittent drainage, which has resulted in retention of water during flow events. It is expected the waters of the United States would also be considered waters of the State (Helix Environmental 2025:11). Impacts specific to waters of the United States are also addressed in Section 3.3, Biological Resources.

Stormwater Drainage

There is existing El Dorado Irrigation District (EID) stormwater infrastructure under Clarksville Crossing and Silva Valley Parkway, which includes a culvert, gutters, and storm drains.

Flood Conditions

The 100-year flood refers to the flood resulting from a storm event which has a probability of occurring once every 100 years, or a 1 percent chance of occurring in any given year. Areas mapped in the 100-year floodplain area are subject to inundation during a 100-year storm event. According to the FEMA flood insurance rate map (FIRM), the project site is not located within or adjacent to the 100-year or 500-year floodplain (FEMA 2008).

Groundwater Conditions

The project site is not located in an area mapped as a groundwater basin (DWR 2025). Groundwater was not encountered in the results of the geotechnical investigation by Kleinfelder (2024) conducted at a maximum depth of approximately 9 feet. However, Kleinfelder's investigation in 2019 encountered perched groundwater in excavated test pits in the South Site near the seasonal creek running through the project site, and all test pits encountered perched water near bedrock contact (Kleinfelder 2024). Rainwater collected on shallow, less permeable rock and soil causes perched groundwater across the entire site during and after rainfall. Fluctuation of groundwater levels on the project site are expected with rainy seasons and irrigation of landscaped areas.

WATER QUALITY

A segment of Carson Creek is located approximately 600 feet southeast of the project site. While the creek was listed under Section 303(d) as water quality impaired in 2012 for aluminum and manganese, the creek has since been delisted due to the application of a new water standard EPA's 2018 Final Recommended Aquatic Life Criteria for Aluminum in Freshwater and because the original basis for listing manganese pollutants was incorrect (CVRWQCB 2025a).

3.9.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential hydrologic and water quality impacts is based on a review of existing documents and studies that address water resources in the vicinity of the project. Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, state, and local laws, ordinances, and regulations. The Drainage Study for Costco El Dorado Hills at Highway 50 and Silva Valley Parkway prepared by Watermark Engineering was used in preparation of this analysis (Appendix H).

THRESHOLDS OF SIGNIFICANCE

An impact on hydrology or water quality is considered significant if implementation of the project would do any of the following:

- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would
  - result in substantial erosion or siltation on- or off-site;
  - result in flooding on-site or off-site;
  - create or contribute runoff water that would exceed the capacity of existing or planned stormwater- drainage systems or provide substantial additional sources of polluted runoff;
  - impede or redirect flood flows
- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and/or
- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

ISSUES NOT DISCUSSED FURTHER

Decrease Groundwater Supplies or Interfere with Groundwater Recharge

The project would not use groundwater for its water supply needs. The applicant has proposed that potable water be supplied to the project site by EID. EID's existing water supplies include surface water and recycled water; EID does not use groundwater. Although project construction would result in new impervious surfaces, bioretention areas and underground water quality vaults would be included in the project design to treat stormwater runoff. The project is

not anticipated to significantly affect groundwater quality because this proposed stormwater infrastructure would sufficiently detain and infiltrate stormwater runoff and prevent long-term water quality degradation. Therefore, project construction and operation would have no impact on groundwater resources and these issues are not discussed further in this Draft EIR.

Conflict with a Sustainable Groundwater Management Plan

The project sites are not located in a groundwater basin subject to SGMA (DWR 2025). There is no sustainable groundwater management plan in the project area; therefore, the project would not conflict with or obstruct implementation of a sustainable groundwater management plan. Therefore, no sustainable groundwater management plan has been prepared, or is being prepared, that includes the project area. This issue is not appliable to the project and is not discussed further.

Risk Release of Pollutants Due to Project Inundation in a Flood Hazard, Tsunami, or Seiche Zone

According to FEMA FIRM Panel 06017C0725E, the project site is not within a floodplain, a FEMA-designated floodway, or an inundation area (FEMA 2008). Because the Pacific Ocean is more than 80 miles west of the project site, there is no risk of tsunami on site. Folsom Lake is the nearest large lake and is about 4 miles from the project site. It is also about 270 feet lower in elevation; there is no risk of seiche on the project site. Therefore, project implementation would not place buildings and structures in a 100-year flood hazard area that would redirect flood flows. Furthermore, 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. Thus, the project would have no impact to exposure to flood hazards and these issues are not discussed further in this Draft EIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.9-1: Violate Water Quality Standards or Waste Discharge Requirements

Construction activities would involve grading, movement of soil, and blasting, which could result in erosion and sedimentation, and discharge of other nonpoint source pollutants in onsite stormwater that could then drain to off-site areas and degrade local water quality. In addition, the project would include fuel storage and dispersal, and tire maintenance that could generate stormwater pollutants including oils, lubricants, and heavy metals. The project would be required to implement a SWPPP and associated BMPs to control erosion, reduce sedimentation and turbidity of surface runoff, and provide leak and spill protection for heavy equipment and hazardous material use. During operation, the project would be required to implement BMPs and low-impact development (LID) measures in accordance with existing State and El Dorado County regulations, including the Grading Ordinance, the Design Manual, the Drainage Manual, and the West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan. Impacts would be **less than significant**.

Costco Project

Construction activities would create the potential for soil erosion and sedimentation of stormwater drainage systems, both within and downstream of the project site as well as part of construction of off-site improvements identified in Chapter 2, "Project Description." Project construction would involve extensive ground-disturbing activities over approximately 21 acres, including grading, trenching, blasting, and facility construction activities. The increase in exposed surfaces and the earth-moving activities would result in an increased potential for erosion and sedimentation, particularly during the rainy season. The construction process may also result in accidental release of other pollutants to surface waters, including oil and gas, chemical substances used during construction, waste concrete, and wash water. Many construction-related wastes have the potential to degrade existing water quality by altering the dissolved-oxygen content, temperature, pH, suspended-sediment and turbidity levels, or nutrient content, or by causing toxic effects in the aquatic environment. Proposed construction activities, if not properly implemented, could violate water quality standards or cause direct harm to aquatic organisms associated with Carson Creek.

Implementation of the project would increase the impervious surface on-site, which would alter the existing drainage pattern and increase stormwater runoff. Development and operation of the project would result in intensified land uses within the project site, which would result in increased vehicle use and the discharge of associated pollutants. Leaks of fuel or lubricants, tire wear, brake dust, and fallout from exhaust contribute petroleum hydrocarbons, heavy metals, and sediment to the pollutant load. The increased stormwater runoff would pick up and carry pollutants to receiving waters. Implementation of the project would result in the installation of landscaping along the project's frontage and parking areas. Runoff from new landscaped areas may contain residential pesticides and nutrients. Consequently, the long-term degradation of runoff water quality within the project site and of receiving waters could occur as a result of project operation.

Because the project site sloped and the soils onsite are susceptible to erosion, project implementation could cause localized erosion hazards (see Section 3.6, "Geology, Soils, and Paleontological Resources"). Intense rainfall and associated stormwater runoff could result in short periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, these soil materials could contribute to sedimentation and blockage of off-site waterways. Further, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase the potential for runoff and erosion. Stormwater runoff could also wash construction materials into receiving waterbodies and negatively impact water quality. Non-stormwater discharges could result from activities such as discharge or accidental spills of hazardous substances such as fuels, oils, concrete, paints, solvents, cleaners, or other construction materials.

Construction of the Costco warehouse retail building and fuel facility on the North Site and South Site (including off-site transportation improvements identified in Chapter 2, "Project Description,") would result in more than 1 acre of ground disturbance and the project applicant would be required to obtain coverage under the SWRCB NPDES Construction General Permit. As part of compliance with the NPDES Construction General Permit, a SWPPP must be prepared and implemented. One purpose of the SWPPP is to reduce the amount of construction-related pollutants that are transported by stormwater runoff to surface waters. The SWPPP would include specific construction BMPs, which include temporary erosion control measures (e.g., installation of straw wattle, silt fence, and erosion control blanket) to avoid transportation of construction-related pollutants to surface water bodies. Implementation of construction BMPs would reduce sedimentation and turbidity of surface runoff from disturbed areas within the project site, and leak and spill protection for heavy equipment and hazardous material use.

In addition to compliance with the latest NPDES and other water quality requirements (i.e., Construction General Permit and Small MS4 Permit), the project would be required to comply with the County's SWMP and Stormwater Quality Ordinance (Ordinance No. 5022), as discussed in Section 3.9.1, "Regulatory Setting," above. The SWMP and Stormwater Quality Ordinance set forth requirements that development projects incorporate BMPs to control the volume, rate, and potential pollutant loading of stormwater runoff. If dewatering is required during excavation activities, dewatering would be conducted locally and in accordance with methods described in the "Central Valley RWQCB Dewatering Requirements" heading under Section 3.9.1, "Regulatory Setting."

The Costco project would adhere to state and local requirements, such as implementing a SWPPP and being consistent with the County's SWMP. With adherence to these requirements, potential adverse water quality impacts, such as violations of water quality standards or waste discharge requirements from construction activities, would be maintained at a less-than-significant level..

Operation of the Costco project and associated paved parking areas would create impervious surfaces within the site. Commercial land uses within the project site would result in increased vehicle use and the discharge of associated pollutants. Leaks of fuel or lubricants, tire wear, brake dust, and fallout from exhaust contribute petroleum hydrocarbons, heavy metals, and sediment to the pollutant load. The increased stormwater runoff would pick up and carry pollutants to receiving waters. Runoff from new landscaped areas may contain pesticides and nutrients. Additionally, a leak in an underground storage tank could result in the potential contamination of groundwater. The development of commercial uses could increase the amount of trash and debris entering the stormwater drainage system. Consequently, the long-term degradation of runoff water quality within the project site and of receiving waters could occur as a result of project operation.

The underground storage tank (UST) regulations (CCR, Title 23, Division 3, Chapter 16) require design, construction, testing, and monitoring for all underground storage tank systems. These regulations require reinforcement of tank areas that receive the greatest wear and an independent secondary containment system large enough to contain 150 percent of the volume of the largest tank, or 10 percent of the total volume of all tanks, whichever is greater. A leak interception and detection system is also required that prevents stored fuel from contacting groundwater. Additionally, the owners of all new USTs are required to develop a routine monitoring and reporting plan, and a response plan for any unauthorized release before the storage tank system is put into service. The project would comply with all applicable UST design, containment, and monitoring requirements, and the fueling system would be designed to meet or exceed all State and County performance standards for groundwater protection.

The County's Grading Ordinance requires the site to be graded in a way that would not cause flooding and would reduce stormwater runoff, which would reduce water quality pollution during storm events. Appropriate runoff controls such as berms, storm gates, detention basins, overflow collection areas, filtration systems, and sediment traps shall be implemented to control siltation, and the potential discharge of pollutants into drainages. The basins would capture and treat runoff consistent with LID standards per the El Dorado County West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements. The proposed drainage structures would ensure that Costco project operation would minimize water quality impacts.

In addition to onsite detention/water quality basins, the new stormwater management system would include LID water quality treatment measures to control the quality of stormwater runoff from the site prior to discharge to County storm drain facilities. Typical measures could include bio-filtration planters, bio-filtration basins, infiltration areas, permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as approved by the County. The LID measures would also minimize water quality impacts associated with project operation. The County SWMP ensures compliance with the Small MS4 permit requirements in the entire unincorporated County by setting forth requirements that development projects incorporate BMPs to control the volume, rate, and potential pollutant loading of stormwater runoff. The required BMPs may be contained in any land use entitlement, conditions of approval, grading plans, improvement plans, or any construction or building-related permit to be issued relative to such development. Implementation of the BMPs required by the Small MS4 permit would ensure that the project operation would not violate water quality or waste discharge requirements.

Thus, Costco project compliance with the above requirements would mitigate construction and operational water quality impacts to **less than significant**.

North Site Remainder Area

The North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development; however, the types of commercial uses are not currently known. Similar to the project, future commercial development within the North Site Remainder Area would involve grading, movement of soil, and blasting, which could result in erosion and sedimentation, and discharge of other nonpoint source pollutants in onsite stormwater that could then drain to off-site areas and degrade local water quality. The future commercial development within the North Site Remainder Area would be required to obtain coverage under the SWRCB NPDES Construction General Permit including the preparation of a SWPPP and comply with the County's SWEMP, Stormwater Quality Ordinance, Grading Ordinance, and Post Construction Storm Water Plan Requirements. With adherence to existing requirements, impacts related to water quality degradation would be **less than significant**.

Conclusions

Based on the discussion above, construction and operation of the project, including the Costco project and the future development on the North Site Remainder Area, would not violate water quality standards or waste discharge requirements with compliance with existing regulations, BMPs, and LID measures. The project impacts on water quality would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.9-2: Substantially Alter Existing Drainage Patterns of the Project Site Such That Substantial Erosion and Siltation Would Occur

Construction of the project would include earth-disturbing activities that have the potential to result in soil erosion during excavation, grading, and trenching. The project would add impervious surface to the currently undeveloped project site. Implementation of the project would be subject to existing regulations pertaining to construction erosion control BMPs and post-construction stormwater runoff control, including the County's Grading Ordinance, the County SWMP's Construction Site Runoff Control Program, NPDES Construction General Permit, County's Design Manual, and MS4 permit requirements. Compliance with existing regulations would ensure that the impacts associated with soil erosion and siltation would be **less than significant**.

Costco Project

The development would cover approximately 20.33 acres across the North and South sites with impervious areas such as buildings, parking lots, and walkways. The project would also fill the existing drainages on site. Project on-site storm drainage improvements would include LID features, underground stormwater detention piping, and bioretention basins to capture runoff such that pre-development flow volumes are maintained consistent with County water quality requirements identified in Section 3.9.2, "Regulatory Setting." See Figure 2-5 in Chapter 2, "Project Description," for the proposed landscape plan showing the water quality basins and Figure 2-9 for the North Site Infrastructure Improvements. Therefore, the project would substantially increase the amount of impervious surface on-site and change the on-site drainage. To accommodate this increase, the project would include storm drain improvements with on-site drainage facilities, manholes and drain lines designed to collect and convey stormwater to existing stormwater infrastructure in Silva Valley Parkway and Clarksville Crossing. The project would result in altered flow patterns that could result in substantial erosion and siltation.

Modeling of the proposed development and stormwater infrastructure (consisting of eight bioretention basins) indicates that the proposed project piping network is adequate to convey a 10-year, 24-hour storm. Additionally, the drainage study prepared for the Costco project notes that the project site is at the lower end of the watershed so that the peak flow from the project area would enter the watercourse and pass under U.S. 50 at least 15 minutes before the main stem peak flow arrives. As a result, there is only a minimal possibility that the proposed project would increase the main stem peak flow (Appendix H). Modeling was also conducted to evaluate the Costco project's facilities to attenuate 100-year flow. The drainage study concluded that the Costco project developed conditions would reduce the 100-year attenuated flow to 99 cubic feet per second (cfs) from existing conditions (102 cfs) (Appendix H). Therefore, the proposed drainage improvements would ensure that post-development storm runoff would not exceed pre-development conditions.

Construction activities associated with the project would have the potential to expose topsoil and result in erosion and siltation. Erosion and transport of silt would be addressed by complying with the County's Grading Ordinance, the County SWMP's Construction Site Runoff Control Program, and the NPDES Construction General Permit requirements to implement construction erosion control BMPs. Implementation of BMPs, such as physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, and limitations on work periods during storm events, would substantially reduce or prevent erosion from occurring during construction. These water quality controls have been identified effective in protecting water quality in the California Storm Water Quality Association Industrial and Commercial and New and Redevelopment BMP Handbook.

During operation of the Costco project, disturbed areas would be restored and either covered in impervious surfaces with drainage control features to manage stormwater runoff, consistent with County's Design Manual, or landscaped/ vegetated which would reduce the erosion potential (Figure 2-5, "Proposed Landscape Plan"). The improvements that introduce new impervious surfaces would be required to include drainage control features consistent with County requirements that are designed to minimize the potential for erosion or siltation. In addition, the Small MS4 permit and the local ordinances and regulations implemented to comply with the Small MS4 permit would require LID measures to be constructed to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. The project utilizes bioretention basins and vegetated swales as LID measures. This would ensure the project's effect on drainage patterns would not cause or exacerbate soil erosion and siltation, or substantially increase surface runoff, stormwater drainage, and flood flows. Thus, this impact would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is designated for commercial uses and could and is assumed to include approximately 138,000 square feet of future development; however, the types of commercial uses are not currently known. Similar to the project, future commercial development within the North Site Remainder Area would involve construction activities that would have the potential to expose topsoil and result in erosion and siltation. These future activities would be subject to and comply with the County's Grading Ordinance, SWMP Construction Site Runoff Control Program, and the NPDES Construction General Permit requirements to implement construction erosion control BMPs.

Disturbed areas and impervious surfaces created by the construction and operation of commercial development within the North Site Remainder Area would be restored and either covered in impervious surfaces with drainage control features to manage stormwater runoff, consistent with County's Design Manual, or landscaped/vegetated which would reduce the erosion potential. The improvements that introduce new impervious surfaces would be required to include drainage control features consistent with County requirements that are designed to minimize the potential for erosion or siltation. In addition, the Small MS4 permit and the local ordinances and regulations implemented to comply with the Small MS4 permit would require LID measures to be constructed to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical LID features could include bio-infiltration facilities, permeable paving, localized rainwater harvesting, and other treatment features as approved by the County. This would ensure the project's effect on drainage patterns would not cause or exacerbate the rate of sedimentation or siltation. This impact would be **less than significant**.

Conclusions

The project would involve development of commercial uses on over 20 acres of undeveloped land, with the potential to ultimately include commercial uses on 43.26 acres of undeveloped land. The Costco project and potential commercial development of the North Site Remainder Area would be subject to and comply with regulations pertaining to erosion and siltation control BMPs and post-construction stormwater runoff control, including the County's Grading Ordinance, the County SWMP's Construction Site Runoff Control Program, NPDES Construction General Permit, County's Design Manual, and MS4 permit requirements. For these reasons, the project would not substantially alter existing drainage patterns of the project site such that substantial erosion and siltation would occur. This impact is **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.9-3: Substantially Alter Drainage Patterns of the Project Site Such That Flooding On-Site or Off-Site Would Occur, or Flood Flows Would Be Impeded or Redirected

Project components such as the warehouse and paved parking areas would alter surface drainage patterns as a result of adding impermeable surface and altering flow patterns that could yield increased amounts of stormwater runoff resulting in on-site or off-site flooding. However, the Storm Drainage Study prepared for the project concluded that the proposed drainage facilities incorporated into the project design would be sufficient to manage stormwater runoff on-site and would not result in adverse impact to downstream channels. The project would also not impede or redirect flood flows because the project is not located in flood hazard zone and the surface water flow would be managed by the proposed drainage facilities. Therefore, the impacts related to flooding on-site or off-site and impeding or redirecting flood flows would be **less than significant**.

Costco Project

The project site is currently undeveloped with existing sewer laterals under Silva Valley Parkway and Clarksville Crossing. Implementation of the project would include the warehouse, paved parking areas, and a fueling facility that would alter the surface drainage patterns as a result of adding impermeable surfaces and directly altering flow patterns. The project would include several drainage improvements in order to maintain or reduce peak flows and flood elevations leaving the project site. The drainage study conducted for the Costco development concluded that

the project storm drain pipelines have adequate capacity to convey the 10-year, 24-hour storm, and is adequate to attenuate the 100-year peak flow to below existing conditions (Appendix H). The project would result in altered flow patterns that could yield increased amounts of stormwater runoff resulting in flooding on-site or off-site. The project activities that convert permeable surface or install permanent structures would require stormwater drainage management measures to avoid on-site or off-site flooding impacts.

The Drainage Study for Costco El Dorado Hills at Highway 50 and Silva Valley Parkway was prepared based on the proposed storm drainage facilities as required by the County's Drainage Manual (Appendix H). The evaluation modeled 100-year storm events within the project site under pre-development and post-development conditions. The post-development conditions 100-year storm flows (99 cubic feet per second [cfs]) are reduced below the pre-development conditions (102 cfs). The flow rate reductions are achieved primarily by use of the prosed detention basins to capture stormwater runoff. With implementation of the proposed drainage improvements, the peak flows during storm events would be reduced. Any increase or decrease in WSE of 0.1 foot or less is considered negligible and is within the computational accuracy of the model.

The evaluation concluded that the project design**,** including storm drain pipes, is sufficient to satisfactorily treat and convey 100-year flow within the proposed drainage facilities. The proposed detention basins would direct flows to existing channels at rates that are below pre-development stormwater peak flows and would therefore reduce the existing rate of surface water flow from the project site. Therefore, the proposed detention basins and the proposed drainage improvements would ensure that post-development stormwater runoff flow would not exceed pre-development conditions. As discussed in Impact 3.9-2 above, the project would be subject to Small MS4 permit and local ordinances requirements pertaining to post-construction stormwater runoff control. The project would be required to construct LID measures to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical LID measures could include bio-infiltration facilities, permeable paving, localized rainwater harvesting, and other treatment features as approved by the County. Therefore, implementation of the project would not result in altered drainage patterns that could result in on-site or off-site flooding or impeded or redirected flood flows with compliance with existing regulations. The project is located in areas of minimal flood hazards and not within a 100-year flood zone (FEMA 2008). There is no localized flooding risk in the project area. Surface water flow would be managed by the proposed drainage facilities. Therefore, the project would not impede or redirect flood flows. Impacts associated with on-site or off-site flooding and impeding or redirecting flood flows would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development; however, the types of commercial uses are not currently known. Similar to the project, future commercial development within the North Site Remainder Area would involve construction activities that would have the potential alter drainage patterns such that flooding on-site or off-site would occur, or flood flows would be impeded or redirected. These future activities would be subject to and comply with the County's Grading Ordinance, preparation of a Storm Drainage Evaluation, NPDES Small MS4 Permit, and El Dorado County Drainage Manual to implement drainage and flooding control BMPs.

Construction and operation of commercial development within the North Site Remainder Area would be subject to County review to ensure appropriate runoff design, control, drainage facilities, and maintenance for on-site drainage systems, consistent with the County's Drainage Manual. The improvements that introduce new impervious surfaces would be required to include drainage control features consistent with County requirements that are designed to minimize the potential for flooding. In addition, the Small MS4 permit and the local ordinances and regulations implemented to comply with the Small MS4 permit would require LID measures to be constructed to control the quality of stormwater runoff from the site prior to discharge to the surrounding waters. Typical LID features could include bio-infiltration facilities, permeable paving, localized rainwater harvesting, and other treatment features as approved by the County. This would ensure the project's effect on drainage patterns would not result in on-site or off-site flooding or impede or redirect flood flows. Impacts associated with on-site or off-site flooding and impeding or redirecting flood flows would be **less than significant**.

Conclusions

The project would involve development of commercial uses on 43.26 acres of undeveloped land. The Costco project and potential commercial development of the North Site Remainder Area would be subject to and comply with regulations pertaining to drainage BMPs and post-construction stormwater runoff control, including the County's Grading Ordinance, the County SWMP's Construction Site Runoff Control Program, NPDES Construction General Permit, County's Design Manual, and MS4 permit requirements. For these reasons, the project would not substantially alter existing drainage patterns of the project site such that on-site or off-site flooding would occur, or flood flows would be impeded or redirected. This impact is **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.9-4: Conflict with or Obstruct Implementation of a Water Quality Control Plan

The Basin Plan implemented by the Central Valley RWQCB is a master policy document for managing water quality in the region. Carson Creek located south of the project site is a tributary to Deer Creek, which is identified in the Basin Plan with various beneficial uses. Implementation of the project would not use mercury containing materials and would not violate water quality standards as discussed in Impact 3.9-1. Therefore, the impact would be **less than significant.**

The following analysis applies to both the Costco project and the North Site Remainder Area.

The Central Valley RWQCB implements the Basin Plan for the Sacramento and San Joaquin River Bains, a master policy document for managing water quality in the region. The Basin Plan established beneficial water uses for waterways and waterbodies within the region. The project site is approximately 600 feet from a tributary to Carson Creek, which is a tributary to Deer Creek. Deer Creek is listed as providing the beneficial uses of municipal and domestic supply, irrigation supply, water contact, and non-contact recreation, canoeing and rafting, warm and cold freshwater habitat, cold migration, warm and cold spawning, and wildlife habitat (CVRWQCB 2019). Stormwater would be controlled and treated in the stormwater system on site, so that it would not adversely affect beneficial uses in Deer Creek. Additionally, Folsom Lake is located approximately 4 miles northwest of the project site. Folsom Lake is listed as providing the beneficial uses of municipal and domestic supply, irrigation supply, service and power supply, water contact and non-contact recreation, warm and cold freshwater habitat, and wildlife habitat (CVRWQCB 2019). Folsom Lake is also listed on the CWA 303(d) list of impaired water bodies and listed as impaired for mercury with potential source of this pollutant identified as "A Source Unknown" (CVRWQCB 2025b).

Implementation of the Costco project (including off-site transportation improvements as identified in Chapter 2, "Project Description,") and potential commercial development on the North Site Remainder Area would not use mercury containing materials that would negatively impact Folsom Lake because the site's drainage would not flow into the lake. In addition, construction and operation of the Costco project and future development of the North Site Remainder Area would not violate water quality standards or waste discharge requirements with compliance with existing regulations, BMPS, and LID measures as discussed in Impact 3.9-1 above. Therefore, the development and operation of the Costco project and future North Site Remainder Area development would not conflict with or obstruct the implementation of a water quality control plan, and the impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

3.10 LAND USE AND PLANNING

This land use analysis evaluates consistency of the project with applicable land use plans and policies. The physical environmental effects associated with the project, many of which pertain to issues of land use compatibility (e.g., noise, aesthetics, air quality) and the project's consistency with associated General Plan policies, are evaluated in other sections of Chapter 3 of this Draft EIR.

Comments received on the Notice of Preparation (NOP) regarding land use and planning expressed concerns regarding land use conversion and incompatibility with adjacent land uses, including potential conflicts with an existing elementary school and residential units located near the project site. These comments are addressed where appropriate throughout this section. The NOP and comments submitted in response to it are included in Appendix A.

3.10.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to land use are applicable to the project.

STATE

California Planning Law – General Plans

State law requires El Dorado County (County) (as well as all other cities and counties in the state) to "adopt a comprehensive, long-term general plan for the physical development of the county" (Government Code Section 65300). The general plan is considered to be the County's "constitution," containing development and conservation policies that will guide its long-term development. State law mandates that the general plan address land use, housing, circulation, open space, conservation, noise, and public safety, as well as any other issues that may be of interest to the county. The land use element of the general plan identifies the allowable types, density, and intensity of land uses through its list of residential, commercial, agricultural, industrial, and other land use designations. The land use diagram (map) identifies the locations of these existing and future land uses, as well as the communities within which they will be located.

Senate Bill 375

The Sustainable Communities and Climate Protection Act (Senate Bill 375 - Section 65080(b)(2)(A) of the California Government Code) requires that metropolitan planning organizations prepare a Sustainable Communities Strategy (SCS), as an integral part of its regional transportation plan, that contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet California Air Resources Board's targets for greenhouse gas reductions. The Sacramento Area Council of Governments (SACOG) serves as the metropolitan planning organization (MPO) for El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties. SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy compiles with this requirement and covers the project site.

LOCAL

2020 Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy

As noted above, SACOG is designated by the federal government as the MPO for the Sacramento region, which requires SACOG to maintain a regional transportation plan that must be updated every 4 years in coordination with each local government. Placer and El Dorado Counties are different in this arrangement in that each county has its own State designation as a Regional Transportation Planning Agency responsible for developing its own

transportation plan. SACOG is the Regional Transportation Planning Agency for Sacramento, Sutter, Yolo, and Yuba Counties. SACOG works in coordination with the Placer County Transportation Planning Agency and the El Dorado County Transportation Commission to ensure consistency between these two county-specific plans and the broader regionwide plan.

The Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) is required to be a 20-year multimodal transportation plan that is financially feasible, achieves health standards for clean air, and addresses Statewide climate goals. The MTP/SCS land use forecast identifies the general location of different types of land uses, residential densities, employment intensities, and natural resource areas.

The project is located within the Established Community type identified in the 2020 MTP/SCS. The 2020 MTP/SCS forecasts about 3,870 new jobs in El Dorado Hills and 9,270 new jobs in the Established Community Type in El Dorado County (SACOG 2020: 5).

El Dorado Local Agency Formation Commission

The El Dorado County Local Agency Formation Commission (LAFCO) is responsible for reviewing, approving, or disapproving changes in organization to cities and special districts, including annexations, detachments, new formations, and incorporations. LAFCOs must, by law, create municipal service reviews and update spheres of influence for each independent local governmental jurisdiction within their countywide jurisdiction (El Dorado LAFCO 2023). El Dorado LAFCO Commission policies encourage the orderly formation of local governmental agencies and the efficient provision of governmental services, the preservation of agricultural land and open space resources, and logical patterns of growth and discourage urban sprawl. The reader is referred to Section 3.13, "Public Services and Recreation," and 3.15, "Utilities and Service Systems," regarding further details on LAFCO provisions applicable to the project.

El Dorado County General Plan

The El Dorado County General Plan (General Plan) provides for long range direction and policy for the use of land within El Dorado County. It provides a mechanism through which the County can focus on the issues of greatest local concern as well as a basis for rational decision making regarding long-term physical development. The General Plan Introduction Chapter identifies the long-range direction and policy for the use of land in the County through the Statement of Vision, Plan Strategies, Plan Concepts, and Plan Objectives, which are the basis of the General Plan's goals, objectives, policies, and implementation measures contained in each of the plan's nine elements. These provisions constitute the central policy direction of the General Plan and contains goals, objectives, and policies related to the county's future growth and development.

The General Plan was last adopted in July 2004, and the most recent amendment to the Land Use Element chapter in the General Plan was in August 2019 (El Dorado County 2019). The project site is designated as Commercial under the General Plan:

> The purpose of this land use category is to provide a full range of commercial retail, office, and service uses to serve the residents, businesses, and visitors of El Dorado County. Mixed use development of commercial lands within Community Regions and Rural Centers which combine commercial and residential uses shall be permitted. Commercially designated parcels shall not be developed with a residential use as the sole use of the parcel unless the residential use is either (1) a community care facility as described in goal HO-4 or (2) part of an approved mixed-use development as allowed by Policy 2.1.1.3 and 2.1.2.5, within an area zoned to allow for a mix of uses. Numerous zone districts shall be utilized to direct specific categories of commercial uses to the appropriate areas of the County. This designation is considered appropriate within Community Regions, Rural Centers, and Rural Regions.

The project site is located within the boundaries of the General Plan designated El Dorado Hills Community Region, which is identified in the General Plan's Plan Strategies and Plan Concepts as an area where urban growth is to be directed (El Dorado County 2004). The El Dorado County General Plan land use designation for the project site is Commercial (C) (El Dorado County 2019).

The following are relevant land use objectives and policies to the project (El Dorado County 2019). The reader is referred to Sections 3.1 through 3.17 for applicable General Plan objectives and policies related to other environmental issue areas.

- Objective 2.1.1: Community Regions. Establish urban development line and provide opportunities that allow for continued population growth and economic expansion while preserving the character and extent of existing rural centers and urban communities, emphasizing both the natural setting and built design elements which contribute to the quality of life and economic health of the County.
  - Policy 2.1.1.1: The Communities within the County are identified as: El Dorado Hills, Cameron Park, El Dorado, Diamond Springs, Shingle Springs, and the City of Placerville and immediate surroundings. (Resolution 126-2019, August 6, 2019)
  - Policy 2.1.1.2: Establish Community Regions to define those areas which are appropriate for the highest intensity of self-sustaining compact urban-type development or suburban type development within the County based on the municipal spheres of influence, availability of infrastructure, public services, major transportation corridors and travel patterns, the location of major topographic patterns and features, and the ability to provide and maintain appropriate transitions at Community Region boundaries. These boundaries shall be shown on the General Plan land use map.
  - Policy 2.1.1.7: Development within Community Regions, as with development elsewhere in the County, may proceed only in accordance with all applicable General Plan Policies, including those regarding infrastructure availability as set forth in the Transportation and Circulation and the Public Services and Utilities Elements. Accordingly, development in Community Regions and elsewhere will be limited in some cases until such time as adequate roadways, utilities, and other public service infrastructure become available and wildfire hazards are mitigated as required by an approved Fire Safe Plan.
- Objective 2.2.5: General Policy Section.
  - Policy 2.2.5.2: All applications for discretionary projects or permits including, but not limited to, General Plan amendments, zoning boundary amendments, tentative maps for major and minor land divisions, and special use permits shall be reviewed to determine consistency with the policies of the General Plan. No approvals shall be granted unless a finding is made that the project or permit is consistent with the General Plan. In the case of General Plan amendments, such amendments can be rendered consistent with the General Plan by modifying or deleting the General Plan provisions, including both the land use map and any relevant textual policies, with which the proposed amendments would be inconsistent.
  - Policy 2.2.5.21: Development projects shall be located and designed in a manner that avoids incompatibility with adjoining land uses that are permitted by the policies in effect at the time the development project is proposed. Development projects that are potentially incompatible with existing adjoining uses shall be designed in a manner that avoids any incompatibility or shall be located on a different site.
- Objective 2.5.1: Physical and Visual Separation - Provision for the visual and physical separation of communities from new development.
  - Policy 2.5.1.1: Low intensity land uses shall be incorporated into new development projects to provide for the physical and visual separation of communities. Low intensity land uses may include any one or a combination of the following: parks and natural open space areas, special setbacks, parkways, landscaped roadway buffers, natural landscape features, and transitional development densities.

El Dorado County Zoning Ordinance

While the County General Plan establishes policies to guide the County's land use decision making, the Zoning Ordinance (County Code of Ordinances, Title 130) consists of enforceable regulations on the use of land areas subject to the county's jurisdiction (unincorporated area). The unincorporated area is broken into various residential, commercial, industrial, agricultural, and other "zones," with the standards and regulations applicable to each particular type of zone described in the Zoning Ordinance. Zoning maps illustrate how the zoning districts are

distributed throughout the county. The Zoning Ordinance sets forth regulations to ensure that development and land use activities protect and promote the health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the County.

Zoning on the North Site consists of Commercial Regional – Planned Development (CR-PD), while the South Site is primarily zoned CR-PD, with smaller areas zoned Commercial Limited (CL) and Transportation Corridor (TC). A summary of these zoning districts is provided below (El Dorado County 2025).

- **Commercial, Regional; Planned Development Combining Zone (CR-PD):** The CR, Regional Commercial Zone, provides for large-scale retail services for a regional trade area. The CR zone applies to regional shopping centers that serve a market beyond the community and are located along arterials and at major intersections that provide convenient automobile access. Residential uses are generally inappropriate in the CR zone. The Planned Development (-PD) Combining Zone implements the General Plan by providing innovative planning and development techniques that allow the use of flexible development standards; provide for a combination of different land uses which are complementary, but may not in all aspects conform to the existing zoning regulations; allow clustering of intensive land uses to minimize impacts on various natural resources; avoid cultural resources where feasible; promote more efficient utilization of land; reflect the character, identity and scale of local communities; protect suitable land for agricultural uses; and minimize use compatibility issues and environmental impacts.
- **Commercial, Limited (CL):** The CL, Limited Commercial Zone, designates areas suitable for lower intensity retail sales, office and service needs of the surrounding area while minimizing conflicts with the residential uses and outside traffic into the area. Mixed use development compatible with surrounding uses would also be appropriate.
- **Transportation Corridor (TC):** The TC Zone is intended to protect and preserve established and identified future transportation corridors within the County, including corridors for motor vehicle, bicycle, hiking, equestrian, and rail transportation.

3.10.2 Environmental Setting

The project site encompasses 43.26 acres located on six parcels. The northern portion of the site (North Site) is 24.83 acres, and the southern portion of the site (South Site) is 18.43 acres. The entire project site has a General Plan Land Use Designation of Commercial (C). The North Site is currently zoned Commercial Regional – Planned Development (CR-PD). The South Site is predominantly zoned CR-PD but also includes small parcels zoned Commercial Limited (CL) and Transportation Corridor (TC).

Surrounding land uses include single-family residential and Oak Meadow Elementary School to the north, vacant land, Tong Road, a church, and single-family residential to the East, US 50 to the south, and Clarksville Crossing roadway, open space, single-family residential, and additional commercial/undeveloped land to the west.

3.10.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential land use impacts is based on a review of the relevant planning documents pertaining to the project area that includes the El Dorado County General Plan and Zoning Ordinance. In addition, the analysis discusses whether the project would be consistent with applicable land use plans and policies that were adopted for the purpose of avoiding or mitigating an environmental effect. Land use policies pertain to the type, location, and physical form of new development. For this analysis, policies "adopted for the purpose of avoiding or mitigating an environmental effect" are considered those that, if implemented and adhered to, would avoid, or mitigate physical impacts on the environment. For each potential impact, the analysis compares the impact to the standards of significance listed below and determines the impact's level of significance under CEQA. The reader is referred to the other sections of this EIR for evaluations of project consistency with County and State policies and regulations related to environmental issue areas beyond land use.

THRESHOLDS OF SIGNIFICANCE

An impact on land use would be significant if implementation of the project would:

- physically divide an established community; and/or
- cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

ISSUES NOT DISCUSSED FURTHER

Physically Divide an Established Community

The project would develop the North Site and the South Site, which is within an undeveloped area bisected by Silva Valley Parkway. The project does not propose to develop the North Site Remainder Area. Development of the project would not divide an established community and public roadway access along Silva Valley Parkway would be maintained in the project area. Therefore, no further analysis is required.

Offsite Transportation Improvements

As identified in Chapter 2, "Project Description," the project would include offsite transportation improvements to the White Rock Road and Valley View Parkway-Vine Street intersection and improvements to the proposed northbound left turn lanes for the project site on Silva Valley Parkway. These offsite improvements would occur within existing roadways and/or easements and would not create a new physical feature or land use that would conflict with County land use policies or physically divide an established community in the county. Therefore, this issue is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: Cause a Significant Environmental Impact Because of a Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

The project would not alter or conflict with General Plan land use policy provisions and would be consistent with the SACOG 2020 MTP/SCS. The project would not conflict with County land use policies adopted for the purposes of avoiding or mitigating an environmental effect. This impact would be **less than significant**.

As described in Chapter 2, "Project Description," implementation of the Costco project would require a Planned Development Permit (PD), a Conditional Use Permit (CUP), variance for building-attached signage, a tree permit, and a lot line adjustment. The project would does not propose or require any amendments to the General Plan Land Use Diagram or to General Plan policies. The reader is referred to Appendix L for a project consistency analysis with the General Plan and other applicable regulations.

Costco Project

The project site is designated as Commercial under the General Plan, and the proposed Costco project is a retail use that is consistent with the General Plan definition of Commercial. The proposed floor area ratio (FAR) for development on both the North and South Sites would be well below the General Plan's maximum allowable FAR of 0.85, and therefore consistent with applicable intensity standards (El Dorado County 2019). Therefore, there is no conflict with the General Plan. The project would be generally consistent with applicable General Plan policy provisions, County Code of Ordinances requirements, and El Dorado County LAFCO, which address environmental issues beyond the General Plan land use policy provisions described above. The reader is also referred to Sections 3.1 through 3.17 for additional consistency analysis discussions for each environmental topic initiated within the draft EIR.

Furthermore, the increase of economic growth resulting from the proposed development of proposed Costco project would be consistent with the General Plan's Plan Strategies and Plan Concepts as well as Objective 2.1.1 and associated Policy 2.1.1.2 regarding the placement of urban-type development within the El Dorado Hills Community

Region. In addition, the Costco project is buffered from existing single-family residential areas through open space land areas west and north of the South Site, and physical distance (over 600 feet) from existing single-family residential uses, Oak Meadow Elementary School, and Capital Korean Presbyterian Church from the fuel facility on the North Site. These land use conditions as well as landscaping along the frontage and property boundaries to shield and transition project development with surrounding land uses (Figure 2-3) would ensure the project is consistent with General Plan Objective 2.5.1 and associated Policy 2.5.1.1 and Policy 2.2.5.21.

The project site is included in SACOG's 2020 MTP/SCS as an Established Community type and has therefore been accounted for in its growth pattern estimation for the region (SACOG 2020: 4). The 2020 MTP/SCS forecasts 7,690 new jobs added to the Established Communities in El Dorado County and 3,870 new jobs in El Dorado Hills between 2016 and 2040. In comparison to the 2020 MTP/SCS, the project would account for approximately 4 percent of total new employment opportunities in Established Communities in El Dorado County and approximately 8 percent of total new employment opportunities in El Dorado Hills by 2040. SACOG describes Established Communities as areas typically adjacent to or surrounding Center and Corridor communities and that are also known as mature suburban communities. These communities typically include commercial strip centers, which is consistent with the proposed project; therefore, the project is consistent with the land use assumptions for the Established Community Type in the 2020 MTP/SCS. Additionally, the El Dorado County LAFCO Commission policies encourage orderly growth and development of vacant or underdeveloped land within the existing boundaries of a city. The project site is considered underdeveloped land within the county and is adjacent to existing and planned development. The reader is referred to Section 3.13, "Public Services and Recreation," and 3.15, "Utilities and Service Systems," regarding further details on project consistency with LAFCO provisions applicable to the project.

Based on the analysis above, the project would be implemented in a manner consistent with applicable plans and policies. This impact would be **less than significant** through application of the mitigation measures identified in Section 3.1 through 3.17.

North Site Remainder Area

As detailed in Chapter 2, "Project Description," the North Site Remainder Area is designated Commercial under the General Plan and is assumed to include approximately 138,000 square feet of development. The North Site Remainder Area is not proposed for future development as part of this project, and future development would require submittal of a separate application. Future development of the North Site Remainder Area would be consistent with the General Plan's Plan Strategies and Plan Concepts as well as Objective 2.1.1 and associated Policy 2.1.1.2 regarding the placement of urban-type development within the El Dorado Hills Community Region. Similar to the Costco project, the North Site Remainder Area is designated in SACOG's 2020 MTP/SCS as an Established Community type and has therefore been accounted for in its growth pattern estimation for the region.

Future development within this area would be subject to County land use policies and standards which would ensure that such development would not conflict with a program, plan, ordinance, or policy addressing land use. This impact would be **less than significant.**

Conclusions

As detailed above, the project and future development within the North Site remainder area would be designed and constructed in accordance with County general plan policies, design guidelines, and standards, thus ensuring that such development would be consistent with County land use plans, policies, and regulations. Furthermore, the project would be implemented in a manner consistent with applicable land use plans, policies, and regulations, including the El Dorado County General Plan, the El Dorado County Zoning Ordinance, as well as SACOG's 2020 MTP/SCS and El Dorado County LAFCO Commission policies. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

3.11 NOISE AND VIBRATION

This section includes a summary of applicable regulations related to noise and vibration, a description of ambient noise conditions, and an analysis of potential short-term construction and long-term operational-source noise impacts associated with the project. Mitigation measures are recommended as necessary to reduce significant noise and vibration impacts. Noise measurement and modeling data is provided in Appendix I.

Comments made during the NOP scoping period that pertain to the project include concerns associated with construction and operational noise impacts from the project on adjoining residential areas. Specifically, concerns were raised related to the hours of operation of loading docks and associated noise of truck deliveries; operational noise from the warehouse retail building (e.g., forklifts), idling vehicles, and the fuel facility; construction noise and potential disruption to students during school hours; and concerns about the effects of construction noise, traffic noise, and operational noise (e.g., deliveries, backup electrical generators) on students at the nearby school. In addition, concerns were raised about the impacts of noise pollution on local wildlife and regarding potential noise increases related to the surrounding topography of the neighborhood (e.g., the potential for the hillside location to amplify sound). Requests for a sound wall barrier to be built around the site perimeter and requests for limited hours for deliveries were also made. Impacts on biological resources are discussed in Section 3.3, "Biological Resources," and are not discussed further in this section. The NOP and comments submitted in response to it are included in Appendix A.

3.11.1 Common Terminology

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following noise descriptors are used throughout this section.

- **Equivalent Continuous Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq}, is the energy average of sound levels occurring during a 1-hour period and is the basis for noise abatement criteria used by the California Department of Transportation (Caltrans) and the Federal Transit Administration (FTA) (Caltrans 2013; FTA 2018).
- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period (Caltrans 2013; FTA 2018).
- **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-decibel (dB) "penalty" applied to sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m. (Caltrans 2013; FTA 2018).
- **Community Noise Equivalent Level (CNEL):** CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m. and a 5-dB penalty applied to the sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m. (Caltrans 2013).
- **Vibration Decibels (VdB):** VdB is the vibration velocity level in the decibel scale (FTA 2018).
- **Peak Particle Velocity (PPV):** PPV is the peak signal value of an oscillating vibration waveform. Usually expressed in inches per second (in/sec) (FTA 2018).

3.11.2 Regulatory Setting

FEDERAL

US Environmental Protection Agency Office of Noise Abatement and Control

The US Environmental Protection Agency (EPA) Office of Noise Abatement and Control was established initially to coordinate Federal noise control activities. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982, responsibilities for regulating noise control policies were transferred to state and local governments. However, documents and research conducted by the EPA Office of Noise Abatement and Control continue to provide valuable insights into the analysis of noise effects. Specifically, EPA identified in the Noise Effects Handbook a level of 70 A-weighted decibels (dBA) at which the chances of sleep awakening become more prevalent. For evaluating the potential for noise sources to disrupt sleep, the 70 dBA (Single-Event Noise Level) can be applied.

Federal Transit Administration

To address the human response to ground vibration, FTA has established guidelines for maximum-acceptable vibration criteria for different types of land use as well as screening distances from transit for vibration assessments. These guidelines are presented in Table 3.11-1. FTA has also established construction vibration damage criteria, shown in Table 3.11-2.

Table 3.11-1 Groundborne Vibration Impact Criteria for General Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/second) Frequent Events[1]	GBV Impact Levels (VdB re 1 micro-inch/second) Occasional Events[2]	GBV Impact Levels (VdB re 1 micro-inch/second) Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations.	65[4]	65[4]	65[4]
Category 2: Residences and buildings where people normally sleep.	72	75	80
Category 3: Institutional land uses with primarily daytime uses.	75	78	83

Notes: GBV = groundborne vibration; VdB = vibration decibels referenced to 1 µ inch/second and based on the root mean square (RMS) velocity amplitude.

[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day.

[2] "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

[4] This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018.

Table 3.11-2 FTA Construction Vibration Damage Criteria

Land Use Category	PPV, in/sec	Approximate L_V*
I. Reinforced-concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Notes: PPV in/sec = peak particle velocity; inches/sec = inches per second. L_v = RMS velocity in decibels, VdB re 1 micro-in/sec.

Source: FTA 2018: Table 7-5.

In addition to vibration criteria, FTA has also established construction noise criteria based on the type of land use affected by noise, as well as whether construction noise is expected to occur during daytime or nighttime hours. The FTA criteria are as follows:

- Residential: 90 dBA L_{eq} (day) and 80 dBA L_{eq} (night), and
- Commercial/Industrial: 100 dBA L_{eq} (day and night) (FTA 2018).

STATE

California Department of Transportation

In 2020, Caltrans published the *Caltrans Transportation and Construction Vibration Guidance Manual* (Caltrans 2020). The manual provides general guidance on vibration issues associated with the construction and operation of projects in relation to human perception and structural damage. For example, the manual has established damage criteria for different types of buildings based on the type of vibration exposure (i.e., transient, or continuous/frequent). Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment (Caltrans 2020). The threshold for historic and some old buildings' exposure to continuous/frequent intermittent sources is 0.25 in/sec PPV (Caltrans 2020).

LOCAL

The project site is located within an unincorporated area of El Dorado County (County), in the El Dorado Hills community region (El Dorado County 2015). Therefore, the County General Plan and the County Code are discussed under local regulations.

El Dorado County General Plan

The Safety Element of the County General Plan includes objectives, goals, and policies related to noise level standards (El Dorado County 2024). The Safety Element states that noise-sensitive developments include hospitals, schools, churches, and residential areas (El Dorado County 2024: 117). The following General Plan noise policies are relevant to the project:

- **Objective 6.5.1** – Protection of Noise-Sensitive Development: Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels.
  - **Policy 6.5.1.2:** Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table HS-4 (presented as Table 3.11-4 in this section) at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.
  - **Policy 6.5.1.3:** Where noise mitigation measures are required to achieve the standards of Table HS-3 and HS-4, (presented as Table 3.11-3 and Table 3.11-4, respectively, in this section), the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.
  - **Policy 6.5.1.7:** Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table HS-4 (presented as Table 3.11-4 in this section) for noise-sensitive uses.
  - **Policy 6.5.1.9:** Noise created by new transportation noise sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table HS-3 (presented as Table 3.11-3 in this section) at existing noise-sensitive land uses.

Table 3.11-3 Maximum Allowable Noise Exposure for Transportation Noise Sources

Land Use	Outdoor Activity Areas[1] (dB L_{dn}/CNEL)	Interior Spaces (dB L_{dn}/CNEL)	Interior Spaces (dB L_{eq})[2]
Residential	60[3]	45	—
Transient Lodging	60[3]	45	—
Hospitals, Nursing Homes	60[3]	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Meeting Halls, Schools	60[3]	—	40
Office Buildings	—	—	45
Libraries, Museums	—	—	45
Playgrounds, Neighborhood Parks	70	—	—

Notes: dB = decibels; L_{dn} = Day-night level; CNEL = community noise equivalent level; L_{eq} = Equivalent continuous sound level

[1] In Communities and Rural Centers, where the location of outdoor activity areas is not clearly defined, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB L_{dn} shall be applied at the building facade, in addition to a 60 dB L_{dn} criterion at the outdoor activity area. In Rural Regions, an exterior noise level criterion of 60 dB L_{dn} shall be applied at a 100-foot radius from the residence unless it is within Platted Lands where the underlying land use designation is consistent with Community Region densities in which case the 65 dB L_{dn} may apply. The 100-foot radius applies to properties which are five acres and larger; the balance will fall under the property line requirement.

[2] As determined for typical worst-case hour during periods of use.

[3] Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: El Dorado County 2024.

Table 3.11-4 Noise Level Performance Protection Standards for Noise Sensitive Land Uses Affected by Non-Transportation[1] Sources[2]

Noise Level Descriptor	Daytime 7:00 a.m.–7:00 p.m. Community	Daytime 7:00 a.m.–7:00 p.m. Rural	Evening 7:00 p.m.–10:00 p.m. Community	Evening 7:00 p.m.–10:00 p.m. Rural	Night 10:00 p.m.–7:00 a.m. Community	Night 10:00 p.m.–7:00 a.m. Rural
Hourly L_{eq}, dB	55	50	50	45	45	40
Maximum Level, dB	70	60	60	55	55	50

Notes: dB = decibel; L_{eq} = equivalent continuous sound level

[1] For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission (CPUC) regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land use, etc.

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas, the exterior noise level standard shall be applied at a point 100' away from the residence. The above standards shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all effected property owners and approved by the County.

[2] The El Dorado County General Plan uses the terms "Community" and "Rural" to describe applicable noise standards, however Chapter 130.37 of the County Municipal Code uses the terms "Community/Rural Centers." Neither the County General Plan nor the County Municipal Code provide a definition of these terms. However, the County General Plan Land Use Diagram depicts Community Regions within the county (El Dorado County 2015). The project site is located within the El Dorado Hills Community Region (El Dorado County 2015) and thus, the noise standards for Community/Rural Centers are applied in this analysis.

Source: El Dorado County 2024.

- **Policy 6.5.1.11:** The standards outlined in Table HS-5, Table HS-6, and Table HS-7 shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally recognized holidays. Further, the standards outlined in Tables HS-5, HS-6, and HS-7 shall not apply to public projects to alleviate traffic congestion and safety hazards.
- **Policy 6.5.1.12:** When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration.

  A. Where existing or projected future traffic noise levels are less than 60 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 5 dBA L_{dn} caused by a new transportation noise source will be considered significant;

  B. Where existing or projected future traffic noise levels range between 60 and 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 3 dBA L_{dn} caused by a new transportation noise source will be considered significant; and

  C. Where existing or projected future traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA L_{dn} caused by a new transportation noise will be considered significant.
- **Policy 6.5.1.13:** When determining the significance of impacts and appropriate mitigation to reduce those impacts for new development projects, including ministerial development, the following criteria shall be taken into consideration:

  A. In areas in which ambient noise levels are in accordance with the standards in Table HS-3 (presented as Table 3.11-3 in this section), increases in ambient noise levels caused by new non-transportation noise sources that exceed 5 dBA shall be considered significant; and

  B. In areas in which ambient noise levels are not in accordance with the standards in Table HS-3 (presented as Table 3.11-3 in this section), increases in ambient noise levels caused by new non-transportation noise sources that exceed 3 dBA shall be considered significant.

El Dorado County Code of Ordinances

The County Code of Ordinances establishes noise performance standards for noise-sensitive land uses in Chapter 130.37, Noise Standards. This chapter complies with General Plan Goal 6.5 "Acceptable Noise Levels" and supplements the County Code Chapter 9.16 "Noise," by establishing standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating uses. The following noise regulations are applicable to the project:

Section 130.37.020 Exemptions

The following noise sources are exempt from the standards included in Chapter 130.37:

B. The use of any mechanical device, apparatus, or equipment related to or connected with emergency activities or emergency work to protect life or property.

I. Construction (e.g., construction, alteration, or repair activities) during daylight hours provided that all construction equipment shall be fitted with factory installed muffling devices and maintained in good working order.

Section 130.37.050 Acoustic Analysis Requirements

An acoustic analysis prepared by an acoustic specialist shall be required prior to discretionary authorization or permit approval for the following uses:

- A. New noise-generating land uses likely to exceed the performance thresholds in the Tables in Section 130.37.060 (Tables 3.11-3 and 3.11-4 in this section) when proposed in areas adjacent to sensitive receptors. Noise sources may include industrial operations, outdoor recreation facilities, outdoor concerts and events utilizing amplified sound systems, commercial land uses, fixed sound sources, and other similar use.

Section 130.37.060 Noise Standards

The following standards shall apply to all development projects for which an acoustic analysis is required:

- A. Noise sensitive land uses affected by non-transportation noise sources shall not exceed standards set forth in Table 130.37.060.1, Noise Level Performance Standards for Noise Sensitive Land Uses Affected by Non-Transportation Sources [presented in Table 3.11-4 in this section].
  - 1. Each of the noise levels specified above [in Table 3.11-4] shall be lowered by five dBA for simple tone noises, noises consisting primarily of unamplified speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses, such as caretaker dwellings.
  - 2. The Director can impose noise level standards which are up to five dBA less than those specified above, based upon a determination of existing low ambient noise levels in the vicinity of the project site.
  - 3. The exterior noise level standard shall be applied as follows:
    a. In Community Regions, at the property line of the receiving property;
    b. In Rural Centers and Regions, at a point 100 feet away from a sensitive receptor or, if the sensitive receptor is within the Platte Lands Overlay (-PL) where the underlying land use designation is consistent with Community Region densities, at the property line of the receiving property of 100 feet away from the sensitive receptor, whichever is less; or
    c. In all areas, at the boundary of a recorded noise easement between affected properties.
- B. Transportation noise shall not exceed thresholds set forth in Table 130.37.060.2, Noise Level Standards for Noise-Sensitive Land Uses Affected by Transportation Sources [presented in Table 3.11-3 of this section].
  - 1. In Community Regions and Rural Centers:
    - (a) Where the location of outdoor activity areas is not clearly defined, the exterior noise level standard shall be applied at the property line of the sensitive receptor.
    - (b) For residential uses with front yards facing the identified noise source, an exterior noise level threshold of 65 dBA L_{dn} shall be applied at the dwelling facade in addition to the required threshold at the outdoor activity area.
  - 2. In Rural Regions: An exterior noise level threshold of 60 dB L_{dn} shall be applied at a 100-foot radius from the dwelling on lots five acres and larger. Those lots less than five acres shall have the noise level standards applied at the property line.
  - 3. Where it is not possible to reduce noise levels in those outdoor activity areas limited to 60 dB L_{dn}/CNEL thresholds using a practical application of the best-available noise reduction measures, an exterior noise threshold of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
- C. Construction-related noise shall allow for exceptions to the evening and nighttime standards or other temporary exceedances of noise standards as may be approved by the Director, where necessary to alleviate traffic congestion and safety hazards, or where authorized by an approved permit.

Section 130.37.070 Noise Reduction Measures

Noise reduction measures shall be incorporated into the project design to reduce noise levels at or below the thresholds set forth in Tables in Section 130.37.060 above (presented as Tables 3.11-3 and 3.11-4) in this Chapter.

3.11.3 Environmental Setting

ACOUSTIC FUNDAMENTALS

Prior to discussing the noise setting for the project, background information about sound, noise, and vibration is needed to provide context and a better understanding of the technical terms referenced throughout this section.

Sound, Noise, and Acoustics

Sound is mechanical energy transmitted as pressure waves through a medium, such as air, to the human ear. Noise is generally considered an unwanted or disruptive sound. Acoustics, the science of sound, focuses on how sound travels from a source to a receiver, with factors like source strength and environmental conditions (e.g., ground type, barriers) influencing what is heard.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

Sound pressure, measured in micro-Pascals (mPa), reflects the amplitude of sound waves. Due to the wide range of pressures humans can perceive, sound levels are expressed logarithmically in decibels, making comparisons easier.

Addition of Decibels

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates a sound pressure level of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is purely a physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels. All sound levels discussed in this section are expressed in A-weighted decibels unless otherwise noted. Table 3.11-5 describes typical A-weighted noise levels for various noise sources.

Table 3.11-5 Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
—	— 110 —	Rock band
Jet fly-over at 1,000 feet	— 100 —	—
Gas lawn mower at 3 feet	— 90 —	—
Diesel truck at 50 feet at 50 miles per hour	— 80 —	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, daytime, Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	— 60 —	—
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, Bedroom at night, concert hall (background)
Quiet rural nighttime	— 20 —	—
—	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Notes: dBA = A-weighted decibels

Source: Caltrans 2013: Table 2-5.

Human Response to Changes in Noise Levels

As described above, the doubling of sound energy results in a 3-dB increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000–8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013: 2-18). In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. A doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable. Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013: 2-10).

VIBRATION FUNDAMENTALS

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, and landslides) and those introduced by human activities (e.g., explosions, machinery, traffic, trains, and construction equipment). Vibration sources may be continuous (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in PPV or RMS vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well with the stresses experienced by buildings (FTA 2018: 110, Caltrans 2020: 6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal,

typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as VdB, which serves to compress the range of numbers required to describe vibration (FTA 2018: 110, Caltrans 2020: 7). This is based on a reference value of 1 micro inch per second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2018: 120, Caltrans 2020: 27).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor cosmetic damage can occur to fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018: 113).

Vibrations generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations are generated by vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment. Table 3.11-6 summarizes the general human response to different ground vibration-velocity levels.

Table 3.11-6 Human Response to Different Levels of Ground Noise and Vibration

Vibration-Velocity Level	Human Response
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85 VdB	Vibration tolerable only if there are an infrequent number of events per day.

Notes: VdB = vibration decibels referenced to 1 µ inch/second and based on the root mean square (RMS) velocity amplitude.

Source: FTA 2018: 120.

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. How a noise level decreases with distance depends on the following factors:

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuation rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off

rate of 4.5 dB per doubling of distance. This would apply to point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as the wind can carry sound. Sound levels can be increased over large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver attenuates noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction (Caltrans 2013: 2-41, FTA 2018: 15, 16). Barriers higher than the line of sight provide increased noise reduction (FTA 2018: 16). Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier unless there are multiple rows of vegetation (FTA 2018: 15, 104, 106).

Reflective Noise and Canyon Effects

Studies of highways through canyons typically have shown noise increases of less than 3 dBA from canyon effects, although noise increases in narrow canyons with steep side slopes could be greater, depending on the groundcover and the steepness and smoothness of side slopes (Caltrans 2013: 5-33). Thus, in complex terrain, it is possible for noise to be reflected such that noise can perceptibly increase at a receiver (Caltrans 2013). However, when a topographic feature (e.g., hill) results in a deflection or blockage in noise in one direction, it might also result in a noise reduction at a different location as the path of travel is redirected. This concept is highlighted by the properties of noise and road noise barriers, which are well-studied aspects of acoustics and noise propagation. For example, a solid noise barrier will effectively reduce noise levels directly behind the wall at the receiver it is blocking, however, noise can also be deflected or "bounce" off the top of the wall, resulting in higher noise levels at locations behind and at points above the sound wall (e.g., second floor of receiver). (Caltrans 2013: 5-33). Natural topographic features such as canyon walls can, to some extent, function as soundwalls with respect to noise reflection and can result in increased noise levels. On the other hand, in areas where topography can affect noise propagation due to natural terrain, there is also a higher likelihood that less urban development would be present in these areas, which can also affect how noise attenuates over a distance. Natural, undisturbed areas with vegetation or otherwise that lack substantial pavement, tend to "absorb" noise, which results in higher attenuation rates (i.e., reduces noise over a shorter distance from the source) compared to areas where ground surfaces are paved that tend to reflect noise and slow down its attenuation (i.e., increase noise of longer distance from the source).

While it is acknowledged that canyon effect is something that could alter the propagation path of noise, it also is not known to result in substantial increases in noise. Nonetheless, using 3-D modeling software SoundPLAN, as described in detail below in Section 3.11.4, "Methodology" and in Impact 3.11-3 was used to account for local terrain and ground attenuation factors.

EXISTING NOISE ENVIRONMENT

Existing Noise and Vibration-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption if a project consists of nighttime construction. In addition to residential areas, the County General Plan Safety Element states that noise-sensitive developments also include hospitals, schools, and churches (El Dorado County 2024: 117). Buildings and structures within these land use types are considered vibration-sensitive in addition to commercial and industrial buildings. However, commercial, and industrial land uses are not considered noise sensitive.

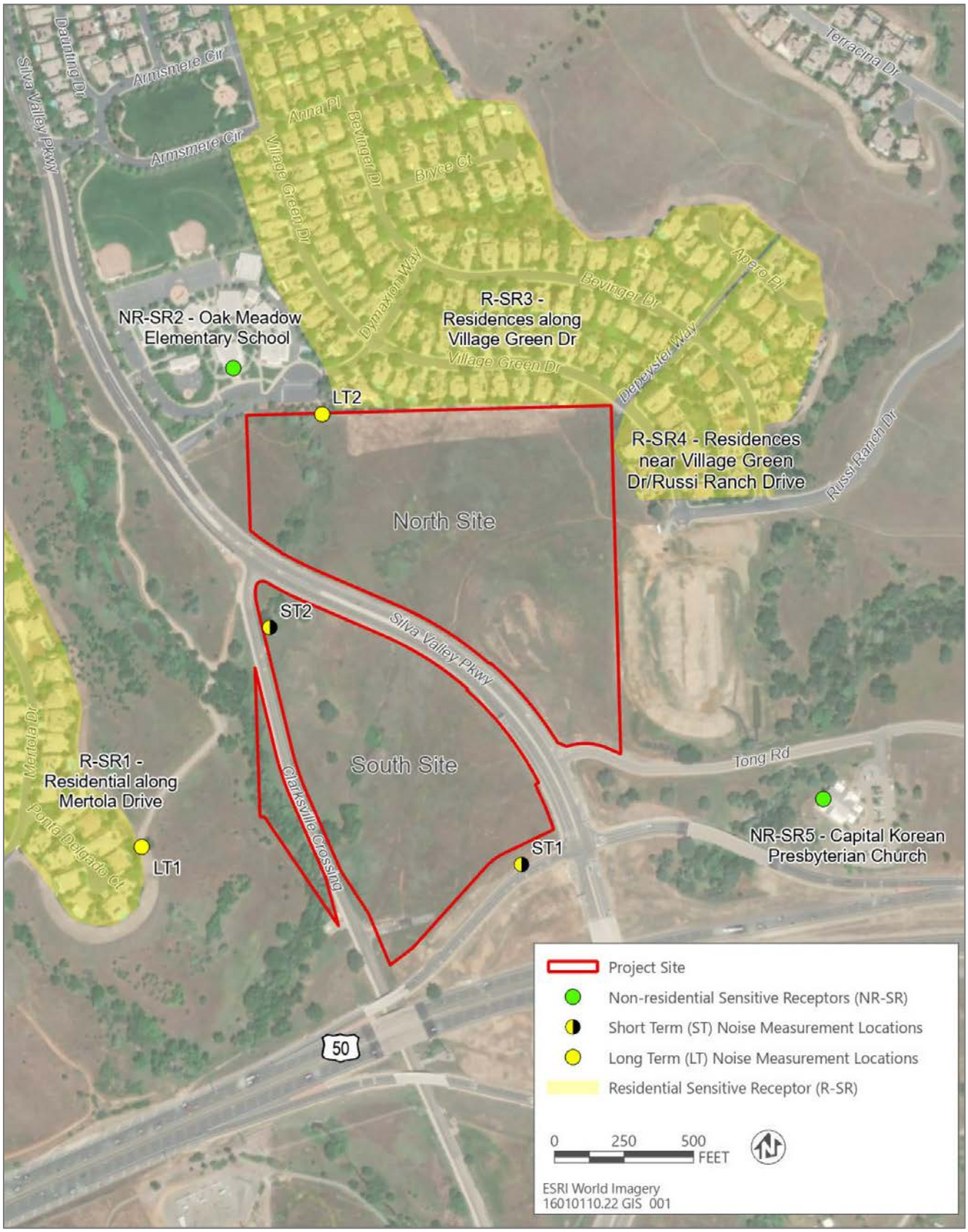
The nearest noise-sensitive receptors to the North Site are single-family residences near Village Green Drive and Oak Meadow Elementary School, the property lines of which are adjacent to the northern boundary of the North Site. The nearest noise-sensitive receptors to the South Site are single-family residences located near Mertola Drive, the property lines of which are approximately 475 feet west of the South Site perimeter. See Figure 3.11-1 for the locations of these receptors. Table 3.11-7 details the existing sensitive receptors surrounding the project site.

Table 3.11-7 Existing Noise-Sensitive Receptors

Receptor ID	Receptor Name	Land Use Type	Distance to Closest Boundary of the Project Site (feet)[1]
R-SR 1	Residences near Mertola Avenue	Residential	412
NR-SR 2	Oak Meadow Elementary School	Non-Residential	65
R-SR 3	Residences near Village Green Drive	Residential	10
R-SR 4	Residences near Village Green Drive/Depeyster Way	Residential	9
NR-SR 5	Capital Korean Presbyterian Church	Non-Residential	593

Notes: R-SR = residential sensitive receptor; NR-SR = non-residential sensitive receptor.

[1] Distance is measured from the property line of the receptor to the closest boundary of either the North or South Site.
Source: Modeled by Ascent 2025.



Source: Adapted by Ascent in 2025.

Figure 3.11-1 Noise Measurement Locations and Existing Noise- and Vibration-Sensitive Land Uses

Existing Noise Sources and Ambient Levels

The sound levels in most communities fluctuate, depending on the activity of nearby and distant noise sources, time of the day, or season of the year, with major roads and highways typically the primary sources of ambient noise in a community. The predominant noise source in the project area is vehicular traffic on the surrounding roadway network including US 50, located approximately 170 feet south of the South Site boundary, and Silva Valley Parkway, which bisects the North Site and South Site.

To characterize the existing ambient noise environment at the project site, an ambient noise survey was conducted from February 25th, 2025, to February 26th, 2025, consisting of two long-term (LT) (24-hour) and two short-term (ST) (15-minute) ambient noise level measurements. A Soft dB Piccolo II Type 2 precision integrating sound level meter was used for the ambient noise level measurement surveys. The meter was calibrated before and after use with a Larson Davis Laboratories Model CAL200 acoustical calibrator to ensure measurement accuracy. The measurement equipment meets all pertinent specifications of the American National Standards Institute. Weather conditions during the measurement periods were mild, ranging from 52 degrees Fahrenheit (°F) to 71 °F, with clear skies, and average wind speeds of 7 miles per hour. Noise monitoring conducted for the project was done at the project site and near existing residential receptors and thus accounts for topography and its effect on noise (e.g., the canyon effect, the potential for noise reflections and increases in narrow canyons with steep side slopes). The results of the ambient noise survey are summarized in Table 3.11-8 including the unique noise measurement location IDs corresponding to measurement locations, depicted on Figure 3.11-1. Detailed summaries of the measured noise level data can be found in Appendix I.

Table 3.11-8 Summary of Existing Ambient Noise Level Survey

Location IDs[1]	Date and Time	Noise Levels (dBA) L_{eq}	Noise Levels (dBA) L_{max}	Noise Levels (dBA) L_{min}	
Short-Term Measurements					
ST-1	February 25, 2025, 11:15 a.m. to 11:30 a.m.	53.5	63.8	47.7	
ST-2	February 25, 2025, 12:00 p.m. to 12:15 p.m.	55.7	65.1	45.4	
Long-Term Measurements					
Location IDs[1]	**Date and Time**	**(dBA) CNEL**	**12-Hour Daytime L_{eq}**	**12-Hour Evening L_{eq}**	**12-Hour Nighttime L_{eq}**
LT-1	February 25, 2025, 12:00 p.m. to February 26, 2025, 12:00 p.m.	65.2	58.0	57.0	59.0
LT-2	February 25, 2025, 1:00 p.m. to February 26, 2025, 1:00 p.m.	58.9	52.0	51.0	52.0

Notes: dBA = A-weighted decibels; ST = short-term measurement; LT = long-term measurement; CNEL = community noise equivalent level; L_{eq} = equivalent sound level; L_{min} = minimum noise level; L_{max} = maximum noise level; L_{dn} = day-night noise level.

[1] Refer to Figure 3.11-1 for ambient noise level measurement locations.

Source: Data collected by Ascent in 2025.

Existing traffic noise levels on roadway segments in the project area were modeled using calculation methods consistent with FHWA Traffic Noise Model (FHWA 2004) and using average daily traffic (ADT) volumes provided in the traffic analysis conducted by Kittelson & Associates, Inc. (2025). The modeling conducted does not account for the acoustic dampening effects of any natural or human-made shielding (e.g., vegetation, the presence of walls or buildings) or reflection off building surfaces; thus, modeled noise levels may be overestimated where such shielding exists. Table 3.11-9 summarizes the modeled existing traffic noise levels at 100 feet from the centerline of each area roadway segment identified for analysis and lists distances from each roadway centerline to the 70 dBA, 65 dBA, and 60 dBA L_{dn} traffic noise contours. It is important to note that not all study intersections had weekend traffic volumes (i.e., weekend daily volumes were zero); thus, several roadway segments in Table 3.11-9 do not have include traffic noise levels. For further details on traffic-noise modeling inputs and parameters, refer to Appendix I.

Table 3.11-9 Summary of Modeled Existing Traffic Noise Levels

Roadway Segment Number	Roadway	Segment Description	L_{dn} at 100 feet from Roadway Centerline	Distance (feet) from Roadway Centerline to 70 dBA L_{dn} Contour	Distance (feet) from Roadway Centerline to 65 dBA L_{dn} Contour	Distance (feet) from Roadway Centerline to 60 dBA L_{dn} Contour
Weekday						
1	El Dorado Hills Blvd/Latrobe Road	US 50 WB Ramps to US 50 EB Ramps	70.5	125	397	1,254
2	Latrobe Road	From US 50 EB Ramps to White Rock Road	70.4	123	389	1,231
3	White Rock Road	From Latrobe Road to Post Street	66.2	46	147	464
4	White Rock Road	From Post Street to Valley View Parkway	65.9	43	136	431
5	White Rock Road	From Valley View Parkway to Clarksville Crossing	65.2	37	118	373
6	White Rock Road	Clarksville Crossing to US 50 EB Ramps	66.2	47	148	470
7	White Rock Road/Silva Valley Parkway	From US 50 EB Ramps to US 50 WB Ramps	66.0	44	140	443
8	Silva Valley Parkway	From Harvard Way to Golden Eagle Lane	59.1	9	29	91
9	Silva Valley Parkway	From Golden Eagle Lane to Serrano Parkway	65.7	41	130	411
10	Silva Valley Parkway	From Serrano Parkway to Entrada Drive	66.6	51	160	507
11	Silva Valley Parkway	Entrada Drive to Oak Meadow Elementary School	60.3	12	38	119
12	Silva Valley Parkway	From Oak Meadow Elementary School Driveway to Clarksville Crossing	60.2	12	37	118
13	Silva Valley Parkway	From Clarksville Crossing to North/South Site Access	65.9	44	139	439
14	Silva Valley Parkway	From North/South Site Access to Tong Road	66.0	44	140	441
15	Silva Valley Parkway	From Tong Road to US 50 WB Ramps	66.0	44	140	441
16	Clarksville Crossing	From Silva Valley Parkway to South Site North Access	58.4	8	24	77
17	Clarksville Crossing	From South Site North Access to South Site Center Access	58.4	8	24	77
18	Clarksville Crossing	From South Site Center Access to South Site South Access	58.4	8	24	77
19	Clarksville Crossing	From South Site South Access to White Rock Road	58.3	7	24	75
20	Serrano Parkway	From Silva Valley Parkway to Bass Lake Road	65.6	40	128	405

Roadway Segment Number	Roadway	Segment Description	L_{dn} at 100 feet from Roadway Centerline	Distance (feet) from Roadway Centerline to 70 dBA L_{dn} Contour	Distance (feet) from Roadway Centerline to 65 dBA L_{dn} Contour	Distance (feet) from Roadway Centerline to 60 dBA L_{dn} Contour
21	Bass Lake Road	From Serrano Parkway to Country Club Drive	65.2	37	116	366
22	Bass Lake Road	From Country Club Drive to US 50 WB Ramps	67.7	65	206	652
23	Bass Lake Road	From US 50 WB Ramps to US 50 EB ramps	65.4	39	123	389
24	US 50 Westbound	From Silva Valley Parkway to El Dorado Hills Boulevard	59.9	11	34	109
25	US 50 Westbound	East of Silva Valley Parkway Interchange	58.8	9	27	85
26	US 50 Eastbound	From El Dorado Hills Boulevard to Silva Valley Parkway	58.7	8	26	82
27	US 50 Eastbound	East of Silva Valley Parkway Interchange	70.5	6	21	65
Weekend						
1	El Dorado Hills Blvd/Latrobe Road	US 50 WB Ramps to US 50 EB Ramps	—	—	—	—
2	Latrobe Road	From US 50 EB Ramps to White Rock Road	—	—	—	—
3	White Rock Road	From Latrobe Road to Post Street	—	—	—	—
4	White Rock Road	From Post Street to Valley View Parkway	—	—	—	—
5	White Rock Road	From Valley View Parkway to Clarksville Crossing	62.6	20	64	202
6	White Rock Road	Clarksville Crossing to US 50 EB Ramps	64.8	34	107	338
7	White Rock Road/Silva Valley Parkway	From US 50 EB Ramps to US 50 WB Ramps	65.0	35	112	354
8	Silva Valley Parkway	From Harvard Way to Golden Eagle Lane	—	—	—	—
9	Silva Valley Parkway	From Golden Eagle Lane to Serrano Parkway	60.7	13	42	132
10	Silva Valley Parkway	From Serrano Parkway to Entrada Drive	65.1	36	114	360
11	Silva Valley Parkway	Entrada Drive to Oak Meadow Elementary School	59.2	9	30	94
12	Silva Valley Parkway	From Oak Meadow Elementary School Driveway to Clarksville Crossing	59.2	9	29	92
13	Silva Valley Parkway	From Clarksville Crossing to North/South Site Access	64.8	33	106	334

Roadway Segment Number	Roadway	Segment Description	L_{dn} at 100 feet from Roadway Centerline	Distance (feet) from Roadway Centerline to 70 dBA L_{dn} Contour	Distance (feet) from Roadway Centerline to 65 dBA L_{dn} Contour	Distance (feet) from Roadway Centerline to 60 dBA L_{dn} Contour
14	Silva Valley Parkway	From North/South Site Access to Tong Road	64.8	33	106	334
15	Silva Valley Parkway	From Tong Road to US 50 WB Ramps	64.7	33	106	334
16	Clarksville Crossing	From Silva Valley Parkway to South Site North Access	57.6	6	20	65
17	Clarksville Crossing	From South Site North Access to South Site Center Access	57.6	6	20	65
18	Clarksville Crossing	From South Site Center Access to South Site South Access	57.6	6	20	65
19	Clarksville Crossing	From South Site South Access to White Rock Road	57.7	7	21	66
20	Serrano Parkway	From Silva Valley Parkway to Bass Lake Road	61.3	15	48	151
21	Bass Lake Road	From Serrano Parkway to Country Club Drive	—	—	—	—
22	Bass Lake Road	From Country Club Drive to US 50 WB Ramps	—	—	—	—
23	Bass Lake Road	From US 50 WB Ramps to US 50 EB ramps	—	—	—	—
24	US 50 Westbound	From Silva Valley Parkway to El Dorado Hills Boulevard	59.5	10	32	100
25	US 50 Westbound	East of Silva Valley Parkway Interchange	57.8	7	21	68
26	US 50 Eastbound	From El Dorado Hills Boulevard to Silva Valley Parkway	56.8	5	17	53
27	US 50 Eastbound	East of Silva Valley Parkway Interchange	56.3	5	15	48

Notes: dBA = A-weighted decibel; L_{dn} = day-to-night noise level; WB = westbound; EB = Eastbound; N/A = Not Applicable; - = No Data.

Source: Data provided by Kittelson 2025; Modeled by Ascent 2025.

3.11.4 Environmental Impacts and Mitigation Measures

METHODOLOGY

Construction Noise

To assess potential short-term construction-related noise impacts, sensitive receptors and their relative exposure were identified. Project-generated construction noise levels were determined based on methodologies, reference emission levels, and usage factors from the FTA Guide on Transit Noise and Vibration Impact Assessment methodology (FTA 2018) and FHWA Roadway Construction Noise Model User Guide (FHWA 2006). Reference levels for noise emissions for specific equipment or activity types are well documented and the usage thereof is common practice in the field of acoustics.

Construction noise can be characterized based on the type of activity and associated equipment needed. In this analysis, construction noise was modeled based on the likely combination of construction equipment required for

each phase of construction (i.e., site preparation, grading and excavation, building construction, architectural coatings, and paving) and their simultaneous operation was assumed. In addition, this analysis assumes that silent blasting would be required on the North Site during project construction. Silent blasting would likely include drilling rock, and thus modeling for this phase included the simultaneous operation of a hoe ram and associated equipment (i.e., dozer, excavator). As detailed in Chapter 2, "Project Description," construction on the North Site and South Site for the Costco project would occur simultaneously beginning in July 2026 and continuing for approximately 11 months. Because Costco project construction activity would take place on the North Site and South Site simultaneously, for a conservative analysis, this analysis modeled the simultaneous operation of three pieces of equipment on each site (i.e., six pieces total) of construction equipment anticipated to be used during each phase of construction. The on-site construction noise analysis is based on the concept that construction equipment moves about a construction site, with some pieces operating closer to the property edge (and subsequently nearer to sensitive receptors) while others are operating on another portion of the site (further from the same receiver). Propagating noise levels from the center of the construction site is appropriate in the field of acoustics, especially when evaluating construction noise, to account for the random pattern of noise-generating equipment moving about the site that generates different noise levels throughout the day. In accordance with FTA guidance, noise levels at sensitive receptors are calculated based on the distance from the center of the nearest onsite construction activities (i.e., the acoustical center) and using the calculated hourly average noise level (i.e., L_{eq}) associated with multiple pieces of equipment operating at the same time. The average noise level is the appropriate unit to assess construction noise as it can be used to describe noise levels from the operation of each piece of equipment separately as well as the noise level from all equipment operating during a given period. In accordance with Section 130.37.060 of the County Code, the attenuated construction noise level is measured to the sensitive receptor's property line. The project would also include off-site improvements such as utilities installation, roadway improvements (see Chapter 2, "Project Description," for further details) and the implementation of new sidewalks. Because the off-site improvements are primarily linear, there is no acoustical center. Therefore, the noise levels associated with construction of off-site improvements are measured from the edge of construction activity to the property line of the nearest sensitive receptor.

Most project construction would occur between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. on weekends and federal holidays in accordance with County Code Section 130.37.020 and General Plan Policy 6.5.1.11. However, nighttime concrete pours would be required on the South Site for a total of eight nights (see Appendix B for detailed assumptions). Thus, an assessment of nighttime construction noise on the South Site and associated impacts are included in this analysis.

As identified in Chapter 2, "Project Description," the North Site Remainder Area is not proposed to be developed by the project. However, this analysis evaluates the potential range of construction noise levels for the future development of this area.

Construction Vibration

To assess potential short-term construction-related vibration impacts, sensitive receptors and their relative exposure to construction vibration were identified. Project-generated construction vibration levels were determined based on methodologies, reference emission levels, and usage factors from the FTA Guide on Transit Noise and Vibration Impact Assessment methodology (FTA 2018). Reference levels for vibration emissions for specific equipment types are well documented and the usage thereof is common practice in the field of acoustics.

Construction activities have the potential to expose nearby buildings to levels of ground vibration that could result in structural damage and/or negative human response. These types of activities were assessed based on the types of construction equipment that would be used, the levels of ground vibration typically generated by these types of equipment, and the proximity of construction activity to nearby buildings. Referenced ground vibration levels for typical construction equipment are provided by the FTA Transit Noise and Vibration Impact Manual (FTA 2018). Construction vibration levels and contour distances were calculated based on reference vibration levels for construction equipment that would be used for commercial development.

Operational Noise and Vibration

Non-Transportation Noise

With respect to non-transportation noise sources (e.g., stationary) associated with project implementation, the assessment of long-term (operational-related) impacts was based on reference noise emission levels, and measured noise levels for activities and equipment associated with project operation (e.g., heating, ventilation and air conditioning [HVAC] units, delivery docks, parking lots), and standard attenuation rates and modeling techniques.

As noted above, the North Site Remainder Area is not proposed to be developed by the project. However, this analysis evaluates the potential range of operational noise sources for the future development of this area.

Transportation Noise

An assessment of potential long-term (operation-related) noise impacts resulting from project-generated increases in traffic volumes on the surrounding roadway network was conducted using calculations consistent with the FHWA Traffic Noise Model (FHWA 2004) and ADT volumes from Kittelson & Associates, Inc., (Appendix J). To assess noise impacts, traffic noise levels under existing and existing-plus-project conditions for affected roadway segments were modeled. The analysis is based on the reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. The modeling conducted does not account for the acoustic dampening effects of any natural or human-made shielding (e.g., vegetation, the presence of walls or buildings) or reflection off building surfaces; thus, modeled noise levels may be overestimated where such shielding exists. This analysis factors traffic noise from both the Costco project and the future development of the North Site Remainder Area.

SoundPLAN Modeling

In addition to the non-transportation and transportation noise modeling described above, Costco project-generated noise levels were also modeled using SoundPLAN noise modeling software to illustrate the changes in ambient noise levels with implementation of the Costco project. Noise levels were estimated using project-specific information, where available, and default values in SoundPLAN based on the project location, topography, ground effects, and directivity.

Existing noise levels at adjacent sensitive receptors were estimated using average daily vehicle trips and noise measurements collected by Ascent (see Table 3.11-8). Existing traffic noise levels were modeled using calculations consistent with the FHWA Traffic Noise Model (FHWA 2004) and ADT volumes provided by Kittelson (Appendix J). The modeled existing traffic noise levels were used to calculate State Route 50, Silva Valley Parkway, Clarksville Road to recorded measurement points LT-1 and LT-2 to quantify the contribution of each road to the existing noise environment. Project-generated noise levels were estimated using reference noise data from other noise studies, data collected by Ascent, and manufacturer-provided information. The reference noise levels used in the SoundPLAN model are shown in Table 3.11-10.

Table 3.11-10 Reference Noise Levels Data

Noise Source	Measurement Noise Level dBA L_{eq} at 50 feet from Receiver	Data Source
HVAC Units	46.5	Lennox 2019
Trash Compactors	56.0	Berger et al 2015
Loading Dock Activity	67.1	Ascent 2023
Parking Lots North Facility	59.0	Ascent 2023
Parking Lots South Facility	64.7	Ascent 2023
Tire Center	65	City of Redding 2018
Heavy Vehicles	53.0	Ascent 2023

Notes: L_{eq} = Hourly Equivalent Sound Level; dB = decibel.

The modeled noise environment considers the simultaneous operation of existing noise sources (e.g., SR 50, Silva Valley Parkway) and the noise sources associated with the Costco project (e.g., trash compactors, HVAC equipment). The modeled change in ambient noise levels as a result of project implementation is quantified by the difference between modeled noise levels for the existing and existing-plus-project conditions within SoundPLAN. It is important to note that the model considers the changes in elevation from project-specific grading plans. See Appendix I for SoundPLAN outputs.

THRESHOLDS OF SIGNIFICANCE

The project would result in a significant noise or vibration impact if it would result in any of the following:

Short-Term Construction Noise

- Generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Because the County does not establish daytime construction noise standards, for this analysis, short-term temporary construction noise levels are evaluated against the FTA recommended daytime construction noise level of 90 dBA L_{eq} at the property line of the nearby sensitive land use.

Based on Section 130.37.020 of the County Code and General Plan Policy 6.5.1.13, the project would result in a significant noise impact if it would result in:

- Construction-generated noise levels that exceed the County evening criterion of 50 dBA L_{eq} between the hours of 7:00 p.m. and 10:00 p.m. or the County nighttime noise standard of 45 dBA L_{eq} between 10:00 p.m. and 7:00 a.m. during non-exempt hours (i.e., between 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends and holidays)
- Nighttime construction noise increases of 3 dBA or more (General Plan Policy 6.5.1.13) at the property line of existing sensitive receptors

Stationary Noise

- Generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Long-term stationary noise impacts are assessed in conjunction with the County noise performance standards pursuant to Chapter 130.37 of the County Code and County General Plan Policy 6.5.1.13. The following standards are applied as thresholds for operational stationary noise sources:

- The project site and surrounding sensitive receptors are located within the El Dorado Hills Community Region area. The Community Region stationary noise standards applicable to the project are:
  - 55 dBA L_{eq} and 70 dBA L_{max} between 7:00 a.m. and 7:00 p.m.
  - 50 dBA L_{eq} and 60 dBA L_{max} between 7:00 p.m. and 10:00 p.m.
  - 45 dBA L_{eq} and 55 dBA L_{max} between 10:00 p.m. and 7:00 a.m.
- An increase in noise levels of 5 dB or more where existing ambient noise complies with the Community Region land use stationary noise standards (Table 3.11-4) (General Plan Policy 6.5.1.13).
- An increase in noise levels of 3 dB or more where existing ambient noise does not comply with the Community Region land use stationary noise standards (Table 3.11-4) (General Plan Policy 6.5.1.13).

Operational Traffic Noise

- Generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Long-term operational traffic noise levels are evaluated pursuant to Chapter 130.37 of the County Code and in accordance with County General Plan Policy 6.5.1.12. The following standards regarding incremental noise increase are applied as thresholds for operational traffic noise:

- Where existing or projected future traffic noise levels are less than 60 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 5 dBA L_{dn} caused by a new transportation noise source will be considered significant.
- Where existing or projected future traffic noise levels range between 60 and 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 3 dBA L_{dn} caused by a new transportation noise source will be considered significant.
- Where existing or projected future traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA L_{dn} caused by a new transportation noise will be considered significant.

Short-Term Construction and Long-Term Operational Vibration

- Generate excessive groundborne vibration or groundborne noise levels.

The County General Plan and the County Code do not have vibration-related standards. Therefore construction-generated vibration levels are compared to the following Caltrans and FTA thresholds:

Structural Damage (Caltrans)

- Construction-generated vibration that exceeds the Caltrans standards of 0.25 in/sec PPV for structural damage from continuous/frequent intermittent sources.

Human Annoyance (FTA)

- Construction-generated vibration that exceeds the FTA standard of 80 VdB for residences and buildings where people normally sleep or 83 VdB for institutional land uses (e.g., schools)

Airport Land Use Compatibility

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

ISSUES NOT DISCUSSED FURTHER

Long-Term Groundborne Vibration

The project would not introduce any major sources of long-term or permanent ground vibration such as commercial railways or passenger rail transit lines. Therefore, the project would not result in long-term operational activities associated with permanent or substantial levels of ground vibration. This issue is not discussed further.

Airport Land Use Compatibility

The project site is not located within an airport land use plan area or within 2 miles of a public airport, public use airport, or within 2 miles of a private airstrip. Cameron Park Airport, located approximately 3.8 miles northeast of the project site, is the closest airport and the project site is not located within any of the airport noise contours (EDCTC 2012). Therefore, the project would not result in noise impacts related to the exposure of people residing or working in the project area to excessive aircraft-related noise levels. This issue is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: Project-Related Short-Term Construction Noise Impacts at Nearby Noise-Sensitive Receptors

Most noise-generating construction activity would be performed during daytime hours (i.e., between 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends and holidays) when construction noise is exempt from County noise standards pursuant to Section 130.37.020 of the County Code. However, nighttime construction activity would be required for the Costco project on the South Site during non-exempt hours (i.e., between 7:00 p.m. and 7:00 a.m. Monday through Friday and 5:00 p.m. and 8:00 a.m. on weekends). Hourly construction noise levels at the nearest sensitive receptors would reach 72.6 dBA L_{eq} during daytime construction activities and 57.9 dBA L_{eq} during nighttime construction (i.e., concrete pours). Construction noise levels would not exceed the FTA daytime residential construction noise standard (i.e., 90 dBA L_{eq}) or result in in daytime noise levels at NR-SR 2 (i.e., Oak Meadow Elementary School) that could result in adverse effects to the interior operation of educational buildings. However, construction noise would result in a substantial increase in nighttime noise levels at nearby residential receptors (i.e., R-SR 3 and R-SR 4) that could result in adverse health effects (e.g., sleep disruption). Construction of future development of the North Site Remainder Area could also generate significant construction noise impacts on nearby receptors. Therefore, this impact is **significant**.

Costco Project

The project would include the construction of a Costco fuel facility, a Costco warehouse retail building, and below-grade and main-level parking areas. As detailed in Chapter 2, "Project Description," construction of the Costco project is anticipated to begin in July 2026 and continue for approximately 11 months. Construction noise can be characterized based on the type of activity and associated equipment needed and, in this analysis, is evaluated by considering noise levels associated with the likely combination of construction equipment required for each phase of project construction. The effects of construction noise largely depend on the type of activities being performed, noise levels generated by those activities, distances to noise-sensitive receptors, the relative locations of noise-attenuating features, and existing ambient noise levels. Reference noise levels of heavy equipment anticipated to be used in construction activities are detailed in Table 3.11-11.

As detailed under "Methodology," onsite construction noise was modeled based on the likely combination of construction equipment required for each phase of construction and the simultaneous operation of the three loudest pieces of equipment on each site was assumed. Although construction activities would occur primarily during daytime hours (i.e., 7:00 a.m. to 7:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. Saturday and Sunday), nighttime construction (i.e., between 10:00 p.m. and 6:00 a.m.) on the South Site would be required for concrete pours that must be done continuously until complete. Construction activities performed during the more noise-sensitive evening and nighttime hours could result in increased annoyance and potential sleep disruption for occupants of nearby residential land uses because exterior ambient noise levels typically decrease during nighttime hours as typical levels of community activities (e.g., vehicle traffic) decrease. Thus, noise-generating activities occurring during the more noise-sensitive evening and nighttime hours are of increased concern. Daytime and nighttime onsite construction activities are discussed separately below.

Table 3.11-11 Noise Emission Levels from Construction Equipment

Equipment	Noise Level at 50 feet (dBA Lmax)
Backhoes	80
Concrete Mixer	85
Concrete Pump	82
Crane/Lift, Mobile	83
Dozer	85
Dump Truck	84

Equipment	Noise Level at 50 feet (dBA Lmax)
Excavator	85
Front End Loaders	80
Generator	82
Grader	85
Impact Pile Driver	101
Mounted Impact Hammer (Hoe Ram)	90
Paver	85
Roller	85
Scraper	85
Tractor	84

Notes: dBA= A-weighted decibels. L_{eq} = Noise Level Equivalent. Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment.

Source: FTA 2018; FHWA 2006.

Daytime Construction Noise

According to County Code Section 130.37.020 and General Plan Policy 6.5.1.11, construction that occurs during daylight hours (i.e., between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. on weekends or federal holidays) is exempt from County noise standards. Although Section 130.37.020 of the County Code and General Plan Policy 6.5.1.11 provide an exemption for construction-generated noise if construction occurs during daylight hours, the County has not adopted construction-related numerical noise limits. FTA has established noise criteria for the purpose of conducting construction noise assessments, which is 90 dBA L_{eq} for residential receptors for daytime construction; thus, the FTA construction noise standards are used to assess potential daytime construction noise impacts. The loudest modeled construction noise levels (i.e., construction with silent blasting) and attenuated noise levels at the surrounding sensitive receptors are shown in Table 3.11-12.

Table 3.11-12 Modeled Construction Noise Levels at Costco Project North Site and South Site

Receptor ID	Land Use	Distance from Center of Nearest Construction Activities (feet)	Highest Construction Noise Level at Receptor (dBA L_{eq})	Applicable Threshold (dBA L_{eq})	Threshold Exceeded?
R-SR 1	Residences near Mertola Avenue	950[1]	62.9	90	No
NR-SR 2	Oak Meadow Elementary School	635[2]	66.4	90	No
R-SR 3	Residences near Village Green Drive	500[2]	68.5	90	No
R-SR 4	Residences near Village Green Drive/Depeyster Way	985[2]	62.6	90	No
NR-SR 5	Capital Korean Presbyterian Church	1,255[1]	60.5	90	No

Notes: R-SR = residential sensitive receptor; NR-SR = non-residential sensitive receptor; dBA = A-weighted decibel; L_{eq} = noise level equivalent.

[1] Nearest construction activities would be located on the South Site.

[2] Nearest construction activities would be located on the North Site.

Source: Modeled by Ascent 2025.

As shown in Table 3.11-12, the loudest construction activities (i.e., construction with silent blasting) would expose nearby sensitive receptors to average noise levels between approximately 62.6 dBA L_{eq} and 68.5 dBA L_{eq}. Other phases of daytime project construction would generate noise levels lower than those shown in Table 3.11-12. Therefore, the nearest sensitive receptors would not be exposed to construction noise levels that exceed the FTA recommended daytime threshold of 90 dBA L_{eq} during any phase of construction. Sensitive receptors located farther

from the project site than the receptors included in Table 3.11-12 would experience even lower construction noise levels and thus would also not be exposed to construction noise that exceeds the recommended FTA threshold.

Substantial Increase in Daytime Noise

Daytime construction activities would occur during daylight hours, when construction noise is exempt from County noise standards in accordance with Section 130.73.020 of the County Code. However, when considering the effects of construction noise, in addition to maximum noise exposure, the perceived increase in noise over existing ambient levels is important to consider. Thus, in addition to a comparison of construction noise to daytime noise standards, project-generated temporary construction noise levels were also evaluated in comparison to existing ambient noise levels to determine if a substantial temporary increase in noise at daytime sensitive land uses (e.g., school) would occur.

Residences are most sensitive to noise during nighttime hours when ambient noise levels decrease. Because daytime construction would not occur during nighttime hours, the temporary increase in noise would not result in adverse health effects (i.e., sleep disruption) to nearby residential receptors. However, in this analysis, NR-SR 2 (i.e., Oak Meadow Elementary School) is considered a daytime noise-sensitive receptor, as daytime construction could interfere with indoor learning activities when class is in session. However, it is important to note that outdoor activities (e.g., recess, physical education) are not considered noise-sensitive as they do not require silence, are noisy themselves, and typically only occur at specific times and for limited durations.

To determine the existing noise levels at NR-SR 2, the LT-2 24-hour noise measurement (Table 3.11-8) was used to calculate the noise level at 50 feet from the centerline of Silva Valley Parkway (i.e., 62.5 dBA L_{eq}) which was then attenuated to NR-SR 2. The existing daytime noise level at NR-SR 2 was determined to be approximately 60 dBA L_{eq}. As shown in Table 3.11-12, the loudest construction activity (i.e., construction with silent blasting) would generate noise levels of approximately 66 dBA L_{eq} at NR-SR 2 (See Appendix I for noise modeling), resulting in an approximately 6 dBA increase over existing noise levels (i.e., 60 dBA L_{eq}) at the property line of NR-SR 2 (see Appendix I for detailed modeling inputs).

In accordance with General Plan Policy 6.5.1.7, construction noise levels were measured at the property line of the receiving property. However, the educational buildings on the school site are located approximately 165 feet north of the property line and thus would experience lower construction noise levels than those discussed above; specifically, at this distance, exterior construction noise would attenuate to approximately 64 dBA L_{eq}. In addition, typical buildings provide an exterior-to-interior attenuation of at least 20 dBA (Caltrans 2013: 7-17). Assuming a 20-dBA noise attenuation for exterior-to-interior noise, interior noise levels would be lowered to approximately 44 dBA L_{eq}, which is lower than the typical noise levels of normal speech at 3 feet (Caltrans 2013: Table 2-5). For these reasons, construction noise would not be anticipated to result in adverse effects to the interior operation of educational buildings.

South Site Nighttime Construction

As detailed under "Methodology," nighttime construction (i.e., concrete pour) would be required within the footprint of the Costco warehouse retail building on the South Site for approximately eight nights and would occur between midnight and 7:00 a.m. In accordance with FTA guidance, nighttime construction noise is evaluated using the average noise level (L_{eq}) as it can be used to describe noise levels from the operation of each piece of equipment separately as well as the noise level from all equipment operating during a given period. Therefore, nighttime construction noise levels are compared against the County exterior nighttime stationary noise thresholds for noise-sensitive land uses (i.e., 45 dBA L_{eq}). Modeled nighttime construction noise levels and attenuated noise levels at the surrounding sensitive receptors) are shown in Table 3.11-13.

As shown in Table 3.11-13, nighttime construction activities would expose the surrounding noise-sensitive receptors to noise levels between 54.4 dBA L_{eq} and 57.9 dBA L_{eq}. Although nighttime construction noise levels would exceed the County nighttime exterior noise threshold for sensitive uses (i.e., 45 dBA L_{eq}), existing average nighttime noise levels near each sensitive receptor exceed that threshold under existing conditions. Therefore, project-generated nighttime construction noise levels were also evaluated in comparison to existing nighttime noise levels to determine if a substantial temporary increase in noise would occur.

Table 3.11-13 Modeled Nighttime Construction Noise Levels at Costco Project South Site

Receptor ID	Sensitive Receptor Name	Activity Noise Level at Receptor[1]	Applicable Noise Threshold (dBA L_{eq})	Exceeds Absolute Noise Level Threshold?	Existing Nighttime Noise Level at Receptor (dBA L_{eq})	Combined Noise Level (dBA L_{eq})	Change (dBA)	Threshold	Exceeds Threshold?
R-SR 1	Residences near Mertola Avenue	57.9	45	Yes	58.9	61.5	2.5	3.0	No
NR-SR 2	Oak Meadow Elementary School	54.4	45	Yes	60.0	60.9	1.1	3.0	No
R-SR 3	Residences near Village Green Drive	55.2	45	Yes	51.5	56.7	5.3	3.0	Yes
R-SR 4	Residences near Village Green Drive/Depeyester Way	55.4	45	Yes	49.9	56.4	6.5	3.0	Yes
NR-SR 5	Capital Korean Presbyterian Church	55.5	45	Yes	51.2	55.5	5.6	3.0	Yes

Notes: R-SR = residential sensitive receptor; NR-SR = non-residential sensitive receptor; dBA = A-weighted decibel; L_{eq} = noise level equivalent; L_{max} = maximum noise level.

[1] The distance is measured from the property line to the center of proposed South Site construction.

Source: Modeled by Ascent 2025.

Pursuant to Section 130.37.020 of the County Municipal Code, construction that occurs during daylight hours is exempt from County noise standards. However, because nighttime construction would occur during nighttime hours (i.e., between 10:00 p.m. and 7:00 a.m.), nighttime construction noise is evaluated against applicable County noise standards. In accordance with the County General Plan Policy 6.5.1.13, in areas in which nighttime ambient noise levels are 45 dBA L_{eq} or less, increases in ambient noise levels of 5 dBA or more are considered significant and in areas in which nighttime ambient noise levels are more than 45 dBA L_{eq}, an increase of 3 dBA or more is considered significant (El Dorado County 2024: Table 6-2). Because existing nighttime ambient noise levels near sensitive receptors exceed 45 dBA $L_{eq,}$ and thus exceed the applicable noise level, an increase in 3 dBA or more is considered substantial (County General Plan Policy 6.5.1.13). As shown in Table 3.11-13, three sensitive receptors (i.e., R-SR 3, R-SR 4, and NR-SR 5) would be exposed to a substantial increase (i.e., 3+ dBA) in noise. NR-SR 5 (i.e., the church near Tong Road) is not a residential location where people sleep and thus would not be adversely affected by nighttime noise. However, R-SR 3 and R-SR 4 are residences and thus could be exposed to adverse health effects (e.g., sleep disruption) associated with substantial increases in nighttime noise.

Offsite Improvements

In addition to onsite construction, the project would include construction of offsite roadway improvements identified in Chapter 2, "Project Description." Due to the spatial constraints associated with simultaneously operating heavy equipment near one another on a smaller project site such as a linear alignment or intersection, modeling of off-site construction noise included the simultaneous operation of two pieces of heavy equipment (i.e., a paver and grader). At 50 feet, noise associated with off-site improvements would be 84.5 dBA L_{eq} and 88.0 dBA L_{max}. Table 3.11-14 presents the anticipated noise levels from off-site construction at the nearby sensitive receptors.

As shown in Table 3.11-14, noise associated with off-site improvements would attenuate to below approximately 73 dBA L_{eq} at all nearby sensitive receptors. Therefore, such activity would not exceed the FTA recommended thresholds for daytime construction (i.e., 90 dBA L_{eq}) at any nearby sensitive receptors. Construction of off-site improvements would occur during daylight hours (i.e., between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. on weekends), when construction noise is exempt from County noise standards in accordance with Section 130.73.020 of the County Code. Because construction would not occur during nighttime hours when people are most sensitive to an increase in noise, the temporary increase in noise would not result in adverse health effects (i.e., sleep disruption) to nearby residential receptors during nighttime hours.

Table 3.11-14 Modeled Off-Site Construction Noise Levels at Nearby Sensitive Receptors

Off-Site Improvement and Location	Noise Level at Nearest Sensitive Receptor (dBA L_{eq})	Noise Level at NR-SR 2 (dBA L_{eq})
Install 150-foot dual northbound left turn lanes at Silva Valley Parkway/ Main Costco Driveway Intersection	59.7[1]	57.5
Roadway Improvements at White Rock Road/Valley View Parkway-Vine Street Intersection	72.8[2]	N/A

Notes: dBA = A-weighted decibel; L_{eq} = noise level equivalent; N/A = not applicable.

[1] Nearest sensitive receptors are the residences near Village Green Drive approximately 877 feet northeast of off-site improvement.

[2] Nearest sensitive receptors are residences near White Rock Road approximately 193 feet southwest of off-site improvement.

Source: Modeled by Ascent 2025.

As shown in Table 3.11-14, the loudest off-site construction activity near the school (i.e., the installation of northbound turn lanes at the Silva Valley Parkway/Main Costco Driveway Intersection) would result in noise levels of approximately 58 dBA L_{eq} at the property line of the school. Existing daytime noise levels near NR-SR 2 are approximately 60 dBA L_{eq}. Considering the logarithmic properties of noise that require a doubling of a source to result in a 3-dB increase in noise, this off-site improvement would not result in a substantial increase in noise because existing noise levels at NR-SR 2 are higher than that of noise generated from the construction activity. Therefore, the temporary noise increase at NR-SR 2 from off-site construction would not be considered substantial.

North Site Remainder Area

To address the potential for commercial development within the site, the distances within which construction noise would exceed the FTA recommended daytime (i.e., 90 dBA L_{eq}) and nighttime (i.e., 45 dBA L_{eq}) were modeled, as shown in Table 3.11-15.

Table 3.11-15 Modeled Construction Noise Levels for Future Commercial Development at the North Site Remainder Area

Construction Phase	Noise Level (dBA L_{eq}) at 50 feet	Noise Level (dBA L_{max}) at 50 feet	Distance within which FTA Daytime Noise Threshold (90 dBA L_{eq}) would be Exceeded (feet)	Distance within which County Nighttime Noise Threshold (45 dBA L_{eq}) would be Exceeded (feet)
Site Preparation	85.5	89.5	30	7,476
Grading	85.8	89.8	31	7,746
Building Construction	85.3	89.8	29	7,280
Building Construction with Pile Driving	89.6	89.8	48	12,042
Paving	85.1	89.5	28	7,133
Architectural Coating	79.0	83.0	14	3,557

Notes: dBA = A-weighted decibel; L_{eq} = noise level equivalent; L_{max} = maximum noise level; FTA = Federal Transit Administration

Source: Modeled by Ascent 2025.

As shown in Table 3.11-15, the loudest phase of daytime construction activity (i.e., building construction with pile driving) could exceed the FTA recommended threshold of 90 dBA L_{eq} within 48 feet of activity, and the loudest nighttime construction activity could exceed the County nighttime threshold of 45 dBA L_{eq} within 12,042 feet of activity. Short-term construction noise levels near the North Site Remainder Area would fluctuate depending on the type, number, and duration of usage for the varying equipment. Existing sensitive receptors near the Remainder Area include the residences near Village Green Drive, the church near Tong Road, and Oak Meadow Elementary School near Silva Valley Parkway. Considering the logarithmic properties of noise that require a doubling of a source to result in a 3-dB increase in noise, noise levels associated with operation of the Costco project (see Impact 3.11-3) in combination with North Site Remainder Area construction activities are not expected to result in substantial increases in the noise levels identified in Table 3.11-15. In accordance with Section 130.73.020 of the County Code, construction

noise associated with development of the North Site Remainder Area would be exempt from County noise standards if construction activity were to take place during daylight hours (i.e., between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. on weekends) and construction equipment was maintained in good working order. However, because the specific details of construction activities associated with the development of the North Site Remainder Area (e.g., duration of activities, need for nighttime construction) are currently unknown, depending on the existing ambient noise levels at the time of development and duration of construction, construction noise within the North Site Remainder Area could result in a substantial temporary increase in noise. This construction noise impact would be **significant**.

Conclusions

Project construction would primarily occur during daytime hours (i.e., between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. on weekends) during which construction activities would be exempt from County noise standards in accordance with Section 130.73.020. As detailed above, construction noise would not exceed FTA daytime construction noise standards (i.e., 90 dBA L_{eq}) at any nearby sensitive receptors or result in a substantial noise increase that adversely affects the interior operation of educational buildings at Oak Meadow Elementary School (i.e., NR-SR 2). However, construction activity within the South Site would be required during nighttime hours and would exceed the County nighttime exterior noise threshold (i.e., 45 dBA L_{eq}) at all nearby receptors and would result in a substantial increase (i.e., 3+ dBA) in nighttime noise at three sensitive receptors (i.e., R-SR 3, R-SR 4, and NR-SR 5). For these reasons, this impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.11-1a: Implement Measures to Reduce Exposure of Noise-Sensitive Receptors to Construction-Generated Noise from the North Site Remainder Area

To minimize noise levels generated by construction activities, the North Site Remainder Area applicants shall require the construction contractor(s) to implement the following, or equally effective measures, to reduce noise during daytime and nighttime construction:

- All construction equipment and material staging areas shall be set back as far as possible from nearby off-site noise-sensitive receivers, including but not limited to the residences near Village Green Drive, Mertola Drive, and Oak Meadow Elementary School near Silva Valley Parkway.
- All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer specifications. Equipment engine shrouds shall be closed during equipment operation.
- Prohibit the idling of construction equipment for extended periods of time in the vicinity of sensitive receptors.
- Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors).
- Construction equipment with back-up alarms shall be equipped with either audible self-adjusting backup alarms or alarms that only sound when an object is detected. Self-adjusting backup alarms shall automatically adjust to 5 dB over the surrounding background levels. All non-self-adjusting backup alarms shall be set to the lowest setting required to be audible above the surrounding noise levels.
- The contractor shall designate a disturbance coordinator and post that person's telephone number conspicuously around the construction site and provide it to nearby residences. The disturbance coordinator shall receive all public complaints and be responsible for determining the cause of the complaint and implementing any feasible measures to alleviate the problem.

Mitigation Measure 3.11-1b: Implement Measures to Reduce Exposure of Noise-Sensitive Receptors to Nighttime Construction Noise

The Costco project shall implement or incorporate the following construction noise reduction measures into construction specifications for construction contractor implementation during nighttime project construction:

- Noise-reducing enclosures and techniques shall be used around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors).
- Construction equipment with back-up alarms shall be equipped with either audible self-adjusting backup alarms or alarms that only sound when an object is detected. Self-adjusting backup alarms shall automatically adjust to 5 dB over the surrounding background levels. All non-self-adjusting backup alarms shall be set to the lowest setting required to be audible above the surrounding noise levels.
- The contractor shall designate a disturbance coordinator and post that person's telephone number conspicuously around the construction site and provide it to nearby residences. The disturbance coordinator shall receive all public complaints and be responsible for determining the cause of the complaint and implementing any feasible measures to alleviate the problem.
- Stationary noise sources such as generators or pumps shall be located as far away from noise-sensitive uses as feasible.
- Individual operations and techniques shall be replaced with quieter procedures (e.g., mixing concrete off-site instead of on-site, using electric-powered equipment instead of pneumatic or internal combustion powered equipment) where feasible.
- All motorized construction equipment shall be shut down when not in use to prevent idling.
- Notify residents and occupants within 500 feet of the project construction area at least 30 days in advance of anticipated times when construction noise levels are anticipated to exceed evening or nighttime noise limits established in the noise element of the general plan or noise ordinance.
- For construction activity that would occur within 1,300 feet of adjacent off-site sensitive receptors (i.e., R-SR 3, R-SR 4), temporary sound barriers to attenuate noise, such as temporary noise curtains, sound walls, or similar products that provide a barrier to attenuate construction noise, shall be installed. The temporary sound barrier shall be located between the project construction noise sources and receptors to shield the receptors from construction noise. When installed properly, acoustic barriers can reduce construction noise levels by approximately 10 dB (NCHRP 1999). The installation of any temporary sound barrier shall meet all the following criteria:
  - Be installed as close as feasible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s);
  - Shall consist of durable, flexible composite material featuring a noise barrier layer bound to sound-absorptive material on one side; and
  - Shall consist of rugged, impervious material with a surface weight of at least one pound per square foot, such that a minimum of 10 dBA reduction is achieved on the receiving side of the sound barrier.

Significance after Mitigation

Implementation of Mitigation Measure 3.11-1a would provide substantial reductions in levels of North Site Remainder Area construction noise exposure at noise-sensitive receptors by ensuring proper equipment use, locating equipment away from sensitive land uses, and requiring the use of enclosures. Implementation of Mitigation Measure 3.11-1b would provide substantial reductions in levels of nighttime construction noise exposure by requiring operations and techniques to be replaced with quieter procedures, locating equipment as far away from sensitive receptors as feasible, and requiring the implementation of temporary noise barriers to achieve a reduction of at least 10 dBA. Implementation of these noise-reduction features would reduce construction noise levels by 10 dBA or more (NCHRP 1999).

To avoid a substantial increase in nighttime noise, nighttime construction noise levels would need to be reduced by approximately 3 dBA at R-SR 3 and by approximately 4 dBA at R-SR 4. Implementation of Mitigation Measure 3.11-1b

(e.g., installation of noise curtain) would reduce nighttime construction noise levels by up to 10 dBA. Therefore, nighttime construction would not result in a substantial noise increase at R-SR 3 or R-SR 4 as noise levels would be reduced below the applicable substantial increase threshold and would avoid creating noise levels that could result in sleep disturbance for adjacent residential uses. For these reasons, this impact would be **less than significant**.

Impact 3.11-2: Exposure of Existing Sensitive Receptors to Excessive Traffic Noise Levels

Project operation would result in an increase in traffic volumes along project-affected roadways, resulting in long-term permanent increases in traffic noise. Traffic noise modeling was conducted for the existing and the existing-plus-project conditions on weekdays and weekends. Based on modeling conducted and applicable County standards, project-generated traffic volumes would exceed the threshold for substantial traffic noise increase along two roadway segments (i.e., Silva Valley Parkway between US 50 Westbound Ramps and future Country Club Drive, and White Rock Road between US 50 Eastbound Ramps and Clarksville Crossing). However, there are no existing sensitive receptors along these roadway segments and the nearest sensitive receptors would not be exposed to traffic noise levels that exceed the applicable County exterior noise standard for sensitive uses (i.e., 60 dBA L_{dn}). In addition, future development along the North Site Remainder Area would not result in a doubling of traffic volumes along the surrounding roadway network and thus would not result in a substantial increase (e.g., 3+ dBA) in traffic noise. For these reasons, this impact would be **less than significant**.

Costco Project

The project would result in the generation of new vehicle trips. These trips would result in an increase in average daily traffic volumes and an associated increase in traffic noise levels along the roadway network surrounding the project site and increased noise levels at land uses along the affected roadway segments. To analyze the impact of project-generated operational transportation noise sources, traffic noise levels under existing and existing-plus-project conditions were modeled for affected roadway segments using data provided by Kittelson & Associates, Inc. (See Appendix I for detailed modeling inputs). Specifically, traffic noise was modeled using ADT data, default fleet mix data (i.e., percentage of autos, medium trucks, and heavy trucks), and default time-of-day mix (i.e., percentage traveling during the daytime, evening, and nighttime). Costco truck routes would be limited to US 50, Silva Valley Parkway (from US 50 to Clarksville Road), Clarksville Road, and White Rock Road (from Clarksville Road to US 50). No Costco truck traffic would travel north of the project site into the El Dorado Hills community. Noise associated with truck deliveries is addressed under Impact 3.11-3.

In accordance with County standards, and as detailed in the "Thresholds of Significance" section above, the project would result in a significant traffic noise impact if it would result in:

- An increase of more than 5 dB L_{dn} caused by a new transportation noise source where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of residential uses
- An increase of more than 3 dB L_{dn} where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of residential uses
- An increase of more than 1.5 dB L_{dn} where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of residential uses.

Table 3.11-16 shows the modeled traffic noise levels and project-related traffic noise increase over existing conditions along study roadway segments.

Table 3.11-16 Summary of Modeled Traffic Noise Levels under Existing and Existing-Plus-Costco Project Conditions

Roadway Segment Number	Roadway	Roadway Segment	Existing Conditions Noise Levels (dBA L_{dn})	Existing + Costco Project Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
Weekday							
1	El Dorado Hills Blvd/ Latrobe Road	US 50 WB Ramps to US 50 EB Ramps	70.5	70.5	0.0	1.5	No
2	Latrobe Road	From US 50 EB Ramps to White Rock Road	70.4	70.4	0.0	1.5	No
3	White Rock Road	From Latrobe Road to Post Street	66.2	66.3	0.2	1.5	No
4	White Rock Road	From Post Street to Valley View Parkway	65.9	66.0	0.2	1.5	No
5	White Rock Road	From Valley View Parkway to Clarksville Crossing	65.2	65.4	0.2	1.5	No
6	White Rock Road	Clarksville Crossing to US 50 EB Ramps	66.2	66.3	0.1	1.5	No
7	White Rock Road/ Silva Valley Parkway	From US 50 EB Ramps to US 50 WB Ramps	66.0	66.9	0.9	1.5	No
8	Silva Valley Parkway	From Harvard Way to Golden Eagle Lane	59.1	59.2	0.1	5.0	No
9	Silva Valley Parkway	From Golden Eagle Lane to Serrano Parkway	65.7	65.8	0.2	1.5	No
10	Silva Valley Parkway	From Serrano Parkway to Entrada Drive	66.6	67.1	0.5	1.5	No
11	Silva Valley Parkway	Entrada Drive to Oak Meadow Elementary School	60.3	60.8	0.5	3.0	No
12	Silva Valley Parkway	From Oak Meadow Elementary School Driveway to Clarksville Crossing	60.2	60.7	0.5	3.0	No
13	Silva Valley Parkway	From Clarksville Crossing to North/South Site Access	65.9	66.5	0.6	1.5	No
14	Silva Valley Parkway	From North/South Site Access to Tong Road	66.0	67.5	1.5	1.5	No
15	Silva Valley Parkway	From Tong Road to US 50 WB Ramps	66.0	67.5	1.5	1.5	No
16	Clarksville Crossing	From Silva Valley Parkway to South Site North Access	58.4	58.9	0.5	5.0	No
17	Clarksville Crossing	From South Site North Access to South Site Center Access	58.4	58.7	0.3	5.0	No
18	Clarksville Crossing	From South Site Center Access to South Site South Access	58.4	58.7	0.3	5.0	No
19	Clarksville Crossing	From South Site South Access to White Rock Road	58.3	59.2	0.9	5.0	No

Roadway Segment Number	Roadway	Roadway Segment	Existing Conditions Noise Levels (dBA L_{dn})	Existing + Costco Project Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
20	Serrano Parkway	From Silva Valley Parkway to Bass Lake Road	65.6	65.8	0.2	1.5	No
21	Bass Lake Road	From Serrano Parkway to Country Club Drive	65.2	65.2	0.1	1.5	No
22	Bass Lake Road	From Country Club Drive to US 50 WB Ramps	67.7	67.8	0.1	1.5	No
23	Bass Lake Road	From US 50 WB Ramps to US 50 EB ramps	65.4	65.5	0.1	1.5	No
24	US 50 Westbound	From Silva Valley Parkway to El Dorado Hills Boulevard	59.9	61.8	1.9	5.0	No
25	US 50 Westbound	East of Silva Valley Parkway Interchange	58.8	60.1	1.3	5.0	No
26	US 50 Eastbound	From El Dorado Hills Boulevard to Silva Valley Parkway	58.7	59.3	0.7	5.0	No
27	US 50 Eastbound	East of Silva Valley Parkway Interchange	57.6	58.5	0.8	5.0	No
Weekend							
1	El Dorado Hills Blvd/ Latrobe Road	US 50 WB Ramps to US 50 EB Ramps	-	-	-	N/A	N/A
2	Latrobe Road	From US 50 EB Ramps to White Rock Road	-	-	-	N/A	N/A
3	White Rock Road	From Latrobe Road to Post Street	-	-	-	N/A	N/A
4	White Rock Road	From Post Street to Valley View Parkway	-	-	-	N/A	N/A
5	White Rock Road	From Valley View Parkway to Clarksville Crossing	62.6	62.9	0.4	3.0	No
6	White Rock Road	Clarksville Crossing to US 50 EB Ramps	64.8	64.9	0.1	3.0	No
7	White Rock Road/ Silva Valley Parkway	From US 50 EB Ramps to US 50 WB Ramps	65.0	66.1	1.1	1.5	No
8	Silva Valley Parkway	From Harvard Way to Golden Eagle Lane	-	-	-	N/A	N/A
9	Silva Valley Parkway	From Golden Eagle Lane to Serrano Parkway	60.7	61.3	0.6	3.0	No
10	Silva Valley Parkway	From Serrano Parkway to Entrada Drive	65.1	65.9	0.9	1.5	No
11	Silva Valley Parkway	Entrada Drive to Oak Meadow Elementary School	59.2	60.0	0.8	5.0	No
12	Silva Valley Parkway	From Oak Meadow Elementary School Driveway to Clarksville Crossing	59.2	60.0	0.8	5.0	No

Roadway Segment Number	Roadway	Roadway Segment	Existing Conditions Noise Levels (dBA L_{dn})	Existing + Costco Project Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
13	Silva Valley Parkway	From Clarksville Crossing to North/South Site Access	64.8	65.5	0.8	3.0	No
14	Silva Valley Parkway	From North/South Site Access to Tong Road	64.8	66.9	2.1	3.0	No
15	Silva Valley Parkway	From Tong Road to US 50 WB Ramps	64.7	66.9	2.1	3.0	No
16	Clarksville Crossing	From Silva Valley Parkway to South Site North Access	57.6	58.5	0.8	5.0	No
17	Clarksville Crossing	From South Site North Access to South Site Center Access	57.6	58.1	0.5	5.0	No
18	Clarksville Crossing	From South Site Center Access to South Site South Access	57.6	58.1	0.5	5.0	No
19	Clarksville Crossing	From South Site South Access to White Rock Road	57.7	59.1	1.4	5.0	No
20	Serrano Parkway	From Silva Valley Parkway to Bass Lake Road	61.3	62.0	0.7	3.0	No
21	Bass Lake Road	From Serrano Parkway to Country Club Drive	-	-	-	N/A	N/A
22	Bass Lake Road	From Country Club Drive to US 50 WB Ramps	-	-	-	N/A	N/A
23	Bass Lake Road	From US 50 WB Ramps to US 50 EB ramps	-	-	-	N/A	N/A
24	US 50 Westbound	From Silva Valley Parkway to El Dorado Hills Boulevard	59.5	61.9	2.4	5.0	No
25	US 50 Westbound	East of Silva Valley Parkway Interchange	57.8	59.7	1.8	5.0	No
26	US 50 Eastbound	From El Dorado Hills Boulevard to Silva Valley Parkway	56.8	57.7	0.9	5.0	No
27	US 50 Eastbound	East of Silva Valley Parkway Interchange	56.3	57.3	1.0	5.0	No

Notes: dBA = A-weighted decibel; L_{dn} = day-to-night noise level; WB = westbound; EB = Eastbound; N/A = Not Applicable; - = No Data.

[1] The traffic noise levels are modeled 100 feet from the centerline. Refer to Appendix E for detailed traffic noise modeling input data and modeling results.

Source: Data provided by Kittelson 2025; Modeled by Ascent 2025.

As shown in Table 3.11-16, project-generated traffic would result in increased traffic noise along most roadways surrounding the project site on weekdays and weekends. Noise level increases would range from 0.1 dB L_{dn} to 2.5 dBA L_{dn}. Traffic noise increases would not exceed the applicable noise increase standards of 1.5 dBA $L_{dn,}$ to 3.0 dBA $L_{dn,}$ or 5.0 dBA L_{dn} along any roadway. In addition, these noise levels would be below typical human detection of a noise increase (3 dBA).

North Site Remainder Area

Future commercial development of the North Site Remainder Area would generate new vehicle trips. These trips would result in an increase in average daily traffic volumes on the surrounding roadway network and an associated increase in traffic noise levels. Table 3.11-17 shows the modeled traffic noise levels under existing-plus-project

conditions (i.e., traffic noise generated by the Costco project), existing-plus-North Site Remainder Area development conditions, and the related traffic noise increases that would occur with future development in the North Site Remainder Area.

Table 3.11-17 Summary of Modeled Traffic Noise Levels under Existing-Plus-Project and Existing-Plus-Project-Plus Remainder Area Development Conditions

Roadway Segment Number	Roadway	Roadway Segment	Existing+ Costco Project Conditions Noise Levels (dBA L_{dn})	Existing + Costco Project + Remainder Development Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
Weekday							
1	El Dorado Hills Blvd/Latrobe Road	US 50 WB Ramps to US 50 EB Ramps	70.5	70.5	0.0	1.5	No
2	Latrobe Road	From US 50 EB Ramps to White Rock Road	70.4	70.4	0.0	1.5	No
3	White Rock Road	From Latrobe Road to Post Street	66.2	66.4	0.2	1.5	No
4	White Rock Road	From Post Street to Valley View Parkway	65.9	66.1	0.2	1.5	No
5	White Rock Road	From Valley View Parkway to Clarksville Crossing	65.2	65.4	0.2	1.5	No
6	White Rock Road	Clarksville Crossing to US 50 EB Ramps	66.2	66.4	0.2	1.5	No
7	White Rock Road/ Silva Valley Parkway	From US 50 EB Ramps to US 50 WB Ramps	66.0	67.1	1.1	1.5	No
8	Silva Valley Parkway	From Harvard Way to Golden Eagle Lane	59.1	59.3	0.2	5.0	No
9	Silva Valley Parkway	From Golden Eagle Lane to Serrano Parkway	65.7	65.9	0.2	1.5	No
10	Silva Valley Parkway	From Serrano Parkway to Entrada Drive	66.6	67.2	0.7	1.5	No
11	Silva Valley Parkway	Entrada Drive to Oak Meadow Elementary School	60.3	60.9	0.6	3.0	No
12	Silva Valley Parkway	From Oak Meadow Elementary School Driveway to Clarksville Crossing	60.2	60.9	0.6	3.0	No
13	Silva Valley Parkway	From Clarksville Crossing to North/South Site Access	65.9	66.6	0.6	1.5	No
14	Silva Valley Parkway	From North/South Site Access to Tong Road	66.0	67.8	1.8	1.5	No
15	Silva Valley Parkway	From Tong Road to US 50 WB Ramps	66.0	67.8	1.8	1.5	No
16	Clarksville Crossing	From Silva Valley Parkway to South Site North Access	58.4	58.9	0.5	5.0	No
17	Clarksville Crossing	From South Site North Access to South Site Center Access	58.4	58.7	0.3	5.0	No

Roadway Segment Number	Roadway	Roadway Segment	Existing+ Costco Project Conditions Noise Levels (dBA L_{dn})	Existing + Costco Project + Remainder Development Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
18	Clarksville Crossing	From South Site Center Access to South Site South Access	58.4	58.7	0.3	5.0	No
19	Clarksville Crossing	From South Site South Access to White Rock Road	58.3	59.2	0.9	5.0	No
20	Serrano Parkway	From Silva Valley Parkway to Bass Lake Road	65.6	65.9	0.3	1.5	No
21	Bass Lake Road	From Serrano Parkway to Country Club Drive	65.2	65.2	0.1	1.5	No
22	Bass Lake Road	From Country Club Drive to US 50 WB Ramps	67.7	67.8	0.1	1.5	No
23	Bass Lake Road	From US 50 WB Ramps to US 50 EB ramps	65.4	65.5	0.1	1.5	No
24	US 50 Westbound	From Silva Valley Parkway to El Dorado Hills Boulevard	59.9	62.0	2.1	5.0	No
25	US 50 Westbound	East of Silva Valley Parkway Interchange	58.8	60.3	1.5	5.0	No
26	US 50 Eastbound	From El Dorado Hills Boulevard to Silva Valley Parkway	58.7	59.3	0.7	5.0	No
27	US 50 Eastbound	East of Silva Valley Parkway Interchange	57.6	58.5	0.8	5.0	No
Weekend							
1	El Dorado Hills Blvd/ Latrobe Road	US 50 WB Ramps to US 50 EB Ramps	-	42.1	-	N/A	N/A
2	Latrobe Road	From US 50 EB Ramps to White Rock Road	-	-	-	N/A	N/A
3	White Rock Road	From Latrobe Road to Post Street	-	49.0	-	N/A	N/A
4	White Rock Road	From Post Street to Valley View Parkway	-	49.0	-	N/A	N/A
5	White Rock Road	From Valley View Parkway to Clarksville Crossing	62.9	63.1	0.1	3.0	No
6	White Rock Road	Clarksville Crossing to US 50 EB Ramps	64.9	65.1	0.2	3.0	No
7	White Rock Road/ Silva Valley Parkway	From US 50 EB Ramps to US 50 WB Ramps	66.1	66.4	0.3	1.5	No
8	Silva Valley Parkway	From Harvard Way to Golden Eagle Lane	-	40.7	-	N/A	N/A
9	Silva Valley Parkway	From Golden Eagle Lane to Serrano Parkway	61.3	61.6	0.2	3.0	No
10	Silva Valley Parkway	From Serrano Parkway to Entrada Drive	65.9	66.2	0.3	1.5	No

Roadway Segment Number	Roadway	Roadway Segment	Existing+ Costco Project Conditions Noise Levels (dBA L_{dn})	Existing + Costco Project + Remainder Development Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
11	Silva Valley Parkway	Entrada Drive to Oak Meadow Elementary School	60.0	60.3	0.3	3.0	No
12	Silva Valley Parkway	From Oak Meadow Elementary School Driveway to Clarksville Crossing	60.0	60.2	0.3	3.0	No
13	Silva Valley Parkway	From Clarksville Crossing to North/South Site Access	65.5	65.7	0.2	1.5	No
14	Silva Valley Parkway	From North/South Site Access to Tong Road	66.9	67.3	0.4	1.5	No
15	Silva Valley Parkway	From Tong Road to US 50 WB Ramps	66.9	67.3	0.4	1.5	No
16	Clarksville Crossing	From Silva Valley Parkway to South Site North Access	58.5	58.5	0.0	5.0	No
17	Clarksville Crossing	From South Site North Access to South Site Center Access	58.1	58.1	0.0	5.0	No
18	Clarksville Crossing	From South Site Center Access to South Site South Access	58.1	58.1	0.0	5.0	No
19	Clarksville Crossing	From South Site South Access to White Rock Road	59.1	59.1	0.0	5.0	No
20	Serrano Parkway	From Silva Valley Parkway to Bass Lake Road	62.0	62.2	0.2	3.0	No
21	Bass Lake Road	From Serrano Parkway to Country Club Drive	-	43.4	-	N/A	N/A
22	Bass Lake Road	From Country Club Drive to US 50 WB Ramps	-	48.8	-	N/A	N/A
23	Bass Lake Road	From US 50 WB Ramps to US 50 EB ramps	-	45.7	-	N/A	N/A
24	US 50 Westbound	From Silva Valley Parkway to El Dorado Hills Boulevard	61.9	62.1	0.2	3.0	No
25	US 50 Westbound	East of Silva Valley Parkway Interchange	59.7	59.8	0.2	5.0	No
26	US 50 Eastbound	From El Dorado Hills Boulevard to Silva Valley Parkway	58.7	59.3	0.7	5.0	No
27	US 50 Eastbound	East of Silva Valley Parkway Interchange	57.6	58.5	0.8	5.0	No

Notes: dBA = A-weighted decibel; L_{dn} = day-to-night noise level; WB = westbound; EB = Eastbound; N/A = Not Applicable; - = No Data.

[1] The traffic noise levels are modeled 100 feet from the centerline. Refer to Appendix E for detailed traffic noise modeling input data and modeling results.

Source: Data provided by Kittelson 2025; Modeled by Ascent 2025.

As shown in Table 3.11-17, development within the North Site Remainder Area would result in increased traffic noise along most roadways surrounding the area on weekdays and weekends. Noise level increases would range from 0.1 dB L_{dn} to 2.1 dBA L_{dn}. Traffic noise increases would not exceed the applicable noise increase standards of 1.5 dBA L_{dn}, 3.0 dBA L_{dn}, or 5.0 dBA L_{dn} along any roadway. In addition, these noise levels would be below typical human detection of a noise increase (3 dBA).

Conclusions

Implementation of the Costco project and future development within the North Site Reminder Area would result in increases in traffic volumes along the surrounding roadway network. However, no roadway segment would result in an increase that is above the applicable threshold (i.e., 1.5+ dBA, 3.0+ dBA, or 5.0+ dBA L_{dn}) with implementation of the project or future development within the North Site Remainder Area. For these reasons, this impact would be **less than significant.**

Mitigation Measures

No mitigation is required for this impact.

Impact 3.11-3: Exposure of Existing Sensitive Receptors to Long-Term Stationary Noise Sources

The project would involve new noise-generating activities and the long-term operation of new noise sources that could expose existing off-site receptors to excessive noise levels. New operational noise sources would include HVAC units, backup generators, the use of trucks at loading docks, and parking lots. Based on noise attenuation modeling using reference noise levels for these noise sources, the operation of the project would not exceed applicable noise standards at existing residential receptors or expose off-site sensitive receptors to permanent substantial increases in noise. Therefore, this impact is **less than significant.**

Costco Project

This analysis addresses the potential exposure of existing sensitive receptors to noise generated by stationary components of project operation. Based on the project site plans, the stationary noise sources evaluated in this impact include mechanical equipment associated with building operations (e.g., HVAC equipment), loading dock activities, truck deliveries, and activity from parking lots, the fuel facility, and the proposed tire center. Noise levels associated with these sources are discussed separately below. As detailed in Chapter 2, "Project Description," warehouse retail building hours are anticipated to be Monday through Friday from 9:00 a.m. to 8:30 p.m. and Saturday and Sunday from 9:00 a.m. to 7:00 p.m. and the fuel station is anticipated to be open between 5:00 a.m. and 10:00 p.m. daily.

Building Mechanical Equipment

The implementation of the Costco project would introduce new stationary noise sources associated with building operation such as HVAC equipment. Based on the proposed project site plans and information provided by Costco, the size of HVAC equipment would vary but approximately 15 units would be located on the warehouse retail building rooftop. Noise generated by HVAC equipment varies substantially, however noise levels commonly associated with larger commercial-use air conditioning systems can reach levels of up to 78 dB at 3 feet (Lennox 2020). Applying this reference noise level as an hourly average (i.e., L_{eq}) and assuming a 50 percent usage rate, HVAC equipment would result in 75 dBA L_{eq} at 3 feet from the source.

The property line of the nearest sensitive receptor to the proposed warehouse retail building (i.e., NR-SR 5, the church near Tong Road) is located approximately 870 feet east of the eastern warehouse retail building façade. Assuming the simultaneous operation of 15 HVAC units and using the reference noise level of 75 dBA L_{eq} at 3 feet, the nearest sensitive receptors could be exposed to a noise level of approximately 32 dBA L_{eq} (see Appendix I for detailed calculations). This noise level does not exceed the County daytime (i.e., 55 dBA L_{eq}), evening (i.e., 50 dBA L_{eq}), or nighttime (i.e., 45 dBA L_{eq}) exterior stationary noise standards. Other sensitive receptors near the project site are located even farther away from the proposed warehouse retail building than the church and thus would also not be exposed to noise levels that exceed County noise standards. In addition, noise generated from the warehouse retail

building HVAC equipment would be lower than the lowest existing average daytime and nighttime noise levels (i.e., 52.0 dBA L_{eq} at the nearest residential receptors). Therefore, the project would not result in a substantial increase in noise levels because existing noise levels at nearby receptors are higher than that of noise-generated from HVAC equipment. For these reasons, noise from building mechanical equipment associated with the project would not exceed applicable County standards or result in a long-term substantial increase in noise.

Diesel Generators

The project would include two 250-horsepower (hp) generators to supply necessary power requirements to vital systems within the proposed buildings and would only be used temporarily during emergency power outages or routine maintenance. Noise associated with the use of mechanical devices during emergency activities is exempt from County exterior noise standards pursuant to Section 130.37.020 of the County Code. In addition, although the operation of diesel generators could result in a noise increase over existing noise levels at the nearest sensitive receptor, because they would only be used temporarily during an emergency, it would not result in a permanent substantial increase in noise. For these reasons, the operation of diesel generators would not result in substantial adverse effects to nearby sensitive receptors.

Trash Compactors

As described in Chapter 2, "Project Description," the project would include the implementation and operation of two 10-hp trash compactors along the eastern side of the proposed warehouse retail building. Trash compactors would generally operate daily between 9:00 a.m. and 8:00 p.m. Because the trash compactors would not operate during nighttime hours (i.e., between 10:00 p.m. and 7:00 a.m.), this analysis only compares noise levels to the County daytime and evening noise standards. Noise levels associated with trash compactors can vary depending on the hp, motor type, and enclosures but can generate approximately 74 dBA at 10 feet (Berger et al 2015). Applying the acoustical principal, that a doubling of a noise source would result in a 3 dB noise increase (Caltrans 2013), the simultaneous operation of the two trash compactors would generate 77 dBA L_{eq} at 10 feet. Using this noise level, noise associated with the operation of the two trash compactors would exceed the daytime exterior noise standard (i.e., 55 dBA L_{eq}) within 127 feet of activity and the evening noise standards (i.e., 50 dBA L_{eq}) within 226 feet of activity (See Appendix I for modeling details).

The nearest sensitive receptor to the trash compactors is NR-SR 5 (i.e., the church near Tong Road), approximately 1,030 feet east of the proposed location for the trash compactors. At this distance, noise from the trash compactors would attenuate to approximately 37 dBA L_{eq} and thus would not exceed the daytime or evening County exterior noise standards. Other sensitive receptors in the project area are located farther away from the proposed trash compactors than NR-SR 5 and thus would also not be exposed to noise levels that exceed County noise standards. In addition, noise levels generated by trash compacting activity would be lower than the lowest existing average daytime and nighttime (i.e., 52.0 dBA L_{eq}) noise levels at the nearest residential receptors. Therefore, the project would not result in a substantial increase in noise because existing noise levels at nearby sensitive receptors are higher than that of noise-generated from trash compacting activity.

Loading Dock Activity

The project would include a loading dock for receiving shipments by commercial trucks. Noise sources from truck activity associated with delivery areas are usually short-term and can include activities such as vehicle idling, engine revving, the release of air brakes on heavy trucks, and the use of a forklift/pallet to unload goods. All these discrete activities occurring together combine to generate noise that is treated as a stationary noise source. Reference noise levels associated with these activities were obtained by an Ascent noise specialist during a site visit at the Anheuser Busch Santa Fe Springs Distribution Center at 12065 Pike Street, Santa Fe Springs, CA. The reference noise level captured trucks idling, brake noise, opening and raising the truck trailer doors, and loading and unloading activity noise (Ascent 2023); and thus, represents primary noise sources associated with loading docks. The noise specialist collected noise measurements during loading and unloading activities using a Larson Davis Laboratories LxT precision integrating sound level meter located 100 feet away from the center of the loading dock doors. The collective noise level measured during these activities was 59.3 dBA L_{eq} at 100 feet (Ascent 2023).

As detailed in Chapter 2, "Project Description," the project would include a receiving dock located at the southwest corner of the proposed warehouse retail building on the South Site, adjacent to US 50. The loading dock bay doors would be equipped with sealed gaskets to limit noise impacts. It is anticipated that approximately 10 to 12 trucks would be delivering goods on a typical weekday, averaging 2 to 3 trucks per hour with most deliveries complete before the warehouse retail building opens to members at 9:00 a.m. The anticipated receiving time would generally be between 2:00 a.m. and 1:00 p.m.; and thus, the noise impacts associated with loading dock activity are evaluated against the County daytime (i.e., 55 dBA L_{eq}), evening (i.e., 50 dBA L_{eq}), and nighttime (i.e., 45 dBA L_{eq}) noise standards. Noise associated with loading dock activity would exceed the daytime noise standards within 165 feet of activity, the evening noise standards within 300 feet of activity, and the nighttime noise standards within 522 feet of activity (See Appendix I for modeling details). There are no sensitive receptors located within these distances.

The nearest sensitive receptor to the proposed loading dock area of the warehouse retail building is R-SR 1 (i.e., the residences near Mertola Drive); the property line of which is approximately 1,065 feet west of the proposed loading dock. At this distance, noise from loading dock activity would attenuate to approximately 39 dBA L_{eq} and thus would not exceed any County exterior noise standards. Other sensitive receptors near the project site are located farther away from the proposed warehouse retail building than the residences near Mertola Drive and thus would also not be exposed to noise levels that exceed County noise standards. In addition, noise generated by loading dock activity would be lower than the existing average daytime and nighttime (i.e., 52.0 dBA L_{eq}) noise levels at the nearest residential receptors. Therefore, the project would not result in a substantial increase in noise because existing noise levels at nearby receptors are higher than that of noise-generated from loading dock activity.

Parking Lots and Fuel Facility

The project would involve the construes of parking lots on the South Site and a parking lot and a Costco member-only fuel facility located on the North Site. The North Site would include a fuel facility and approximately 60 to 70 Costco employee parking spaces. Approximately 750 to 780 parking spaces would be located on the South Site distributed across a below-grade parking structure and a main-level parking area. The use of fuel facilities and parking lots generates various noise sources including vehicular traffic-related noise, car doors closing or slamming, people talking, horns honking, engines starting, engines idling, and car alarms and radios sounding. These noise sources are typically short and intermittent. In addition, noise levels associated with parking lots tend to increase as hourly or daily vehicular traffic increases, thus larger parking facilities typically generate more noise than smaller ones.

Noise levels associated with the proposed parking lots on the South Site were calculated using the highest peak hour traffic volumes (i.e., weekend midday peak hour traffic volumes of 1,697 trips) provided by Kittelson & Associates, Inc. It is anticipated that the parking lots on the South Site would result in noise levels of 64.7 dB L_{eq} at 50 feet. Using this noise reference level, noise associated with parking lots on the South Site would exceed the County daytime noise standards (i.e., 55 dBA L_{eq}) within 155 feet of activity, the evening noise standards (i.e., 50 dBA L_{eq}) within 275 feet of activity, and the nighttime noise standards (i.e., 45 dBA L_{eq}) within 485 feet of activity (See Appendix I for modeling details). The nearest sensitive receptors to the parking lot on the South Site (i.e., R-SR 1, the residences near Mertola Avenue) are located approximately 700 feet west of the edge of the proposed South Site parking lot. At this distance, noise associated with the South Site parking lots would attenuate to approximately 42 dBA L_{eq} and thus would not exceed the County daytime (i.e., 55 dBA L_{eq}) or evening (i.e., 50 dBA L_{eq}) or nighttime (i.e., 45 dBA L_{eq}) exterior noise standards (See Appendix I for noise modeling). In addition, noise levels from the parking lots at the receptors nearest to the South Site (i.e., 42 dBA L_{eq}) would be lower than existing average daytime and evening nighttime noise levels (i.e., 52.0 dBA L_{eq}). Because the existing noise levels at sensitive receptors are higher than those of the noise generated from the parking lots, they would not result in a substantial increase in noise.

Noise levels associated with the proposed parking lot and fuel facility on the North Site were calculated using the anticipated number of fueling positions (i.e., 32) and the highest peak hour traffic volumes (i.e., weekday p.m. peak hour trips of 461 trips) based on the Institute of Transportation Engineers (ITE) weekday p.m. peak trip generation rate of 14.1 (ITE 2021). Based on the anticipated number of peak trips, it is anticipated that the parking lots on the North Site would result in noise levels of 59.0 dB L_{eq} at 50 feet (See Appendix I for modeling details). Using this reference noise level, noise associated with the parking lot and fuel facility on the North Site would exceed the County daytime noise standards (i.e., 55 dBA L_{eq}) within 80 feet of activity, the evening noise standards (i.e., 50 dBA

L_{eq}) within 155 feet of activity, and the nighttime noise standards (i.e., 45 dBA L_{eq}) within 255 feet of activity (See Appendix I for modeling details). The nearest sensitive receptors to the parking lot on the North Site (i.e., R-SR 3 and Oak Meadow Elementary School) are located approximately 350 feet north of the proposed parking lot. At this distance, noise from parking lots would attenuate to approximately 42 dBA L_{eq}, which would not exceed the County daytime (i.e., 55 dBA L_{eq}), evening (i.e., 50 dBA L_{eq}), or nighttime (i.e., 45 dBA L_{eq}) exterior noise standards (See Appendix I for noise modeling). In addition, noise generated by parking lot activity and the fuel facility would be lower than the lowest existing average daytime and nighttime (i.e., 52.0 dBA L_{eq}) noise levels at the nearest residential receptors. Therefore, the fuel facility and parking lots would not result in a substantial increase in noise because the existing noise levels at nearby receptors are higher than that of noise generated from the parking lot and fuel facility.

Tire Center

The warehouse retail building would include a five-bay tire center with member access via the inside of the main Costco building, which would include tire sales and a tire installation facility. The tire center would also have bay doors accessible from outside of the warehouse retail building. The primary source of noise from a tire service center is from air wrenches used to loosen and tighten the lug nuts on a tire. Other common sources of noise from a tire center could include air compressors, tire inflation, on-vehicle tire balancing at a high spin rate, and brake drum resurfacing. The noises generated by the tire center are short-term heightened levels of noise and would not all occur simultaneously. The combination of lug wrench operation plus numerous other noise sources (e.g., car starts, car horn, dropped tools, banging hammer on a stuck brake drum, air compressor, phone ringing, amplified music) comprise the total noise generation expected from the tire facility associated with the project. Table 3.11-18 shows reference noise measurements at various tire center facilities.

Table 3.11-18 Noise Measurements at Similar Tire Centers in California

Tire Center	Measurement Distance (feet)	Measurement Period Noise Level (Leq)
American Tire Depot, Orange	50	65 dB
American Tire Depot, Costa Mesa	50	62 dB
Costco Tire Center, Culver City	70	60 dB
Firestone, Chino Hills	52	58 dB
Les Schwab, Yuba City	75	57 dB
Costco Tire Center, Tustin	60	59 dB

Notes: L_{eq} = Hourly Equivalent Sound Level; dB = decibel.

Source: City of Redding 2018: Table 4.10-17.

Based on the measured noise levels shown in Table 3.11-18, a reference noise level of 65 dB L_{eq} at 50 feet from the tire center façade is a reasonably conservative input assumption. The warehouse retail building is expected to be open from 9:00 a.m. to 8:30 p.m. on weekdays and 9:00 a.m. to 7:00 p.m. on weekends. Therefore, noise associated with the tire center is evaluated against the County daytime (i.e., 55 dBA L_{eq}) and evening (i.e., 50 dBA L_{eq}) exterior noise standards. Noise from the tire center would exceed the County daytime and evening noise standards within 160 feet and 285 feet, respectively. The nearest noise-sensitive receptors to the tire center (i.e., R-SR 1) are located approximately 965 feet west of the proposed tire center. At this distance, noise from the tire center would attenuate to approximately 39 dBA L_{eq} and thus would not exceed the County daytime or evening exterior noise standards. In addition, noise from the tire center would be less than existing evening ambient noise levels at the nearest sensitive receptor (i.e., 52 dBA L_{eq}) and therefore, would not result in a substantial increase in ambient noise.

Heavy Vehicles (Loading and Delivery)

The project would include the operation of heavy vehicles on-site (i.e., idling trucks, on-site truck circulation, trailer-mounted refrigeration units, doors slamming, and truck deliveries). Noise generated by these types of activities is considered a non-transportation noise source because it is not linear in nature. As detailed in Chapter 2, "Project Description," the Costco loading dock would be located along the southeastern façade of the warehouse retail building, and the bay doors would be equipped with sealed gaskets to limit noise. Costco truck routes would be limited to US 50, Silva Valley Parkway (from US 50 to Clarksville Road), Clarksville Road, and White Rock Road (from Clarksville Road to US 50). No Costco truck traffic would travel north of the project site into the El Dorado Hills community. In addition, it is estimated that fuel would be delivered to the gasoline facility in four to five truck deliveries per day. Fuel delivery trucks would be parked within the North Site. Trucks would access the South Site loading dock facilities via Clarksville Road and the North Site from Silva Valley Parkway.

To evaluate anticipated noise from truck movements on and within the project site, reference noise measurements taken by Ascent at similar facilities are used. The reference noise measurements captured medium/heavy truck movement activities that would be typical of the proposed project, such as driving down a street and passing through a gate to enter or leave the facility. Average noise levels associated with truck movements were 65.8 dBA L_{eq} at 16 feet (Ascent 2023). The property line of the residential receptor nearest to Clarksville Road (i.e., R-SR 1) is located approximately 612 feet west of the Clarksville Road centerline. At this distance, noise from truck movement would attenuate to approximately 34.1 dBA L_{eq} and thus would not exceed the County daytime (i.e., 55 dBA L_{eq}), evening (i.e., 50 dBA L_{eq}), and nighttime (i.e., 45 dBA L_{eq}) noise standards (See Appendix I for noise modeling). The property line of the residential receptor nearest to Silva Valley Parkway (i.e., R-SR 3) is located approximately 670 feet northeast of the Silva Valley Parkway roadway centerline. At this distance, noise from truck movement near the South Site would attenuate to approximately 33 dBA L_{eq} and thus would not exceed the County daytime (i.e., 55 dBA L_{eq}), evening (i.e., 50 dBA L_{eq}), and nighttime (i.e., 45 dBA L_{eq}) noise standards (See Appendix I for noise modeling). In addition, noise levels associated with heavy truck movement would be below existing average daytime, evening, and nighttime noise levels (i.e., 52.0 dBA $L_{eq,}$ 51.0 dBA L_{eq} and 52.0 dBA L_{eq}) at the nearest residential receptors; therefore, heavy truck movement would not result in a substantial increase in noise over existing conditions.

Combined Operational Noise Source Analysis

As detailed in Section 3.11.4, "Methodology," SoundPLAN modeling software was used to evaluate operational noise levels generated by the Costco project as well as the change in existing and existing-plus-project noise levels near the project site. The modeling was based on the project's location, topography, ground effects, and directivity; and the modeled noise environment considers the simultaneous operation of existing noise sources (e.g., traffic on surrounding roadways) and proposed project noise sources (e.g., loading docks). The SoundPLAN modeling results indicate that project-generated noise levels would not exceed applicable County daytime (55 dBA L_{eq}), evening (50 dBA L_{eq}), or nighttime (45 dBA L_{eq}) at any existing sensitive receptors (see Figure 3.11-2). In addition, the project-generated change in existing noise levels would be less than 1.5 dBA at all nearby existing sensitive receptors (see Figure 3.11-3). Therefore, any increase in noise associated with project implementation would be imperceptible to existing sensitive receptors.

North Site Remainder Area

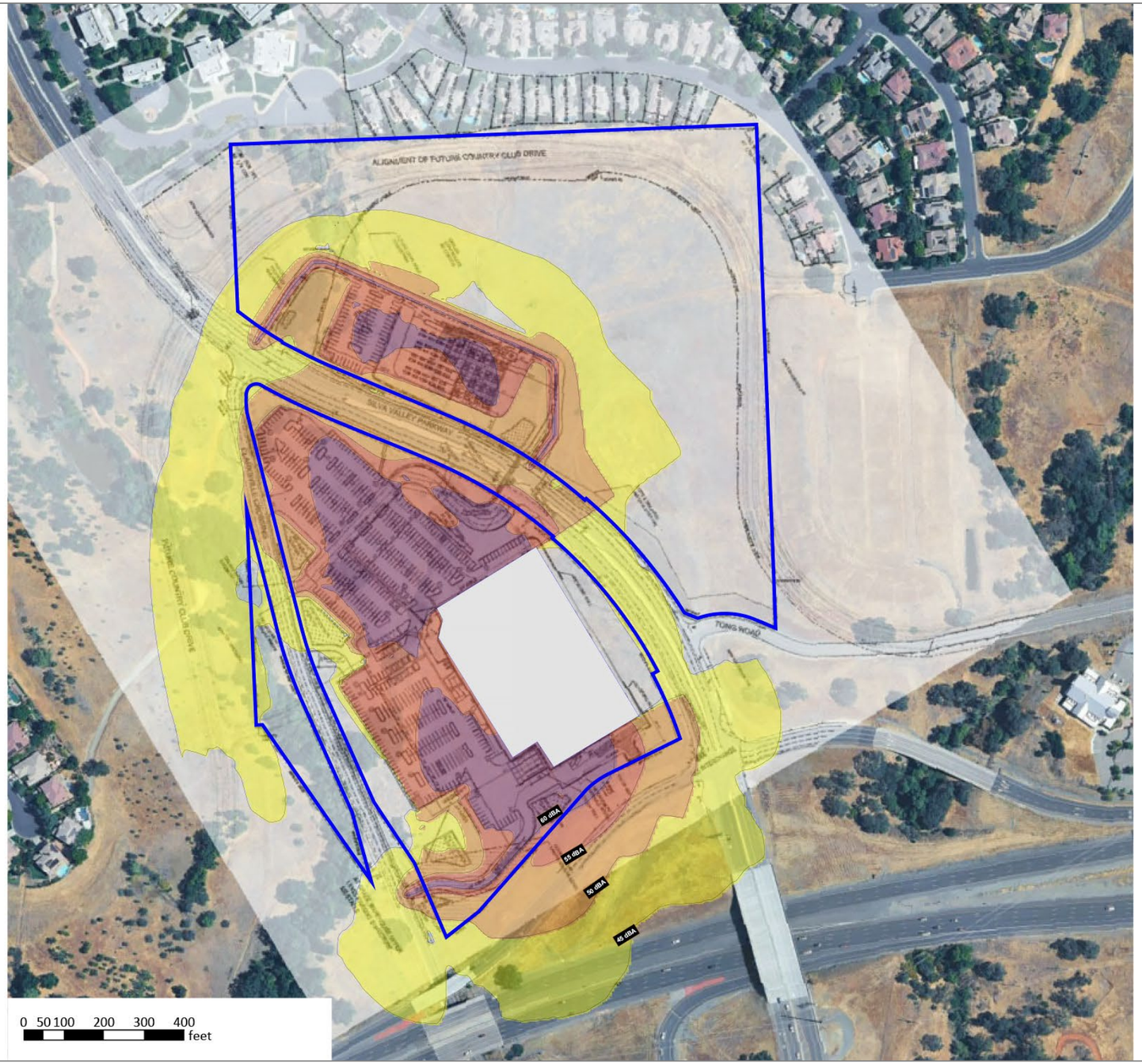
Noise associated with future development within the North Site Remainder Area could increase ambient noise levels due to typical activities associated with commercial land uses, such as mechanical equipment and parking lot activity. These noise sources would be intermittent in nature and would vary considerably, depending on the project-specific characteristics such as the specific land use and site/commercial building design. Section 130.37.050 of the County Code requires that new noise-generating commercial land uses likely to exceed the performance thresholds in Section 130.37.60 (Tables 3.11-3 and 3.11-4 in this section) prepare an acoustic analysis prior to discretionary authorization or permit approval. In accordance with the County Code, the project applicant for development within the North Site area would prepare an acoustic analysis demonstrating that the project would comply with County noise standards such that existing sensitive receptors would not be exposed to substantial noise levels or increases in noise. In accordance with Section 130.37.070 of the County Code, noise reduction measures would be incorporated into the project design to ensure compliance with the County noise standards.

Conclusions

The project's operational activity would involve various non-transportation noise sources including mechanical equipment, loading dock activity, and truck deliveries. Building mechanical equipment, trash compactors, emergency generator, loading dock activity, tire center, and heavy vehicle delivery would not exceed the County daytime (i.e., 55 dBA L_{eq}), evening (i.e., 50 dBA L_{eq}), and nighttime (i.e., 45 dBA L_{eq}) noise standards for sensitive land uses or result in a substantial (i.e., 3+ dBA) increase in noise levels. Future development within the North Site Remainder Area would be required to prepare an acoustical analysis to demonstrate compliance with County noise standards and implement design measures to ensure compliance with County noise standards. For these reasons, this impact would be **less than significant.**

Mitigation Measures

No mitigation is required for this impact.



Operational
Noise level
Leq
in dB(A)

45 < <= 50
50 < <= 55
55 < <= 60
60 <

Noise Level Performance Protection Standards for Noise Sensitive Land Uses

Daytime	55 Leq
Evening	50 Leq
Nighttime	45 Leq

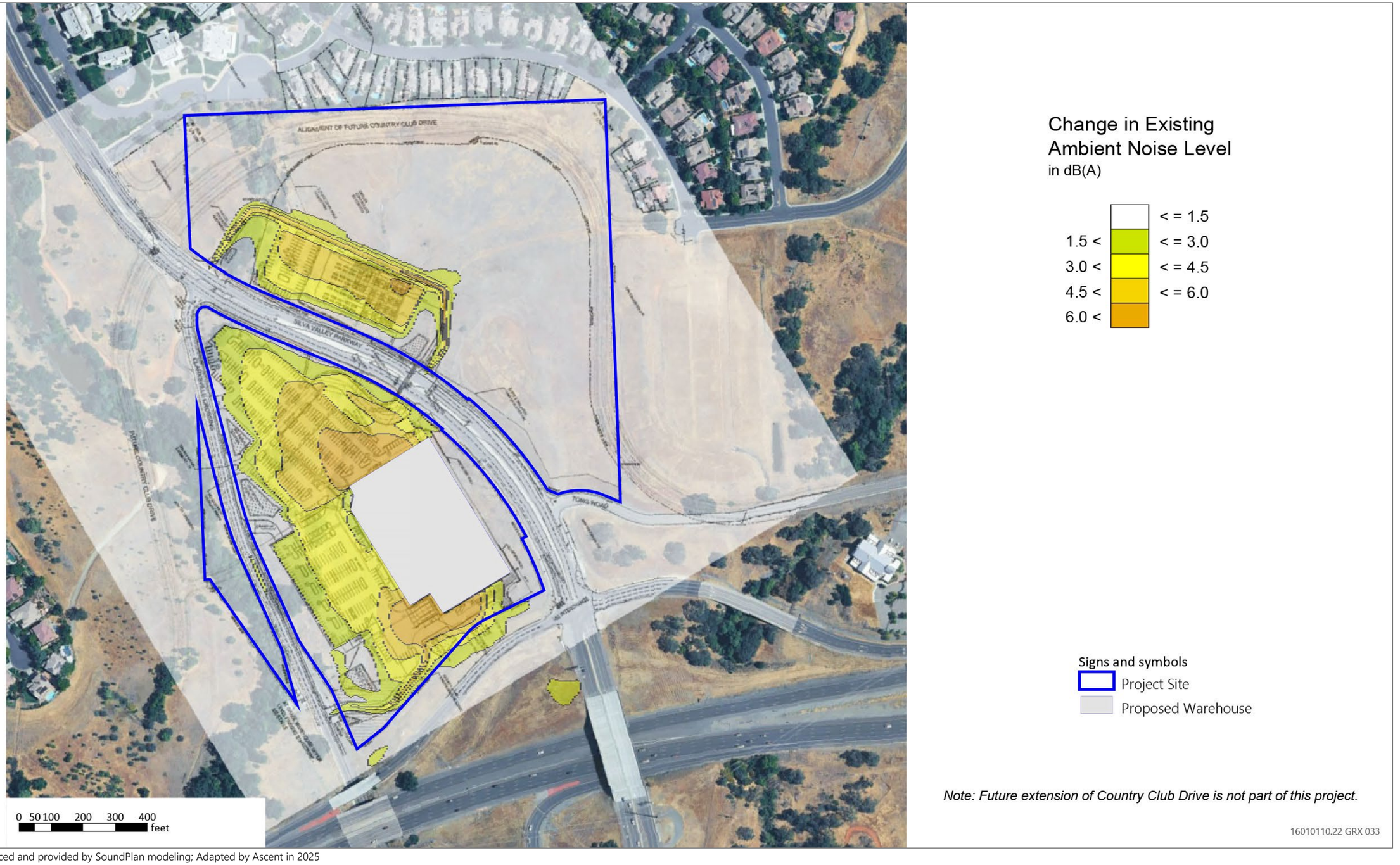
Signs and symbols
Project Site
Proposed Warehouse

Note: Future extension of Country Club Drive is not part of this project.

16010110.22 GRX 032

Source: Image produced and provided by SoundPlan modeling; Adapted by Ascent in 2025

Figure 3.11-2 SoundPLAN Modeled Operational Noise Levels



Source: Image produced and provided by SoundPlan modeling; Adapted by Ascent in 2025

Figure 3.11-3 SoundPLAN Modeled Operational Noise Increase

Impact 3.11-4: Exposure of Persons to or Generation of Excessive Construction Vibration

Construction activity associated with the project would generate short-term increases in vibration near existing sensitive receptors. Based on the distance between the equipment anticipated to be used during project construction and the location of nearby structures and sensitive receptors, vibration levels could exceed applicable thresholds with respect to structural damage and human annoyance. Therefore, this impact would be **significant**.

Costco Project

Silent blasting, which would likely involve the use of a hoe ram, is anticipated to be conducted as part of project construction. In addition, construction activities using pieces of equipment that generate low levels of ground vibration (e.g., dozers and pavers) are also anticipated to be used. Table 3.11-19 provides a list of vibration levels associated with pieces of construction equipment that would be used during project construction.

Table 3.11-19 Typical Construction Equipment Vibration Levels

Construction Equipment	PPV at 25 feet, in/sec	Approximate VdB at 25 feet
Vibratory Roller	0.089	87
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Small Bulldozer	0.003	58

Notes: PPV = peak particle velocity; in/sec = inches per second; VdB = vibration decibels

Source: FTA 2018: 184.

Based on the reference vibration levels for construction equipment shown in Table 3.11-19, vibratory rollers and hoe rams would generate the highest vibration levels and are therefore of greatest concern when evaluating construction-related vibration effects at nearby sensitive receptors and existing structures.

Structural Damage

Based on FTA recommended procedure for applying a propagation adjustment to reference levels, vibration levels from the use of a hoe ram during silent blasting could exceed the Caltrans threshold of significance for structural damage (i.e., 0.25 in/sec PPV) within 13 feet of nearby structures. The use of a hoe ram would occur on the North Site, approximately 440 feet south of the nearest existing structures (i.e., residences near Village Green Drive) and the South Site, approximately 265 feet southwest of the nearest structure (i.e., an overpass above Clarksville Road). Therefore, because of the distance from existing structures, the use of an impact pile driver would not exceed Caltrans' recommended threshold for structural damage. In addition to the use of a hoe ram, a vibratory roller would be used to establish the foundations of the warehouse retail building and parking facility on the South Site. The use of a vibratory roller would also exceed the threshold of significance for structural damage (i.e., 0.25 in/sec PPV) within approximately 15 feet of a structure. Therefore, because of the distance from existing structures, the use of a vibratory roller would also not exceed the Caltrans recommended threshold for structural damage. Other construction equipment (e.g., bulldozers, loaded trucks) would exceed the threshold for structural damage within 15 feet or less of an existing structure. Because all construction activity would take place more than 15 feet from existing structures, other construction activities would not exceed Caltrans' recommended threshold for structural damage. Refer to Appendix I for detailed vibration modeling calculations.

Vibration Annoyance

Vibration levels can result in interference or annoyance to residences or other sensitive land uses where people sleep, such as hotels, and hospitals. Based on the FTA recommended procedure for applying propagation adjustments to these reference levels, vibration levels from the use of a hoe ram and vibratory roller could exceed the FTA recommended threshold of significance for structures where people sleep (i.e., 80 VdB) within approximately 43 feet.

As detailed above, the operation of a hoe ram and vibratory roller would not occur within these distances of existing sensitive receptors. Other construction equipment (e.g., bulldozers, loaded trucks) would exceed the threshold for adverse human response within 12 feet of construction activity. As described above, because all construction activity would take place more than 12 feet from existing structures, other construction activity using less vibration-intensive equipment would not exceed the FTA recommended threshold for human response (i.e., 80 VdB).

Summary

Based on the reference vibration levels and the vibration modeling conducted, project construction activity that includes the use of vibration intensive equipment (i.e., hoe ram, vibratory roller) and less-vibration intensive equipment (e.g., large bulldozers, loaded trucks) would not exceed the Caltrans thresholds for structural damage (i.e., 0.25 in/sec PPV) or the FTA vibration annoyance thresholds (i.e., 80 VdB) at any nearby structures and sensitive land uses. Therefore, this impact is **less than significant**.

North Site Remainder Area

As shown in Table 3.11-19, construction equipment generates varying levels of ground vibration. The most vibration-intensive equipment that could be used during construction of the North Site Remainder Area would be an impact pile driver, which generates ground vibration levels of 1.518 in/sec PPV and 112 VdB at 25 feet (FTA 2018: 184). Vibration from pile driving activities would exceed the Caltrans recommended threshold of significance for structural damage (i.e., 0.25 in/sec PPV) within 84 feet and the threshold for human annoyance (i.e., 80 VdB) within 293 feet of construction. Existing sensitive land uses are located as close adjacent to the boundary of the North Site. Thus, if pile driving were to occur within the North Site Remainder Area, thresholds for structural damage and annoyance would be exceeded at nearby sensitive land uses. Because construction vibration levels could exceed applicable thresholds when pile driving occurs, this impact would be **significant**.

Conclusions

As discussed above, implementation of the project would include construction of a fuel facility and Costco warehouse retail building. Based on reference vibration levels for typical construction equipment, construction of the project would exceed the FTA recommended thresholds for structural damage (0.20 in/sec PPV) or adverse human response (80 VdB). Construction of the North Site Remainder Area is assumed to include future development of up to 138,000 square feet of commercial area. Because the exact details of construction are currently unknown, it is possible that vibration-intensive construction equipment (i.e., impact pile driver) could be required. If pile driving were to occur, thresholds for structural damage and annoyance would be exceeded at nearby sensitive land uses. Because construction vibration levels could exceed applicable thresholds when pile driving occurs, this impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.11-4: Develop and Implement a Vibration Control Plan for Subsequent Developments in the North Site Remainder Area

A vibration control plan shall be developed by the project applicant, in consultation with an acoustic professional, that demonstrates with substantial evidence based on finalized project-specific construction parameters (e.g., specific equipment profiles, location of construction activities, duration of activities), that vibration would not exceed the applicable thresholds of 0.20 in/sec PPV at nearby structures and 80 VdB at sensitive land uses. The plan shall be submitted to El Dorado County for approval prior to the issuance of construction permits. To assess and, when needed, reduce vibration impacts from construction activities on the North Site Remainder Area, the following measures shall be implemented:

- The vibration control plan shall consider all potential vibration-inducing activities that would occur within 300 feet of an existing sensitive receptor and include various measures, setback distances, precautions, monitoring programs, and alternative methods to vibration intensive activities with the potential to result in adverse impacts to sensitive receptors. The following vibration control measures (or other equally effective measures) shall be included in the plan:

- All construction activity shall be limited to daytime hours between 7:00 a.m. and 7:00 p.m. Monday through Friday and between 8:00 a.m. and 5:00 p.m. on weekends in accordance with Section 130.73.020.
- To prevent disturbance for sensitive land uses, minimum setback requirements the use of vibration-intensive equipment shall be established based on the proposed activities and locations, once determined. Established setback requirements (e.g., 97 feet) can be breached only if a site-specific ground vibration study conducted by a qualified geotechnical engineer or ground vibration specialist indicates that the buildings would not be exposed to ground vibration levels in excess of 80 VdB and ground vibration measurements performed during the construction activity confirm that the buildings are not being exposed to levels in excess of 80 VdB.
- To prevent structural damage, minimum setback requirements for different types of ground vibration producing activities (e.g., impact pile driver) shall be established based on the proposed activities and locations, once determined. Factors to be considered include the specific nature of the vibration producing activity (e.g., type and duration of pile driving), local soil conditions, and the fragility/resiliency of the nearby structures. Established setback requirements (e.g., 26 feet) can only be breached if a project-specific, site-specific analysis is conducted by a qualified geotechnical engineer or ground vibration specialist that indicates that no structural damage would occur at nearby buildings or structures.
- Operate all vibration-inducing impact equipment as far away from vibration-sensitive sites as reasonably possible from nearby structures and vibration-sensitive uses.
- Phase high-impact activities as to not to occur simultaneously with other construction activities.
- Vibration levels from pile driving shall be monitored and documented at the nearest sensitive land use to document that applicable thresholds are not exceeded. Recorded data shall be submitted to the County within 48 hours of measurements. If it is found at any time that thresholds are exceeded, pile driving shall cease in that location, and methods shall be implemented to reduce vibration to below applicable thresholds, or an alternative pile installation method shall be used at that location.

Significance after Mitigation

Implementation of Mitigation Measure 3.11-4 would require the contractor to minimize vibration exposure to nearby receptors by locating equipment far from receptors and phasing operations. Further, a vibration control plan would be prepared and implemented to refine appropriate setback distances and identify other measures to reduce vibration, if necessary, and identify and implement alternative methods to pile driving if required. These measures would ensure compliance with recommended levels to prevent structural damage and human annoyance. Thus, this impact would be reduced to **less than significant**.

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3.12 POPULATION AND HOUSING

This section describes the existing population and housing conditions on the site and its surrounding area. Descriptions and analysis in this section are based on information provided by El Dorado County, the California Department of Finance (DOF), and the Sacramento Area Council of Governments (SACOG). The analysis includes a description of the methods used for assessment, as well as the potential direct and indirect impacts of project implementation.

Comments were received on the notice of preparation (NOP) regarding impacts of the Costco project on adjoining residential areas. This issue is addressed in the technical sections of this Draft EIR. The NOP and comments submitted in response to it are included in Appendix A.

3.12.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws are applicable to the provision of population and housing for the project.

STATE

Local Agency General Plan Requirements

State law requires each local government in California to adopt a comprehensive, long-term general plan for the physical development of its city or county, and the housing element is one of seven mandated elements of the general plan. Housing elements address the existing and projected housing needs of all economic segments of the community. The 2021 Housing Element in the El Dorado County General Plan identifies the nature and extent of housing needs in incorporated and unincorporated areas, and the housing element itself includes goals, policies, and implementation programs for the planning and development of housing.

State law sets out a process for determining each local jurisdiction's fair share of regional housing needs. As a first step in the process, the California Department of Housing and Community Development assigns each regional council of governments a required number of new housing units for that region, including affordable housing. The council of governments, in turn, allocates the region's share to cities and counties in the region.

Senate Bill 375

The Sustainable Communities and Climate Protection Act (Senate Bill 375 - Section 65080(b)(2)(A) of the California Government Code) requires that metropolitan planning organizations prepare a Sustainable Communities Strategy (SCS), as an integral part of its regional transportation plan, that contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet California Air Resources Board's targets for greenhouse gas reductions. The Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy compiles with this requirement and covers the project site.

LOCAL

2020 Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy

SACOG is designated by the federal government as the Metropolitan Planning Organization for the Sacramento region, which requires SACOG to maintain a regional transportation plan that must be updated every 4 years in coordination with each local government. Placer and El Dorado Counties are different in this arrangement in that each county has its own State designation as a Regional Transportation Planning Agency responsible for developing its own transportation plan. SACOG is the Regional Transportation Planning Agency for Sacramento, Sutter, Yolo, and

Yuba Counties. SACOG works in coordination with the Placer County Transportation Planning Agency and the El Dorado County Transportation Commission to ensure consistency between these two county-specific plans and the broader regionwide plan.

The metropolitan transportation plan/sustainable communities strategy (MTP/SCS) is required to be a 20-year multimodal transportation plan that is financially feasible, achieves health standards for clean air, and addresses Statewide climate goals. The MTP/SCS land use forecast identifies the general location of different types of land uses, residential densities, employment intensities, and natural resource areas.

The project site is located within an Established Community,1 per the 2020 MTP/SCS. The 2020 MTP/SCS forecasts approximately 2,330 new housing units in El Dorado Hills and 3,870 new jobs within Established Communities in El Dorado County by the year 2040 (SACOG 2019).

El Dorado County General Plan

The El Dorado County General Plan Housing Element includes policies related to housing. Relevant policies from the Economic Development Element include:

- **Objective 10.1.5 – Business Retention and Expansion:** Assist in the retention and expansion of existing businesses through focused outreach and public and private incentive programs and target new industries which diversify and strengthen our export base.
  - **Policy 10.1.5.5:** Recognize and promote the need to create greater opportunities for El Dorado County residents to satisfy retail shopping demands in El Dorado County.
    - **Program 10.1.5.5.1:** Designate sufficient lands of a size and at locations to accommodate needed retail and commercial development.

3.12.2 Environmental Setting

POPULATION AND POPULATION GROWTH

In developing the 2020 MTP/SCS, SACOG prepares a land use forecast required to accommodate the regional growth forecast of population, employment, and housing demand. The 2020 MTP/SCS includes a forecast of the amount of growth that will occur in SACOG's plan area over a 20-year planning period (2020-2040). The regional growth forecast is based on economic and demographic projections through 2040, adopted and pending land use plans and policies, market and economic considerations, and other state and federal policies and regulations that can affect the locations and pace of growth.

As calculated in preparation for the 2020 MTP/SCS, the SACOG area is estimated to add approximately 620,000 new residents between 2016 and 2040 (Table 3.12-3).

Table 3.12-1 SACOG Regional Population Growth Forecast

	2016	2035	2040
Population	2,376,311	2,903,090	2,996,832
Increase	—	526,779	93,742

Source: SACOG 2019.

El Dorado County is, and is expected to remain, one of California's fastest-growing regions. During the 20-year period from 1990 to 2010, the County's population increased by approximately 44 percent. From 2010 to 2020, the

[1] Established Communities are typically the areas adjacent to, or surrounding, Center and Corridor Communities. Many are characterized as "first tier," "inner ring," or mature suburban communities. Some are today's newest subdivisions and suburbs. Local land use plans aim to maintain the existing character and land use pattern in these areas. Land uses in Established Communities are typically made up of existing low- to medium-density residential neighborhoods, office and industrial parks, or commercial strip centers (SACOG 2019).

County's population increased 5.6 percent to a total of 191,185. Unincorporated areas within El Dorado County experienced a 7 percent increase of approximately 159,722 from 2010 to 2020. The population of El Dorado County's unincorporated area grew by 66 percent during the 1990 to 2020 period. For the 25-year period of 2010 to 2035, the county's population is expected to increase by 37 percent from 180,921 to 248,623 (El Dorado County 2021). Table 3.12-2 shows the population increase from 1990 to 2020 in 10-year increments for the entire County and for the unincorporated County.

Table 3.12-2 Comparison 1990, 2000, 2010, and 2020 Population

	1990	2000	2010	2020	% Change 2000-2010	% Change 2010-2020
Population, Entire County	125,995	156,299	181,058	191,185	15.8%	5.5%
Population, Unincorporated County*	96,054	123,080	149,266	159,722	21.3%	7.0%

Notes:

[1] The unincorporated county does not include the City of South Lake Tahoe or the City of Placerville.

Source: El Dorado County 2021.

According to a study completed by BAE Urban Economics, Inc. in 2019, discussed in El Dorado County's 2021-2029 Housing Element Update, El Dorado County's population could grow by an additional 16,846 persons by 2030 from 2020. Table 3.12-3 summarizes the population projections presented in the County's Housing Element Update. According to these projections, it is expected that the El Dorado County population would increase 8.8 percent between 2020 and 2030, with an average annual growth rate of 0.9 percent per year. By 2040, it is projected for the County to grow to approximately 225,419 residents, an increase of approximately 36,413 new residents compared to the current population of 189,006 residents (El Dorado County 2022).

Table 3.12-3 El Dorado County Housing Element Update Population Forecast for El Dorado County

	2020	2025	2030	2035	2040
Population	191,581	199,521	208,457	217,619	225,419
Increased from previous period	—	7,940	8,936	9,162	7,800
Average annual growth from previous period	—	4.1%	4.5%	4.4%	3.5%

Sources: El Dorado County 2022.

According to the DOF, in 2025, there was a total population of 159,106 residents with 74,827 dwelling units in the unincorporated area of the county (DOF 2025). A total of 63,463 dwelling units were estimated to be occupied in the unincorporated area in 2024 reflecting a vacancy rate of 15.2 percent. DOF data for 2025 identifies the average household size is 2.50 persons in the unincorporated area, however, per the US Census, the El Dorado Hills Community has an average household size of 2.84 persons (US Census 2023). The El Dorado County 2045 Housing and Employment Projections Memorandum estimates that the El Dorado Hills Community Region will add 4,583 residential units by 2045 (BAE 2025).

EMPLOYMENT

It is estimated that the El Dorado Hills Community Region had 13,232 jobs in 2023 and consists of 22.1 percent of the total jobs in the west slope area of El Dorado County (excluding the City of Placerville). Approximately 4,087 of these jobs are retail, while the remaining 9,145 jobs are non-retail. It is projected that 1,389 new jobs will be created in the El Dorado Hills Community Region by 2045. (BAE 2025)

3.12.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

To evaluate the potential impacts of the project on the population and housing, the existing population and housing conditions in El Dorado County were compared to the anticipated population and housing growth under implementation of the project. This examination of population and housing conditions is based on information obtained from review of available population and housing projections from the County, SACOG, and DOF. In determining the level of significance, the analysis assumes compliance with relevant federal and state laws, regulations, and ordinances.

THRESHOLDS OF SIGNIFICANCE

A population, employment, and housing impact is considered significant if implementation of the project would do any of the following:

- induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); and/or
- displace substantial numbers of existing people or homes, necessitating the construction of replacement housing elsewhere.

ISSUES NOT DISCUSSED FURTHER

The project would not eliminate any existing residences and does not propose or involve any actions that would displace substantial numbers of people. The project site is undeveloped and is used for seasonal grazing. Thus, there would be no impacts associated with the displacement of substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. This issue is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: Induce Substantial Unplanned Population Growth in an Area, Either Directly or Indirectly

The proposed project would consist of commercial uses and would not create new housing, but could generate approximately 616 employees consistent with the site General Plan land use designations and zoning as well as projected job growth for the El Dorado Hills Community Region. The site is also part of assumed areas of development within the SACOG 2020 MTP/SCS. As such, the employment growth increase associated with the project is considered to be within the County's projected increase and no substantial unplanned population growth would occur. Therefore, this impact would be **less than significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

Construction activities associated with the proposed Costco project and future development of the North Site Remainder Area would be temporary and intermittent, with construction of the Costco project complete in 2027. Therefore, construction activities would not result in long-term increases in employment. In addition, construction workers would be supplied from nearby population centers (e.g., Cities of Folsom, Rancho Cordova, Elk Grove, and Sacramento) and would not create a need for housing.

Operation of both the Costco project and future commercial uses of the North Site Remainder Area are estimated to generate approximately 616 new jobs in the El Dorado Hills Community Plan area. This employment growth has been based on the project site General Plan land use designations and zoning, and is within the projected 1,389 new jobs expected to be created in the El Dorado Hills Community Region by 2045 (BAE 2025). The General Plan and the

environmental impact analysis provided in its EIR was based on future land use forecast of 25,323 jobs in the El Dorado Hills area (EPS 2002). This rate of job growth would not induce new population or housing growth that is not anticipated by the County. Thus, this impact is **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.13 PUBLIC SERVICES AND RECREATION

This section provides an overview of existing public services and evaluates the potential for the project to affect availability, service level, and/or capacity of public services, including fire-protection services, police-protection services, solid waste disposal, parks and recreation, and public schools, and, if such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment. Other publicly provided utility services, such as water and wastewater treatment, stormwater management, electricity, and natural-gas services, are addressed in Section 3.16, "Utilities and Service Systems." The reader is referred to Section 3.17, "Wildfire and Evacuation," for an analysis of wildfire hazards and evacuation impacts of the project.

Comment letters regarding public services and recreation were received in response to the notice of preparation and included concerns about project impact on fire protection and law enforcement services, crime, and impacts on the Oak Meadow Elementary School. Draft EIR Section 3.2, "Air Quality," addresses air quality and toxic air contaminant impacts to sensitive receptors that include the school site, Section 3.11, "Noise and Vibration," addresses construction and operation noise impacts to school site, and Section 3.14, "Transportation," addresses traffic safety in the project area that includes the school site. NOP comments are provided in Appendix A.

3.13.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws are applicable to the provision of public services for the project.

STATE

California Fire Code

The California Fire Code is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. It establishes minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. The California Fire Code also contains requirements related to emergency planning and preparedness, fire service features, building services and systems, fire resistance–rated construction, fire protection systems, and construction requirements for existing buildings, as well as specialized standards for specific types of facilities and materials.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and childcare facility standards, and fire-suppression training.

California Occupational Safety and Health Administration

In accordance with CCR Title 8, Section 1270, "Fire Prevention," and Sections 6773, "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials; fire hose sizing requirements; restrictions on the use of compressed air; access roads; and the testing, maintenance, and use of all firefighting and emergency medical equipment.

LOCAL

El Dorado County General Plan

The El Dorado County General Plan contains goals, objectives, and policies related to public services and recreation critical to the county's future growth and development. The following objectives and policies related to public services and recreation are relevant to the project:

- Objective 5.1.2 - Concurrency: Ensure through consultation with responsible service and utility purveyors that adequate public services and utilities, including fire protection, police protection, and ambulance service are provided concurrent with discretionary development or through other mitigation measures provided, and ensure that adequate school facilities are provided concurrent with discretionary development to the maximum extent permitted by State law. It shall be the policy of the County to cooperate with responsible service and utility purveyors in ensuring the adequate provision of service. Absent evidence beyond a reasonable doubt, the County will rely on the information received from such purveyors and shall not substitute its judgment for that of the responsible purveyors on questions of capacity or levels of service.
  - Policy 5.1.2.1: Prior to the approval of any discretionary development, the approving authority shall make a determination of the adequacy of the public services and utilities to be impacted by that development. Where, according to the purveyor responsible for the service or utility as provided in Table 5-1 [presented below as Table 3.13-1], demand is determined to exceed capacity, the approval of the development shall be conditioned to require expansion of the impacted facility or service to be available concurrent with the demand, mitigated, or a finding made that a CIP [Capital Improvements Plan] project is funded and authorized which will increase service capacity.
  - Policy 5.1.2.2: Provision of public services to new discretionary development shall not result in a reduction of service below minimum established standards to current users, pursuant to Table 5-1 (Draft EIR Table 3.13-1).

The following Levels of Service shall apply to the review of discretionary projects.

Table 3.13-1 El Dorado County General Plan Table 5-1: Minimum Level of Service

	Community Region	Rural Center and Rural Region
Public water source	As determined by purveyor	As determined by purveyor, when applicable
Private well	Environmental Management	Environmental Management
Public water treatment capacity	As determined by purveyor	As determined by purveyor
Public sewer treatment capacity	As determined by purveyor	As determined by purveyor
On-site sewage disposal	Environmental Management	Environmental Management
Storm drainage	Department of Transportation	Department of Transportation
Solid waste	Environmental Management	Environmental Management
County and State road circulation system	E	D
Schools	As determined appropriate by school districts	As determined appropriate by school districts
Parks	Specific plan for new community or Quimby Fee/dedication program for tentative maps	Quimby fee/dedication program for tentative maps
Fire district response	8-minute response to 80% of the population	15 to 45-minute response
Sheriff	8-minute response to 80% of the population	No standard
Ambulance	10-minute response to 80% of the population	20-minute response in Rural Regions and "as quickly as possible" in wilderness areas*

*In accordance with State standards.

Source: El Dorado County 2019.

- **Policy 5.1.2.3:** New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the General Plan land use map to the extent allowed by State law.

- **Objective 5.1.3:** Efficient Development Patterns: Promote a development pattern that permits the efficient delivery of public services in a cost-effective manner.
  - **Policy 5.1.3.1:** Growth and development and public facility expenditures shall be primarily directed to Community Regions and Rural Centers.
- **Objective 5.7.1:** Fire Protection (Community Regions): Ensure sufficient emergency water supply, storage, and conveyance facilities are available, and that adequate access is provided for, concurrent with development.
  - **Policy 5.7.1.1:** Prior to approval of new development, the applicant will be required to demonstrate that adequate emergency water supply, storage, conveyance facilities, and access for fire protection either are or will be provided concurrent with development.
- **Objective 5.7.3:** Law Enforcement: An adequate, comprehensive, coordinated law enforcement system consistent with the needs of the community.
  - **Policy 5.7.3.1:** Prior to approval of new development, the Sheriff's Department shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.
- **Objective 5.7.4:** Medical Emergency Services: Adequate medical emergency services available to serve existing and new development recognizing that levels of service may differ between Community Regions, and Rural Centers and Regions.
  - **Policy 5.7.4.1:** Prior to approval of new development, the applicant shall be required to demonstrate that adequate medical emergency services are available and that adequate emergency vehicle access will be provided concurrent with development.
  - **Policy 5.7.4.2**: Prior to approval of new development, the Emergency Medical Services Agency shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.
- **Objective 6.2.3: Adequate Fire Protection**. Application of uniform fire protection standards to development projects by fire districts.
  - **Policy 6.2.3.1**: As a requirement for approving new development, the County must find, based on information provided by the applicant and the responsible fire protection district that, concurrent with development, adequate emergency water flow, fire access, and fire fighting personnel and equipment will be available in accordance with applicable State and local fire district standards.
  - **Policy 6.2.3.2:** As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.

El Dorado Local Agency Formation Commission

The El Dorado Local Agency Formation Commission (LAFCO) is a state-mandated local agency whose jurisdiction is all El Dorado County. The California Legislature directs the El Dorado LAFCO to promote orderly growth and

development, discourage urban sprawl while preserving open space and agricultural lands, and encourage efficient service areas for local governments.

LAFCOs are responsible for reviewing and approving proposed boundary changes for most public agencies, including annexations and detachments of territory to or from cities and special districts; incorporations of new cities; formations of new special districts; and consolidations, mergers, and dissolutions of existing districts. In addition, LAFCOs must review and approve contractual service agreements, determine spheres of influence (plans that show future service areas and boundaries) for each city and district, and may initiate proposals involving district consolidation and dissolution. As described in Chapter 2, "Project Description," the project involves annexation into the El Dorado Irrigation District (EID) and the El Dorado Hills Fire Department (EDHFD). The following El Dorado LAFCO policies are applicable to the project:

- Policy 3.2.16: When evaluating environmental impacts discovered during the Initial Study process, LAFCO will identify such impacts as potentially significant and adverse if:
  - Build-out of the proposed project may cause service levels to decline below established standards, costs of service provision to rise substantially to the detriment of service levels, or cause those currently receiving service to receive reduced or inadequate services especially when such change may cause adverse health and safety or other physical impacts;
  - Build-out of the proposed project may cause the infrastructure capacity of a service provider to exceed planned and safe limits especially when such change may cause adverse health and safety or other physical impacts;
  - The proposed project includes or plans for infrastructure capacity, especially water and sewer lines, that exceed the needs of the proposed project and may be used to serve areas not planned for development, especially those containing prime agricultural land, mineral, sensitive plant and wildlife or other important resources;
  - The proposed plan could cause health and safety or other physical impacts because a service provider is incapable of providing service, the proposal has an illogical boundary, or elements needed to provide service (water supply, treatment facilities, equipment, energy) are not available, or stressed beyond capacity.
  - The proposed project is substantially inconsistent with applicable Sphere of Influence Plans, long range and area service plans, phased land use plans of any city or county, or resource conservation plans of the state or federal government.
  - In the case of Sphere of Influence and area of service plans, the Environmental Coordinator reviews the appropriate plans and determines whether the level of significance warrants additional review. In the case of public agency land use or resource plans, the affected agency shall provide specific information regarding the nature and substance of the project's potential impacts upon its plans or programs.
  - The proposed project may induce substantial growth on important agricultural and open space lands because it would:
    - Permit the extension of, or require, infrastructure such as flood control levees or water diversions, electrical, water or sewer lines, especially trunk lines, roadways or other public facilities that would permit new development in a substantial area currently constrained from development;
    - Be adversely and substantially inconsistent with the agricultural, open space, resource conservation or preservation, growth management, trip reduction, air quality improvement or other plans, policies or Ordinances of the General, Community, Specific or other Plan of the land use jurisdiction responsible for the project site or vicinity.
    - Cause significant adverse cumulative impacts when considered in conjunction with other recent, present and reasonably foreseeable projects;
    - Result in substantial noncontiguous development which, in turn, results in adverse physical impacts;
    - Have no need for service and the proposed project adversely affects important public resources or the public health and safety;

- Policy 3.3.2.2: If service cannot be provided without expanding service capacity or constructing infrastructure (other than at parcel connections to service), then the following information shall be provided:
  - A description of any required facility or infrastructure expansions or other necessary capital improvements;
  - The likely schedule for completion of the expanded capacity project, the viability of the needed project, and the relation of the subject project to the overall project and project time line;
  - A list of required administrative and legislated processes, such as CEQA review or State Water Resources Board allocation permits, including assessment of likelihood of approval of any permits and existence of pending or threatened legal or administrative challenges if known;
  - The planned total additional capacity;
  - The size and location of needed capital improvements;
  - The proposed project cost, financing plan and financing mechanisms including a description of the persons or properties who will be expected to bear project costs; and
- Policy 3.4.1: Consistency with General and Specific Plans. For the purposes of this policy, a project is consistent if the type and level of services to be provided are consistent with and appropriate to the applicable General or Specific Plan land use designations and document text, and the applicable General or Specific Plan is legally adequate and internally consistent. The Commission will not approve projects that are inconsistent with the applicable General or Specific Plan unless the following circumstances are shown to exist:
  - The site is fully developed and located in an existing developed area where district or city facilities are present and found by LAFCO to be sufficient for service and where the Commission determines that the change of organization or reorganization will not induce growth in the area.
  - The site is fully developed and located in an existing developed area where LAFCO finds that the public interests of health, safety, and welfare would best be served, or that clear and present health or safety hazards could be mitigated, by the proposal.
  - The site is located in an undeveloped area where disapproval would cause a loss of service to existing service users.
- Policy 3.9.1: Every determination made by the Commission shall be consistent with the Spheres of Influence of the local agencies affected by that determination (§56375.5).
- Policy 3.9.3: Lands to be annexed which are within an adopted Sphere of Influence shall be physically contiguous to the boundaries of the annexing agency except under one of the following circumstances (§56119):
  - Existing developed areas where LAFCO determines that interests of public health, safety, and welfare would best be served by the extension of the service, or which represent clear or present health or safety hazards that could be mitigated by the proposal and city or district facilities are present and sufficient for service.
  - Existing developed areas where city or district facilities are present and sufficient for service, and where the Commission determines that the annexation will not induce growth.
- Policy 3.9.7: The resulting boundary configuration shall not produce areas that are difficult to serve (§56668, §56001).
- Policy 6.1.2: An annexation shall not be approved unless the annexing agency is willing to accept the annexation.
- Policy 6.1.4: It is the policy of the Commission to approve changes of organization that encourage and provide planned, well ordered, efficient development patterns, that include the appropriate preservation and conservation of open space and prime agricultural lands within and around developed areas, and contribute to the orderly formation and development of local agencies based upon local circumstances and conditions (§56300, §56301).

- **Policy 6.1.5**: The Commission shall consider existing zoning and pre-zones, general plans, and other land use plans, interests and plans of unincorporated communities, SOIs and master service plans of neighboring governmental entities and recommendations and determinations from related service reviews (§56375, §56668).
- **Policy 6.1.7:** Prior to annexation to a city or special district, the petitioners shall demonstrate that the need for governmental services exists, the annexing agency is capable of providing service, that a plan for service exists, and that the annexation is the best alternative to provide service (§56700, §56668)
- **Policy 6.1.8:** LAFCO will discourage projects that shift the costs of services and infrastructure benefits received to others or other service areas.
- **Policy 6.1.9:** The proposed annexation shall be a logical and reasonable expansion to the annexing district (§56001, §56119, §56668).
- **Policy 6.2.1**: The annexation must provide for the most efficient delivery of services. The most efficient services are those provided at the lowest cost and highest service level. In the case of similar providers with the same level of service, the one that delivers the same service at the lowest cost will be considered to be most efficient.
- **Policy 6.2.2**: The annexation shall be modified, conditioned or disapproved if it permits the more efficient delivery of one or more services to the detriment of other services.
- **Policy 6.2.3**: The annexing agency must demonstrate that no parcel located within district boundaries will be deprived of its right to receive services if the annexation is approved (§56668).
- **Policy 6.2.4**: The annexing agency must demonstrate that levels of service for existing and potential customers within its service boundaries will not be lowered, or costs of service increased, if the annexation is approved (§56668). If any adverse impacts may occur, the applicant or annexing agency must provide, for LAFCO consideration, a written justification for project approval despite the negative impacts.

El Dorado County Code of Ordinances

Chapter 8.09 – Vegetation Management and Defensible Space

Chapter 8.09 of Title 8 of the County Code of Ordinances requires the removal or abatement of all hazardous vegetation and combustible material, which constitutes a fire hazard which may endanger or damage neighboring property. Section 8.09.070(F) establishes defensible space requirements for parcels in, upon, or adjoining land that is covered with flammable material.

El Dorado Hills Fire Department Standards

The El Dorado Hills Fire Department has adopted the following standards for fire protection:

- Emergency Apparatus Access (Standard #B-003),
- Commercial Fire Sprinkler Systems (Standard #C-001),
- Water Supply (Standard #D-003), and
- Access During Construction (Standard #G-001).

The El Dorado Hills Fire Department collects development fees to mitigate the impact of new development on fire services and associated facility and equipment needs. This fee is currently approximately $1.59 per square foot of retail/commercial building area (Standard #A-001).

3.13.3 Environmental Setting

FIRE PROTECTION

The El Dorado Hills Fire Department (EDHFD) provides fire prevention and protection services to the community of El Dorado Hills, as well as some adjacent unincorporated areas in El Dorado County. EDHFD's services include fire suppression, emergency medical response, special and technical rescue, hazardous materials mitigation, fire prevention, public education, disaster preparedness, and support for community-based programs. The department serves a response district covering approximately 78.8 square miles (EDHFD 2016).

The project site is located outside of the existing EDHFD service boundary and would require annexation to the district prior to development. This annexation would be processed through the El Dorado LAFCO and is a required component of the proposed project.

EDHFD has five stations, and Station 85, Headquarters (1050 Wilson Boulevard) is closest to the project site, located approximately 1.1 miles northwest of the site. Station 85 houses a Type 1 engine, a Type 5 engine, a reserve medical unit, and an air unit (EDHFD 2020). In 2024 the department had 65 firefighters and paramedics and a total of 83 personnel (including firefighters, paramedics, chief officers, fire prevention specialists, training officers, fleet maintenance personnel, and administrative staff (EDHFD 2024).

Policy 5.1.2.2 of the County General Plan identifies that the minimum level of service for fire district responses should be an 8-minute response to 80 percent of the population. The standard for the fire department is a 6-minute travel time 90 percent of the time for all emergency calls (ICF 2022). EDHFD participates in joint dispatching with other fire agencies in El Dorado County, which means the closest uncommitted unit responds to an emergency call, regardless of jurisdiction. In addition, EDHFD participates in the Master Mutual Aid System for the State of California, which provides staff and mechanical assistance throughout the state (EDHFD 2016).

LAW ENFORCEMENT

El Dorado County Sheriff's Office

The project would be served by the El Dorado County Sheriff's Office (EDCSO). There is also a substation in El Dorado Hills that is frequently staffed by volunteers and deputies and used for focused patrol efforts to address criminal activities. EDCSO services approximately 1,763 square miles of unincorporated areas of El Dorado County, which encompasses a population of approximately 190,000 (EDCSO 2023). With a service population of approximately 153,200 in unincorporated El Dorado County and 50 deputies on the West Slope Patrol, the service ratio is approximately 3,064 residents to one deputy as identified in the El Dorado County Sheriff's Office Annual Report 2020 (EDCSO 2020). Since 2020, EDCSO overall staff has increased from 396 full-time equivalent employees (FTE) to 402 (FTE) in 2025 (El Dorado County 2025). Additionally, EDCSO is responsible for maintaining and convening the Local Hazard Mitigation Plan for the County (El Dorado County 2018). Policy 5.1.2.2 of the County General Plan states that the minimum level of service for sheriff responses should be an 8-minute response to 80 percent of the population. The average response time for the project area in 2024 was approximately nine minutes (Palmberg, pers. comm., 2025).

EDCSO's main office is located at 200 Industrial Drive in Placerville. The station closest to the project site, the El Dorado Hills Substation, is located at 4355 Town Center Drive, Suite 113, approximately 0.8 miles southwest of the project site. The next nearest substation is in the Cameron Park community at 3334 Coach Lane.

SCHOOLS

Buckeye Union School District and El Dorado Union High School District provide public education services in the project area. The nearest public schools are Oak Meadow Elementary School north of the project site and Oak Ridge High School located at 1120 Harvard Way in El Dorado Hills. Both Buckeye Union and Latrobe El Dorado Union High

have been experiencing school enrollment declines. The El Dorado Union High School District is anticipating an 8.11 percent decrease in enrollment for the 2030/2031 school year from current enrollment (SchoolWorks 2024).

RECREATION

The project is located within the El Dorado Hills Community Services District (CSD) that provides park and recreation services. In the El Dorado Hills CSD service area, parks, trails, and other recreation facilities occupy more than 500 acres, which is double the acreage since 2007, when there was a total of 248 maintained acres (El Dorado Hills CSD 2021). The El Dorado Hills CSD manages 27 public parks (El Dorado Hills CSD 2021). The many public parks, in addition to a 1-percent growth in population in El Dorado Hills, has placed a greater demand and strain on maintenance and operations. The El Dorado Hills CSD uses a standard of 5 acres per 1,000 residents for neighborhood and community parks as a guideline for the acquisition and development of park facilities (El Dorado Hills CSD 2021: 22).

3.13.4 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential public service impacts was based on a review of documents pertaining to the proposed project, including the El Dorado County General Plan, El Dorado Union High School District Master Plan, El Dorado County Parks and Trails Master Plan, and El Dorado Hills Community Services District Park and Recreation Facilities Master Plan; consultation with appropriate public service providers, such as the El Dorado Hills CSD, EDCSO, the El Dorado Union High School District, and El Dorado County Recreation Facilities; and review of the project study area and surroundings. Impacts on public services that would result from the project were identified by comparing existing service capacity and facilities against future demand associated with project implementation.

THRESHOLDS OF SIGNIFICANCE

A public services and recreation impact is considered significant if implementation of the project would do any of the following:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
  - fire,
  - police protection,
  - schools,
  - parks, and
  - other public facilities;
- 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; and/or
- include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

ISSUES NOT DISCUSSED FURTHER

Provision of New or Expanded Schools, Libraries, and Other Public Facilities

The project would involve the development of a Costco project, which would serve the existing regional population. While not proposed by the project, the analysis also addresses impacts from future development of the North Site Remainder Area. The project does not include any residential development and, therefore, would not introduce new permanent residents or student-generating population to the area. While the project would generate approximately 616 jobs (Costo project and North Site Remainder Area), the new employees are expected to be drawn primarily from the existing local and regional labor force. The additional employees would not result in population growth that would substantially increase demand for public amenities such as schools and libraries. For these reasons, the project would not have significant impacts associated with provision of new or physically altered governmental facilities and these issues are not discussed further in this Draft EIR.

Use or Construction of Recreational Facilities

As previously described, the project would include the construction of a commercial facility and does not include any additional housing. Because the project is non-residential, it is not required to provide recreation facilities. The project would employ approximately 616 jobs (Costo project and North Site Remainder Area), However, the additional employees would not substantially increase demand for or use of existing parks and would not result in significant recreation impacts. As such, this issue is not discussed further in this Draft EIR.

Access to Existing Recreational Facilities

Development of the proposed project would not physically obstruct access to or otherwise physically impact existing recreational opportunities. Primary access to the project site would be provided via Silva Valley Parkway, and the project site is designed with multiple access points to support circulation. The project would not preclude access to existing or planned recreational facilities. This issue is not discussed further in this Draft EIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Result in Increased Demand for Fire Protection Facilities and Services

The project site is in a suburban area of El Dorado County that would require annexation to the service area of the EDHFD. Because the project (including the proposed Costco warehouse and fuel station) would serve the existing population rather than introducing new residents, it would not substantially increase demand for fire protection services beyond planned service levels. Consequently, no new or physically altered fire protection facilities would be needed to maintain acceptable service ratios or response times. The project would be required to comply with all applicable County, State, and EDHFD fire protection requirements, and would pay the development fees that help fund fire services. Therefore, the impact on fire protection services would **be less than significant**.

Costco Project

The project proposes to construct a Costco warehouse and fuel facility on vacant land designated for commercial development under the County's General Plan. Before development occurs, the project site would be annexed to EDHFD through the El Dorado LAFCO. The proposed Costco project would serve the existing population of El Dorado Hills and would not increase the residential population in the area, so it would not necessitate new or expanded fire stations or other fire protection facilities. Emergency response time from EDHFD Station 85 to the Costco project (2.5 miles) is anticipated to be within the eight minute response criteria identified in the General Plan (see Table 3.13-1) (Hobert, pers. comm., 2025).

All site plans and building designs would be subject to review by EDHFD to ensure compliance with County fire codes and other standards, consistent with General Plan Policy 5.7.1.1. This review would confirm that the facility includes appropriate fire-suppression measures (such as sprinklers, extinguishers, and hydrants) and adequate emergency access. This has included acceptance of a 15-ft wide fire access easement and associated pathway along the rear of the

building that shall be built to bear a minimum of 75,000 pounds and meet County Department of Transportation standards for roadways and the provision of 3,000 gallons per minute fire flow accompanied with sprinklers would be sufficient to meet California Fire Code Section 507.3 and Appendix B fire flow requirements (Fields, pers. comm., 2025).

EDHFD levies a development fee (Standard #A-001) on a square-footage basis for new construction within its jurisdiction. Specifically, EDHFD have these fees to support the department's capacity to serve development by funding necessary equipment and staffing. Because the project would not introduce new residents and would comply with applicable fire safety regulations, including payment of development fees, no new or expanded fire facilities would be required. Therefore, impacts on fire protection services would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is also designated for commercial uses and is assumed to include approximately 138,000 square feet of development in the future, although specific commercial uses are not yet identified. The North Site Remainder Area would be annexed into EDHFD. Future commercial development in this area would not introduce new residents or create substantial new demands on fire services. Potential development would require review by EDHFD and compliance with applicable fire safety requirements, including the payment of fire impact fees identified above. Because no new or expanded fire stations or fire protection facilities would be necessary, impacts would be **less than significant**.

Conclusions

Neither the Costco project nor future commercial uses in the North Site Remainder Area would create a need for new or physically altered fire protection facilities. Both sites would be annexed to EDHFD, and all development would comply with County, State, and EDHFD requirements, including payment of impact fees and adherence to applicable fire codes. Because neither component of the project would introduce a residential population or substantially increase the overall demand for fire services, impacts on fire protection services would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.13-2: Result in Increased Demand for Law Enforcement Protection Facilities and Services

Because the proposed commercial development would serve the existing population and would not introduce new residential units or otherwise increase population in El Dorado Hills, no new or altered law enforcement facilities would be required to maintain acceptable service ratios or response times. Consequently, the project would not result in any physical environmental impacts related to construction of new police facilities. Therefore, impacts to law enforcement services would be **less than significant**.

Costco Project

The project would develop a Costco warehouse and fuel facility on land designated for commercial development. EDCSO provides law enforcement services to unincorporated areas, including the project area. The Costco project could result in additional law enforcement service calls. The project site is approximately 0.8 miles from the El Dorado Hills Substation, is located at 4355 Town Center Drive, Suite 113 that would result in short response times when deputies are at the substation. Deputies also may respond from the Cameron Park Substation or from on patrol in the area. Given the project site's location adjacent to US 50, response times may be lower than the 2024 average of nine minutes (Palmberg, pers. comm., 2025).

Any staffing or equipment adjustments would be addressed by the County Board of Supervisors and/or through general funding sources unrelated to this specific project, in compliance with General Plan Objective 5.7.3 and Policy 5.7.3.1. Based on consultation with the EDCSO, no new station or construction that could result in impacts to the environment would be required to provide law enforcement services for the Costco project (Palmberg, pers. comm., 2025). Therefore, law enforcement impacts would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is similarly designated for commercial uses and is assumed to include approximately 138,000 square feet of potential future development).

As described above, any staffing or equipment adjustments would be addressed by the County Board of Supervisors and/or through general funding sources unrelated to this specific project, in compliance with General Plan Objective 5.7.3 and Policy 5.7.3.1. Similar to Costco project, no new station or construction that could result in impacts to the environment are expected to be required to provide law enforcement services for the North Site Remainder Area future development. Therefore, law enforcement impacts would be **less than significant**.

Conclusions

Neither the Costco project nor future development on the North Site Remainder Area would cause adverse physical impacts related to constructing new or expanded law enforcement facilities. The project site is already within the EDCSO service area, and normal development impact fees and standard review processes (e.g., site-plan review) will ensure that any incremental service needs are addressed. Therefore, impacts to law enforcement services would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.14 TRANSPORTATION

This section describes the applicable federal, state, and local transportation regulations and policies; discusses the existing roadway network and transportation facilities in the vicinity of the project; and analyzes the potential impacts from implementation of the project on transportation. Mitigation measures that would reduce impacts, where applicable, are also discussed. The analysis in this section is based on the analysis and findings of the El Dorado Hills Costco CEQA Analysis Report (Kittelson & Associates, Inc., 2025a) which are incorporated herein. This study evaluates the effects of the project based on County significance thresholds contained in the El Dorado County Transportation Impact Study Guidelines.

Comments received on the Notice of Preparation (NOP) regarding transportation included requests for new pedestrian facilities and protected bicycle paths and concerns regarding vehicular access and circulation to/from the project site, emergency access, adequate transportation infrastructure to support the project, proximity of the project to the existing Folsom Costco, transportation hazards associated with project operation, safety for all modes of transportation along the surrounding roadway network (including student safety associated with the operation of Oak Meadow Elementary School), and increased traffic congestion along Silva Valley Parkway and the surrounding roadway network. Because a project's effects on automobile delay no longer constitute a significant impact under CEQA, comments related to automobile delay (e.g., level of service [LOS], congestion) are not addressed in this EIR. To address traffic operations and consistency with the County General Plan Transportation Element policy provisions not subject to CEQA, Costco has prepared the El Dorado Hills Traffic Impact Analysis (TIA) that is available for public review. All other comments are addressed in the analysis below. The NOP and comments submitted in response to it are included in Appendix A.

3.14.1 Regulatory Setting

In addition to the following, the reader is referred to Section 3.17, "Wildfire and Evacuation," for additional regulations regarding emergency access and evacuation.

FEDERAL

Federal Highway Administration

The Federal Highway Administration (FHWA), an agency of the US Department of Transportation, provides stewardship over the construction and preservation of the nation's highways, bridges, and tunnels. FHWA also conducts research and provides technical assistance to state and local agencies to improve safety, mobility, and livability, and to encourage innovation in these areas. FHWA also provides regulation and guidance related to work zone safety, mobility, and temporary traffic control device implementation.

STATE

California Department of Transportation

The California Department of Transportation (Caltrans) is the state agency responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as the segments of the Interstate Highway System that are in California. Caltrans District 3 is responsible for the operation and maintenance of United States Route (US) 50, which is located south of the project site. Caltrans requires a transportation permit for any transport of heavy construction equipment or materials that necessitates the use of oversized vehicles on State highways and an encroachment permit for any work within Caltrans right-of-way. Caltrans has established the following guidance related to the function of state roadways that are relevant to the project.

California Manual on Uniform Traffic Control Devices, Part 6: Temporary Traffic Control

The California Manual on Uniform Traffic Control Devices (CA MUTCD), Part 6: Temporary Traffic Control provides principles and guidance for the implementation of temporary traffic control to ensure the provision of reasonably safe and effective movement of all roadway users (e.g., motorists, bicyclists, pedestrians) through or around temporary traffic control zones while reasonably protecting road users, workers, responders to traffic incidents, and equipment. Additionally, this document notes that temporary traffic control plans and devices shall be the responsibility of the public body or official having jurisdiction to guide road users (Caltrans 2024a: 1029).

Local Development Review Safety Review Practitioners Guidance

The Local Development Review (LDR) Safety Review Practitioners Guidance (Guidance) provides practitioners with guidance on how to evaluate project-related safety impacts on the state highway system. The LDR Guidance prioritizes vulnerable roadway users and underserved communities, enhances safety for pedestrians, bicyclists, transit, and vehicular modes, and applies both reactive and systemic perspectives (Caltrans 2024b). Although the LDR Guidance is intended for use on projects affecting the state highway system, it can also serve as a model for lead agencies, developers, and consultants to analyze the safety impacts of proposed land use projects and plans on local roadways.

California Code of Regulations Section 15064.3

On December 28, 2018, State CEQA Guidelines Section 15064.3 was introduced to address the determination of significance for transportation impacts. It mandated that transportation analyses be based on vehicle miles traveled (VMT) rather than congestion metrics, such as LOS. The shift in focus was a direct response to legislation, notably Senate Bill (SB) 743, passed in 2013, that required the Governor's Office of Land Use and Climate Innovation (LCI) (formerly the Governor's Office of Planning and Research [OPR]) to develop new State CEQA Guidelines that address transportation metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

In December 2018, the most recent version of the Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) was published, which provides guidance for VMT analysis (OPR 2018). Following approval by the Office of Administrative Law, the updated State CEQA Guidelines took effect statewide on July 1, 2020, implementing the provisions outlined in State CEQA Guidelines Section 15064.3. As a result, VMT analysis has become a crucial component of project evaluations under CEQA, and VMT is considered in the analysis of this project.

California Fire Code

The 2022 California Fire Code (CFC), which is codified at Part 9 of Title 24 of the CCR, incorporates by adoption the 2021 International Fire Code and contains regulations related to construction, maintenance, access, and use of buildings. Topics addressed in the CFC include design standards for fire apparatus access (e.g., turning radii, minimum widths), standards for emergency access during construction, provisions intended to protect and assist fire responders, and several other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The CFC contains specialized technical regulations related to fire and life safety. The CFC is revised and published every 3 years by the California Building Standards Commission.

REGIONAL

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association that includes the Counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. As the federally designated metropolitan transportation organization for the region, SACOG is required to prepare a long-range transportation plan for all modes of transportation, including public transit, automobile, bicycle, and pedestrians, every 4 years. In addition to preparing the region's long-range transportation plan, SACOG assists in planning for transit, bicycle networks, clean air, and airport land uses.

Metropolitan Transportation Plan/Sustainable Communities Strategy

SACOG is responsible for preparing and updating the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. The purpose of the MTP/SCS is to establish regional access and identify mobility goals; identify present and future transportation needs, deficiencies, and constraints in the transportation system; analyze potential solutions; estimate available funding; and propose investments (SACOG 2019). On November 18, 2019, the SACOG Board of Directors adopted the 2020 MTP/SCS. Adoption of the updated MTP/SCS, known as the 2025 Blueprint, is anticipated by the end of 2025.

Metropolitan Transportation Improvement Program

SACOG prepares and adopts the MTIP approximately every 2 years. The MTIP is a short-term comprehensive listing of surface transportation projects that receive federal funds, are subject to a federally required action, or are regionally significant. The 2023-2026 MTIP covers 4 years of programming: federal fiscal years 2023-2026. SACOG adopted the 2023-2026 MTIP in September 2022. The project listing in the MTIP provides a detailed description for each individual project in the 2023-2026 MTIP, including those in the County.

El Dorado County Transportation Commission

The El Dorado County Transportation Commission (EDCTC), the designated regional transportation planning agency for the County, serves as the planning and programming authority for transportation projects on the western slope of the county, excluding the areas within the Tahoe Regional Planning Agency boundaries. As the designated regional transportation planning agency, EDCTC prepares the regional transportation plan (RTP) and improvement program for the western slope of the county every 5 years (EDCTC 2025).

El Dorado County 2020-2040 Regional Transportation Plan

EDCTC is the regional transportation planning agency for most of the County, excluding a portion of the county located in the Tahoe Regional Planning Area. State law requires EDCTC to adopt and submit an approved RTP to the California Transportation Commission every 5 years. The purpose of the RTP is to identify regional short-term and long-range transportation needs and to establish policies, programs, and projects designed to meet those needs. Adopted in November 2020, the County 2020–2040 RTP is a guide for the systematic development of a balanced, comprehensive, and multimodal transportation system in the county. The RTP analyzes existing conditions, establishes regional goals, and proposes investments for both short-term (up to 10 years) and long-term (10–20 year) periods (EDCTC 2020a).

El Dorado County Active Transportation Plan

The 2020 El Dorado County Active Transportation Plan (Active Transportation Plan) is the guidance document for achieving the County's goal of building a balanced transportation system that supports and encourages active modes of travel. The Active Transportation Plan analyzes existing conditions and provides recommendations to improve active transportation within the county and strategies to ensure that implementation of these recommendations is manageable and fundable (EDCTC 2020b). The following Active Transportation Plan objectives are applicable to the project:

- **Objective 1.2:** Proactively address safety for people walking and bicycling at potential conflict locations.
- **Objective 3.1:** Provide safe and accessible connections to important community destinations.
- **Objective 3.2:** Support regional connectivity for active transportation.
- **Objective 3.3:** Maintain the active transportation network at an acceptable condition.

Western El Dorado County Short- and Long-Range Transit Plan

The El Dorado County Transit Authority (El Dorado Transit) provides a variety of fixed-route and on-demand transit services throughout western El Dorado County, as well as commuter services to Sacramento County. The Western El Dorado County Short- and Long-Range Transit Plan outlines the highest-priority projects that the agency will work on over the next 25 years. The short-range element provides a detailed, 5-year plan that focuses on concrete implementable steps toward the long-range vision for public transit services and the long-range element focuses on

strategies for public transportation in western El Dorado County over the next 25 years (EDCTC 2019). Key points in the short-range service plan include establishing a 50 Express service, an El Dorado Hills Wednesday Activity Bus, and extended hours. Key points in the long-range plan include hourly service on the 50 Express Route and greater frequency of local routes. In January 2024, El Dorado Transit published the Short-Range Transit Plan Update, which provides actionable recommendations to improve services where feasible (El Dorado Transit 2024).

LOCAL

El Dorado County General Plan

The Transportation and Circulation Element (amended in 2019) of the General Plan provides the framework for County decisions concerning the countywide transportation system, which includes various transportation modes and related facilities. The Transportation and Circulation Element establishes standards that guide development of the transportation system, including access to the road and highway system required by new development (El Dorado County 2019). The following Transportation and Circulation Element policies are applicable to the project:

- **Policy TC-3c:** The County shall encourage new development within Community Regions and Rural Centers to provide appropriate on-site facilities that encourage employees to use alternative transportation modes. The type of facilities may include bicycle parking, shower and locker facilities, and convenient access to transit, depending on the development size and location.
- **Policy TC-4a:** The County shall implement a system of recreational, commuter, and inter-community bicycle routes in accordance with the County's Bicycle Transportation Plan. The plan should designate bikeways connecting residential areas to retail, entertainment, and employment centers and near major traffic generators such as recreational areas, parks of regional significance, schools, and other major public facilities, and along recreational routes.
- **Policy TC-4b:** The County shall construct and maintain bikeways in a manner that minimizes conflicts between bicyclists and motorists.
- **Policy TC-4g:** The County shall support development of facilities that help link bicycling with other modes of transportation.
- **Policy TC-4i:** Within Community Regions and Rural Centers, all development shall include pedestrian/bike paths connecting to adjacent development and to schools, parks, commercial areas, and other facilities where feasible. In Rural Regions, pedestrian/bike paths shall be considered as appropriate.
- **Policy TC-5b:** In commercial and research and development subdivisions, curbs and sidewalks shall be required on all roads. Sidewalks in industrial subdivisions may be required as appropriate.
- **Policy TC-9a:** Incorporate circulation concepts that accommodate all users in new developments as appropriate.

El Dorado County Traffic Impact Fee Program

The County utilizes its Capital Improvement Program (CIP) to identify and prioritize future transportation investments to meet the County's existing and future transportation needs. CIP projects can include roadways, intersections, sidewalks, bicycle lanes, traffic calming treatments, transit service improvement projects, and ongoing administrative costs for transportation monitoring programs, including traffic model update costs, traffic study guideline updates, and updates to the Circulation Element to the County's General Plan. Funding from most CIP projects is provided from a variety of sources including state and/or federal grants, and the County's Traffic Impact Fee (TIF) Program. This program is required by General Plan Policy TC-Xb.

The TIF Program is used to fund needed improvements including roadway widening, new roadways, roadway intersection improvements, and transit to accommodate future growth during a defined period of time. Major updates to the CIP and TIF Program are made by the County every five years as required by State law and General Plan policies.

Transportation Impact Study Guidelines

The El Dorado County Community Development Agency adopted the Transportation Impact Study Guidelines in November 2014. The guidelines ensure that the impacts of proposed development projects are addressed in a manner consistent with the policies established in the General Plan Transportation and Circulation Element (El Dorado County 2014). As detailed above, a project's effect on automobile delay is no longer a consideration when identifying a significant impact under CEQA; thus, the portions of the guidelines not directly applicable to CEQA are not included herein.

County Resolution 141-2020

County Resolution 141-2020 was adopted by the County Board of Supervisors in October 2020. The resolution establishes the County VMT thresholds of significance for the purpose of analyzing transportation impacts under CEQA. Consistent with the OPR Technical Advisory, the Board of Supervisors adopted a significance threshold of no net increase in VMT for retail projects (El Dorado County 2020).

County Design Standards and Guidelines

The County adopted Interim Design Standards and Guidelines (IDSG) in December 2024 that are applicable to commercial, multi-family, and mixed-use projects in the County's Community Regions and Rural Centers (El Dorado County 2025). The IDSG established design guidelines and standards for access and circulation at commercial developments that are applicable to the project and are listed below (El Dorado County 2024a):

Access and Circulation Design Guidelines

2. Projects should consider bikeway improvements, including but not limited to connections to bike trails and on-street bike lanes.
4. Projects located within walking distance of public transportation and bike and pedestrian trails are encouraged to provide access to these amenities.

Access and Circulation Design Standards

1. Frontage (i.e., sidewalks, curb, gutter, street improvements, etc.) and driveway improvements shall be installed in accordance with County standards.
2. Driveways and bicycle rack requirements shall be installed per County standards.
3. Emergency access shall comply with County standards and applicable state law.
4. All pedestrian circulation walks shall be designed to provide access to the disabled in compliance with the Americans with Disabilities Act (ADA), California Building Standards Code Title 24, and the County's Improvement Standards.

County Code of Ordinances

Chapter 12 of the El Dorado County Code of Ordinances (County Code) includes regulations regarding county streets, sidewalks, and public spaces, including provisions regarding road encroachments for the purpose of protecting the safety of the public traveling on public roads. Section 12.28.030 of the County Code requires that any development project, unless exempt, pay the County the required traffic impact mitigation fee or comply with requirements for developer constructed facilities as set forth in Section 12.28.110 of the County Code, which establishes parameters for credits and reimbursement for developer constructed fees.

El Dorado Hills County Fire Department Ordinance 2022-01

The El Dorado Hills Fire Department has adopted the 2022 CFC with several local amendments which are more restrictive than those described in the CFC. The El Dorado Hills Fire Department updates its local fire code ordinance in conjunction with the triennial update to the California Building Standards Code. Specific local amendments contained within the ordinance that are applicable to the project include the following:

- Fire apparatus access road design criteria as described in Section 503.2.1 of Ordinance 2022-01
- Fire lane marking requirements described in Section 503.3.1 of Ordinance 2022-01
- Fire apparatus access road design criteria described in Appendix D of Ordinance 2022-01

3.14.2 Environmental Setting

This section describes the existing environmental setting, which is the baseline scenario upon which the project-specific impacts are evaluated. The environmental setting for transportation includes descriptions for roadway, bicycle, pedestrian, and transit facilities within and connected to the project area.

ROADWAY SYSTEM

County roadways are classified as highways, thoroughfare, arterials, collectors, and local streets. The primary roadways in the vicinity of the project are described as follows:

- **US 50** is an east-west freeway that provides regional access to the project area. US 50 is part of the National Highway System and travels from West Sacramento to the California/Nevada border and continues east across the US. Within the vicinity of the project site, US 50 has four lanes in each direction and the interchange that would serve the project site is located at White Rock Road/Silva Valley Parkway.
- **Clarksville Road** is a north-south two-lane local roadway that connects White Rock Road to the south and with Silva Valley Parkway to the north. There are Class II bicycle lanes along both sides of Clarksville Road. There are no pedestrian facilities along the road (EDCTC 2020b). Clarksville Road would provide direct access to the South Site.
- **Silva Valley Parkway** is a four-lane north-south arterial roadway that begins at US 50 and ends at Green Valley Road. There are Class II bicycle lanes along both sides of the parkway (EDCTC 2020b). There are pedestrian facilities (e.g., sidewalks, crosswalks) along the eastern side of Silva Valley Parkway, beginning near Oak Meadow Elementary School and Serrano Parkway. There are sidewalks along both sides of the roadway north of Serrano Parkway. Silva Valley Parkway would provide direct access to the North and South Site.
- **Tong Road** is an east-west two-lane local roadway that begins at Silva Valley Parkway and traverses east where it becomes Old Bass Lake Road. There are no existing bicycle or pedestrian facilities along Tong Road (EDCTC 2020b).

TRANSIT SYSTEM

El Dorado Transit provides fixed-route bus, dial-a-ride, and paratransit services throughout western El Dorado County, as well as commuter routes from the county to downtown Sacramento. No bus stops are located within 0.5 miles of the project site. The bus stop nearest to the project site serves El Dorado Transit Route 50 Express and the Sacramento Commuter bus and is located approximately 1 mile southwest of the project site, near the intersection of White Rock Road and Post Street. Route 50 Express operates between 6:00 a.m. and 7:00 p.m. Monday through Friday and provides a round-trip service between Placerville Station Transfer Center and the Iron Point Light Rail Station (El Dorado Transit 2025a). The Sacramento Commuter provides five trips in the morning from park and ride locations in Western El Dorado County to downtown Sacramento and five return trips Monday through Friday and reverse commuter trips (i.e., between downtown Sacramento to Western El Dorado County) four times daily. Morning service is offered between approximately 5:10 a.m. and 9:30 a.m. and afternoon service is offered between approximately 2:00 p.m. and 6:00 p.m. (El Dorado Transit 2025b). The El Dorado County Health and Human Services Agency also operates a door-to-door senior shuttle program in Placerville, Diamond Springs, and El Dorado Hills. This volunteer-driven transportation service assists adults 60 years and older with grocery shopping trips and trips to various locations in the community.

BICYCLE AND PEDESTRIAN SYSTEM

The County classifies bicycle and pedestrian facilities into the following types (EDCTC 2020b):

- **Class I Shared-Use Paths:** Class I shared-use paths are paved trails completely separated from the street or highway. They allow two-way travel for people who are bicycling and walking.

- **Class II Bicycle Lanes:** Class II bicycle lanes are striped, preferential lanes on the roadway for one-way bicycle travel that include pavement stencils and signs. Some bicycle lanes include a striped buffer on one or both sides to increase separation from the traffic lane or from parked cars.
- **Class IIB Buffered Bicycle Lanes:** Class IIB buffered bicycle lanes include painted buffers that increase the distance between bicyclists and drivers.
- **Class III Bicycle Routes:** Class III bicycle routes are signed routes where people bicycling share a travel lane with people driving. Class III bicycle routes include shared lane markings or "sharrows" that encourage proper bicyclist positioning in the travel lane and alert drivers that bicyclists may be present.
- **Class IV Separated Bikeways:** Class IV separated bikeways are on-street bicycle facilities that are physically separated from motor vehicle traffic by a vertical element or barrier such as a curb, bollards, or parking aisle. They can allow for one- or two-way bicycle travel on one or both sides of the roadway.

As of 2020, the County bicycle and pedestrian system was composed of approximately 62 miles of bicycle facilities: approximately 30 miles of Class I shared-use paths, 31 miles of Class II bicycle lanes, and 1 mile of Class III bicycle routes. There are Class II bicycle lanes along Silva Valley Parkway, which bisects the project site, and along Clarksville Road between Silva Valley Parkway and White Rock Road. There are no pedestrian facilities along the undeveloped parcel frontages adjacent to the project site. The Active Transportation Plan proposes approximately 207 miles of new bicycle facilities and approximately 38 miles of new sidewalks across the county, including Class II bicycle lanes along Silva Valley Parkway between Oak Meadow Elementary School and Harvard Way; Class III bicycle routes adjacent to US 50; and a Class I shared-use path along Tong Road, east of the project site (EDCTC 2020b). There is also a trail that traverses along the drainage on the west side of Silva Valley Parkway connecting Serano Parkway north of the project site to Ponta Delgado Court west of the project site. Access to this trail is provided along Clarksville Road.

3.14.3 Environmental Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the project on the transportation system. Transportation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant using the following analysis methodologies. The development of Country Club Drive, which is a separate County project, is not part of the Costco project or development within the North Site Remainder Area and therefore is not assessed in this analysis.

METHODOLOGY

Conflicts with County Circulation System Programs and Policies

The analysis compares consistency of project transportation operations with programs and policies set forth in the EDCTC 2020-2040 RTP, County General Plan and Active Transportation Plan that address the roadway system and vehicle trip reductions. As detailed above, a project's effects on automobile delay are no longer a consideration when identifying a significant impact under CEQA; thus, consistency with County General Plan policies related to intersection and roadway performance is not addressed here.

Bicycle and Pedestrian Analysis

The bicycle and pedestrian analyses evaluate whether implementing the project would either directly or indirectly, disrupt existing bicycle or pedestrian programs or facilities; interfere with the implementation of a planned bicycle or pedestrian facility; or create a physical or operational transportation outcome that conflicts with applicable bicycle or pedestrian system plans, guidelines, policies, or standards.

Transit Analysis

The transit analysis evaluates whether the project would either directly or indirectly disrupt existing transit services or facilities, interfere with the implementation of a planned transit facility, or create physical or operational

transportation outcomes that conflict with desired conditions expressed in transit policies adopted by the County or El Dorado Regional Transit for their respective facilities in the unincorporated county.

Vehicle Miles Traveled Analysis

Costco Project

This analysis is based on the El Dorado Hills Costco CEQA Analysis Report prepared by Kittelson & Associates, Inc. (Appendix J). This analysis applies the recommended VMT threshold for retail projects established in County Resolution 141-2020. Thus, the project is considered to have a significant impact if it were to result in a net increase in existing regional VMT (El Dorado County 2020). To evaluate the VMT impacts associated with implementation of the project, trip generation rates and trip lengths were first determined. Because travel behaviors and average trip distances (and therefore VMT) could differ between trips made to the warehouse retail building versus trips made to the fuel facility, this analysis separates trips into three types (i.e., warehouse retail building trip, fuel facility trip, employee trip) and evaluates the contribution of each trip type toward a potential impact on regional VMT. The three trip types are defined as follows:

- A **warehouse trip** is a member trip to the Costco warehouse retail building. These trips may also include a shared trip to another facility within the development (e.g., fuel facility) but are assumed to be driven to the development by the warehouse retail building (warehouse-only trips and shared warehouse/fuel trips).
  - A **primary warehouse trip** is a trip that motivates travel in the first place with a destination (i.e., the warehouse retail building) that terminates the travel session. These are trips made to the warehouse retail building or the warehouse retail building and fuel facility that are assumed to return to their previous location once all purchase transactions are complete. For this project, these trips may be existing trips that are expected to shift from nearby Costco locations or new trips on the transportation network. The assumption that any trip not shifting from another Costco location is a new trip on the network is a conservative assumption since the analysis intentionally avoids attempting to assume trips to existing non-Costco, large format retail facilities would shift to the project.
  - A **pass-by warehouse trip** is a trip made during the course of an existing primary trip that does not require deviating from the primary trip route and already is passing by the project site. Since these trips are assumed to have a trip distance of zero miles, they do not affect regional VMT, and thus pass-by trip VMT is not considered in this analysis.
  - A **diverted warehouse trip** is a trip made during the course of a primary trip that requires deviating from the primary trip route. For this analysis, these trips are assumed to originate from primary trips along US 50, from which members deviate from their original path to visit the warehouse retail building or warehouse retail building and fuel facility. They consist of both existing trips that are expected to shift from nearby Costco locations and new trips on the transportation network.
- A **gas trip** is a member trip made to the Costco fuel facility that does not include a visit to the warehouse retail building. These trips are considered separate from warehouse retail building trips since they have unique characteristics that affect VMT (gas-only trips).
  - A **primary gas trip** is a trip that motivates travel in the first place with a destination (i.e., the fuel facility) that terminates the travel session. These are trips made to the fuel facility that are assumed to return to their previous location once the purchase transaction is complete. For this project, these trips are assumed to be existing trips on the transportation network that would otherwise be made at other Costco fuel facilities or existing non-Costco gas stations and would shift to the new facility. None of these trips are assumed to be new on the roadway network as gas purchasing is motivated by a household's driving behaviors and is not motivated by the mere presence of a gas station (i.e., people who would buy gas at the Costco fuel facility already are buying gas somewhere today).

- A **pass-by gas trip** is a trip made during the course of a primary trip that does not require deviating from the primary trip route. Since these trips are assumed to have a trip distance of zero miles, they do not affect regional VMT, and thus pass-by trip VMT is not measured in this analysis.
- A **diverted gas trip** is a trip made during the course of a primary trip that requires deviating from the primary trip route. For this analysis, these trips are assumed to originate from primary trips along US 50, from which members deviate from their original path to visit the warehouse retail building or warehouse retail building and fuel facility. They are assumed to be existing trips on the transportation network that would otherwise divert to nearby Costco fuel facilities or non-Costco gas stations.

- An **employee trip** is a trip made by an employee to or from the new facility. These trips are assumed to be new primary trips on the transportation network.

Trip generation estimates for the three types of trips (i.e., warehouse trip, fuel facility trip, employee trip) were developed using trip rates from a propriety database of Costco traffic data and travel characteristics. Average trip distances for warehouse retail building and fuel facility trips were calculated using spatial analysis and proprietary Costco transaction data. To determine gas trip and warehouse retail building trip VMT, the number of trips for each type of gas and warehouse retail building trip (i.e., primary, diverted) were multiplied by the trip length to determine the VMT. Pass-by trips are assumed to have a distance of zero miles since they represent trips made during the course of a primary trip that do not require deviating from the primary trip route, only a new in and out trip at a project driveway. Therefore, these trip types do not affect regional VMT and are not measured in this analysis. For example, under existing conditions, the primary warehouse retail building trip length to the Folsom Costco is 8.90 miles and there are 5,784 primary warehouse retail building trips, resulting in primary warehouse retail building VMT of 51,478 (8.90 miles * 5,784 trips). Total daily employee VMT was calculated by multiplying the home-based work VMT per employee provided by the County (i.e., 12.5 VMT) by the estimated number of employees for the new Costco facility.

It is anticipated that the opening of a new warehouse retail building in the county would result in a shift of vehicle trips from the existing Folsom Costco warehouse retail building, located approximately 4 miles southwest of the project site, to the new facility. However, after some existing members shift their trips to the new warehouse retail building, the existing Folsom Costco is anticipated to become less crowded with the opening of a new warehouse retail building and could experience an increase in trip frequency by existing members who continue to shop at the same warehouse retail building. Thus, the VMT for these increased visits (defined as latent demand VMT in this analysis) was calculated. See Appendix J for additional details related to the VMT methodology.

North Site Remainder Area

This analysis applies the recommended VMT threshold for retail projects established in County Resolution 141-2020. Thus, development of the North Site Remainder Area is considered to have a significant impact if it were to result in a net increase in existing regional VMT (El Dorado County 2020). To programmatically evaluate the VMT impacts associated with development of the North Site Remainder Area, trip generation rates and trip lengths were determined using the current approved version of the County travel forecast model. As noted in Chapter 2, "Project Description," the project proposes no development for the North Site Remainder Area that consists of approximately 13.79 acres. It is assumed the potential future commercial development of the North Site Remainder Area is approximately 138,000 square feet. For this analysis, it is assumed the North Site Remainder Area, when developed with 138,000 square feet of commercial uses would generate 2,536 daily trips. The travel forecast model provides an average trip length of 4.52 miles for all trip types in the model.

Transportation Hazards and Emergency Access Analysis

Transportation hazards and emergency access analyses evaluate whether the project would, directly or indirectly, substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) or result in inadequate emergency access.

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate the project impacts on transportation under CEQA are based on Appendix G of the CEQA Guidelines, the County General Plan, County Resolution 141-2020, and State CEQA Guidelines Section 15064.3. A transportation-related impact would be significant if implementation of the project would:

- conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, or bicycle and pedestrian facilities;
- conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) regarding VMT;
- substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- result in inadequate emergency access.

ISSUES NOT DISCUSSED FURTHER

All issues related to transportation are discussed in this analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle, and Pedestrian Facilities

The project would be consistent with established EDCTC and County policies and plans related to the circulation system. Implementation of the project would not significantly alter the physical transportation network surrounding the project site such that existing and planned transit, roadway, bicycle, and pedestrian facilities would be adversely affected. In addition, the project would include the construction of frontage improvements that would include sidewalk and onsite pedestrian paths in accordance with County General Plan policies. Development of the North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development. Although the specific types of commercial uses are currently unknown, future development would be subject to County policies and plans, and thus would not conflict with a program, plan, ordinance, or policy addressing transit, roadway, bicycle, or pedestrian facilities. For these reasons, this impact would be **less than significant**.

Costco Project

Transit Facilities and Services

El Dorado Transit operates fixed-route and on-demand transit services throughout western El Dorado County. El Dorado Transit does not currently operate fixed-route transit service to or from the project site and there are no existing or proposed transit facilities within 0.25 miles of the project site. The nearest transit facility, the park and ride lot that serves El Dorado Transit Route 50 and the Sacramento Commuter, is located approximately 1 mile southwest of the project site, near the intersection of White Rock Road and Post Street. Therefore, implementation of the project would not adversely affect any existing transit facilities or services. The 2024 El Dorado Transit Short-Range Transit Plan Update recommends the implementation of a new on-demand micro-transit service in El Dorado Hills (El Dorado Transit 2024: 86). Although the project could generate minimal demand for transit services from employees, fixed-route public transit is typically not a viable method of transportation for those bulk shopping due to the difficulty of transporting goods. In addition, according to the OPR Technical Advisory, when evaluating impacts on multi-modal transportation networks, the addition of new transit users generally should not be treated as an adverse impact (OPR 2018: 19). In addition, the Western El Dorado County Short- and Long-Range Transit Plan acknowledges anticipated growth in the El Dorado Hills community, and County General Plan Policy TC-2a states that the County shall work with transit providers to provide transit services that are responsive to existing and future transit demand. Thus, any increase in demand for transit services generated by the project would be evaluated and accommodated.

For these reasons, the project would not interfere with the implementation of this service or other recommended services and would not conflict with any program, plan, ordinance, or policy addressing transit facilities and services.

Roadway Facilities

As described in Chapter 2, "Project Description," the primary entrances to the North Site and South Site would be from the new signalized intersection with Silva Valley Parkway. Northbound traffic on Silva Valley Parkway would have a left-turn pocket into Clarksville Crossing, and three driveways off Clarksville Crossing would provide direct access to the South Site. A partial traffic signal would be installed at the intersection of Silva Valley Parkway and Clarksville Crossing. In the future, when Country Club Drive is extended by the County, Clarksville Crossing's connection to Silva Valley Parkway and the traffic signal would be removed. The remainder portion of Tong Road on the South Site would be improved and used to access the site. A maintenance agreement between the County and Costco would be created to address the maintenance of the remainder portion of Tong Road.

Based on the results of the 2025 El Dorado Hills Costco Warehouse TIA (Kittelson & Associates, Inc., 2025b), the following transportation operational improvements would be constructed by the project in coordination with the County to address compliance with the El Dorado County Transportation and Circulation Element policies TC-Xd, TC-Xe, and TC-Xf.

- Install 150-foot dual northbound left turn lanes at the signalized intersection of Silva Valley Parkway and the project driveway.
- Add a northbound right turn lane, change the right turn phase to be permissive and overlap, and increase the westbound left turn storage length at the intersection of White Rock Road and Valley View Parkway-Vine Street.

All new internal roadways and off-site roadway improvements would be designed and constructed in accordance with the County Department of Transportation standards, which would ensure all such roadways would have adequate sight distance, appropriate roadway width, and comply with additional specifications for right-of-way. The project plans would also be subject to review by County staff to ensure that applicable design and safety standards are met. For these reasons, the project would not conflict with any plans, policies, or ordinances related to the roadway network.

Bicycle and Pedestrian Facilities

The Active Transportation Plan proposes Class II bicycle lanes along Silva Valley Parkway between Oak Meadow Elementary School and Harvard Way (portions of this facility are currently in place); Class III bicycle routes adjacent to US 50; and a Class I shared-use path along Tong Road, east of the project site (EDCTC 2020b). As detailed in the "Environmental Setting," there are Class II bicycle lanes along Silva Valley Parkway, which bisects the project site, and no pedestrian facilities along the undeveloped parcel frontages adjacent to the project site. Construction activities within the public right-of-way could intermittently reduce, disrupt, or temporarily eliminate access to the Class II bicycle facilities along Silva Valley Parkway. Pursuant to Section 12.08.080 of the County Code, an encroachment permit would be required for any work that would occur within the public right-of-way. The County Department of Transportation has established standard permit conditions including a requirement that a traffic control plan must comply with the requirements in the most recent version of the CA MUTCD (El Dorado County 2024b). The CA MUTCD provides for the continuity of motor vehicles, bicycles, and pedestrian traffic, and identifies necessary traffic control devices (e.g., signs, barricades, flagger control) to ensure the safe movement of all roadway users through or around temporary traffic control zones (Caltrans 2024a). Preparation of a traffic control plan would ensure the safety of the traveling public during construction and adherence to County design standards would ensure that the bicycle facilities are returned to their original condition.

New bicycle and pedestrian improvements would be provided within and surrounding the project site. Specifically, implementation of the project would include the provision of bicycle parking spaces/racks on-site consistent with General Plan Policy TC-3c, which encourages new development to provide on-site facilities that encourage the use of alternative transportation modes and Policy TC-9a, which requires that circulation concepts accommodate all users in new developments, as appropriate. The bicycle facilities would be designed and constructed in accordance with County design standards and specifications. The project would also include the construction of sidewalks, curbs, and pedestrian paths within the North and South sites and connecting to the elementary school in accordance with

General Plan Policy TC-4i, which requires commercial developments to implement pedestrian facilities connecting to adjacent development and to schools where feasible. The proposed pedestrian paths would connect the structures on each site to Silva Valley Parkway, thus enhancing the active transportation network in the vicinity of the project site. The implementation of bicycle and pedestrian facilities would align with Goal 6, Objective A of the EDCTC 2020-2040 RTP, which aims to develop a continuous, safe, and accessible pedestrian and bikeway network throughout the region (EDCTC 2020a: Table 5-1); as well as Policy 22 of the 2020 MTP/SCS which encourages investment in bicycle and pedestrian infrastructure to encourage active transportation trips (SACOG 2019: 76). The project would also comply with County General Plan policies, including Policy TC-1a and Policy TC-1b, to minimize the opportunity for conflicts between vehicles and alternative modes of transportation through design (e.g., right-of-way widths, cross sections). For these reasons, the project would not conflict with any existing or planned bicycle or pedestrian facilities or adopted plans, guidelines, policies, or standards related to such facilities.

Summary

Implementation of the Costco project would not result in modifications to existing facilities in a manner that would disrupt existing service or interfere with the implementation of any planned pedestrian, transit, or bicycle facilities contained in adopted programs, plans, policies, or ordinances. The project would include the implementation of bicycle and pedestrian facilities (e.g., sidewalks, pedestrian paths), thus enhancing connectivity within and around the project site. All new and modified roadways would be designed and constructed in accordance with County design guidelines and standards, thus ensuring that the project would not adversely affect any existing or planned bicycle, pedestrian, or transit facilities or conflict with a program, plan, ordinance, or policy addressing such facilities.

North Site Remainder Area

There are existing Class II bicycle facilities along Silva Valley Parkway. Pursuant to Section 12.08.080 of the County Code, an encroachment permit would be required for any work that would occur within the public right-of-way. The County Department of Transportation has established standard permit conditions including a requirement that a traffic control plan must comply with the requirements in the most recent version of the CA MUTCD (El Dorado County 2024b). Preparation of a traffic control plan and implementation of traffic control measures would provide for the safe movement of vehicles, bicyclists, and pedestrians during construction activities. In addition, all new and modified roadways associated with development of the North Site Remainder Area would be designed and constructed in accordance with the County Department of Transportation standards, which would ensure all such roadways would have adequate sight distance, appropriate roadway width, and comply with additional specifications for right-of-way. For these reasons, development of the North Site Remainder Area would not adversely affect an existing or planned roadway, transit, bicycle, or pedestrian facility; and would not conflict with any adopted plans, policies, or standards related to such facilities.

Conclusions

As discussed above, the project and future development within the North Site Remainder Area would be designed and constructed in accordance with applicable County policies and standards. Construction activities within the public right-of-way could temporarily and intermittently reduce, disrupt, or limit access to the existing Class II bicycle facilities along Silva Valley Parkway. However, pursuant to Section 12.08.080 of the County Code, an encroachment permit would be required for any work that would occur within the public right-of-way. In accordance with the standard permit conditions, a traffic control plan would be prepared and implemented to provide for the safe movement of vehicles, bicyclists, and pedestrians during construction. All new and modified roadways would be designed and constructed in accordance with County design guidelines and standards thus ensuring that implementation of the project and future development of the North Site Remainder Area would not adversely affect an existing or planned roadway, or transit, bicycle, or pedestrian facility; and would not conflict with any adopted plans, policies, or standards related to such facilities. In addition, the Costco project site and North Site Remainder Area are located near existing residential units and therefore could provide new employment opportunities in existing suburban communities consistent with the 2020 MTP/SCS which relies on and supports efforts to foster a balance of jobs and housing (SACOG 2019: 69). For these reasons, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.14-2: Conflict with or Be Inconsistent with State CEQA Guidelines Section 15064.3(b) Regarding Vehicle Miles Traveled

The Costco project would result in a net increase of 21,123 daily VMT when compared to existing conditions, and development of the North Site Remainder Area would result in 11,462 VMT. Thus, implementation of the project and development of the North Site Remainder Area would exceed the threshold of no net increase in regional VMT. Implementation of identified mitigation measures would assist to reduce the extent of VMT impacts. However, it is not possible to determine if VMT associated with future commercial development of the Costo project and the North Site Remainder Area would be reduced below the County's threshold. This impact would be **significant and unavoidable**.

Costco Project

Construction

Project construction activities would be temporary and intermittent, estimated to begin in July 2026 and continuing over 11 months. Therefore, construction activities would not result in long-term increases in vehicular trips along roadways surrounding the project site. In addition, VMT generated by construction personnel is not newly generated; instead, it is redistributed throughout the regional roadway network based on the different worksites to which workers travel. Because construction workers travel on the regional roadway network to access various sites and because the project site is in proximity to population centers (e.g., Cities of Folsom, Rancho Cordova, Elk Grove, and Sacramento), construction workers would not generate a substantial number of new trips as compared to existing conditions. Furthermore, due to the nature of project construction activities, when construction is completed, construction-related vehicle trips and therefore VMT attributed to project construction, would cease.

Operations

As detailed in Table 3.14-1, the project is anticipated to generate 21,123 new daily VMT. The trip types included in the VMT analysis include member trips as well as employee trips. For detailed information regarding trip generation, trip length, and VMT methodology and analysis, see Appendix J.

Table 3.14-1 Project-Generated Daily Vehicle Miles Traveled

Trip Type	Change in Regional Daily VMT
Warehouse Trips (total)	**13,718**
Primary Warehouse Trips	13,758
Shifted from Folsom Costco	*-9,830*[1]
New Primary Warehouse Trips	*23,588*[2]
Diverted Warehouse Trips	-40
Shifted from Folsom Costco	*-150*[3]
New Diverted Warehouse Trips	*110*[4]
Gas Trips (total)	**2,909**
Primary Gas Trips	2,571
Shifted from Folsom Costco	*-218*[5]
Shifted from Non-Costco Gas Stations	*2,789*[6]
Diverted Gas Trips	338
Shifted from Folsom Costco	*-41*[7]
Shifted from Non-Costco Gas Stations	*379*[8]

Trip Type	Change in Regional Daily VMT
Employee Trips	3,825[9]
Latent Demand at Folsom Warehouse	671[10]
Total Net New Daily VMT	21,123

Notes: VMT = vehicle miles traveled

1 Table 5. Primary Warehouse Trip VMT – Shifting Existing Trips from Folsom Costco.

2 Table 6. Primary Warehouse Trip VMT – New Trips

3 Table 8. Diverted Warehouse Trip VMT – Shifting Existing Trips from Folsom Costco.

4 Table 9. Diverted Warehouse Trip VMT – New Trips.

5 Table 11. Primary Gas Trip VMT – Shifting Existing Trips from Folsom Costco.

6 Table 12. Primary Gas Trip VMT – Shifting Existing Trips from non-Costco Gas Stations

7 Table 13. Diverted Gas Trip VMT – Shifting Existing Trips from Folsom Costco

8 Table 14. Diverted Gas Trip VMT – Shifting Existing Trips from Non-Costco Gas Stations

9 Table 15. Employee Trip VMT.

10 Table 17. Latent Demand VMT.

Source: Kittelson & Associates, Inc., 2025a: Table 18.

As shown in Table 3.14-1, implementation of the project is anticipated to generate 21,123 daily VMT. Therefore, project-generated VMT would exceed the applicable threshold of no net increase in existing regional VMT.

Summary

Construction activity is temporary and VMT generated by construction personnel during construction would primarily be a redistribution of existing construction personnel VMT, rather than a new source of VMT in the region. When construction is complete, construction-related vehicle trips and therefore VMT attributed to project construction would cease. Operational VMT attributed to the project is expected to increase regional daily VMT by 21,123.

North Site Remainder Area

Construction

As noted in Chapter 2, "Project Description," the project proposes no development for the North Site Remainder Area so it is not known when this area would be developed. However, it is anticipated that construction activities associated with the North Site Remainder Area would be temporary and intermittent. Therefore, construction activities would not result in long-term increases in vehicular trips along roadways surrounding the site. In addition, VMT generated by construction personnel is not newly generated; instead, it is redistributed throughout the regional roadway network based on the different worksites to which workers travel. Because construction workers travel on the regional roadway network to access various sites and because the North Site Remainder Area is in proximity to population centers (e.g., Cities of Folsom, Rancho Cordova, Elk Grove, and Sacramento), construction workers would not generate a substantial number of new trips as compared to existing conditions. Furthermore, due to the nature of construction activities, when construction is completed, construction-related vehicle trips and therefore VMT attributed to construction of the North Site Remainder Area, would cease.

Operations

As discussed in the "Methodology" section above, this analysis applies the recommended VMT threshold for retail projects established in County Resolution 141-2020. Thus, development within the North Site Remainder Area is considered to have a significant impact if it were to result in a net increase in existing regional VMT (El Dorado County 2020). Based on the number of trips (2,536) and average trip length (4.52 miles) extracted from the County travel forecast model, development of the North Site Remainder Area is anticipated to generate approximately 11,463 daily VMT (i.e., 2,536 trips * 4.52 miles) (Kittelson & Associates, Inc., 2025a: Table 19). Therefore, project-generated VMT would exceed the applicable threshold of no net increase in existing regional VMT.

Conclusions

The Costco project and development in the North Site Remainder Area would generate new VMT. Specifically, the Costo project would generate 21,123 daily VMT and development of the North Site Remainder Area would generate 11,463 daily VMT, thus exceeding the applicable threshold of no net increase in VMT. Because the project and development of the North Site Remainder Area would result in a net increase in VMT, this impact would be **significant.**

Mitigation Measures

The following mitigation measures are consistent with the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing GHG Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (Handbook) for reducing greenhouse gas emissions within the transport sector. Several measures quantified in the CAPCOA Handbook aim to reduce VMT and encourage mode shifts from single-occupancy vehicles to shared (e.g., transit) or active modes of transportation (e.g., bicycling) (CAPCOA 2021). However, not all transportation measures are applicable or feasible given the nature of the project, implementation scale, and/or the limited jurisdictional authority of the applicant to implement particular measures. The following mitigation measures would be required to reduce project-generated VMT based on their feasibility and applicability and are also recommended in Section 3.7, "Greenhouse Gas Emissions and Climate Change:"

Mitigation Measure 3.14-2a: Provide a Mandatory Commute Reduction Program for Costco Employees

Costco shall provide a Mandatory Commute Reduction Program for employees and must include all of the following measures as described in the California Air Pollution Control Officers Association Handbook for Analyzing GHG Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity:

- **Commute Trip Reduction Marketing**: Costco shall develop and implement a marketing strategy to promote a commute reduction program. The following features (or similar alternatives) shall be provided:
  - on-site or online commuter information services,
  - employee transportation coordinators, and
  - guaranteed ride home service.
- **Provide Ridesharing Program**: Costco shall develop and implement a ridesharing program. The following strategies provide examples of a multifaceted approach for promoting a rideshare program:
  - designating a certain percentage of desirable parking spaces for ridesharing vehicles,
  - designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles, and
  - providing an app or website for coordinating rides.
- **Provide End-of-Trip Bicycle Facilities**: Costco shall install and maintain end-of-trip bicycle facilities for employee use. End-of-trip facilities include bike parking, bike lockers, showers, and personal lockers.

Mitigation Measure 3.14-2b: Implement Pedestrian Network Improvements

Costco shall provide pedestrian network improvements near the site, constructing sidewalks along the project frontage on Clarksville Crossing and Silva Valley Parkway. In addition, Costco shall construct sidewalks north of the project frontage on the east side of Silva Valley Parkway to connect to existing sidewalk near Oak Meadow Elementary School, thereby providing connectivity with the surrounding neighborhood.

Mitigation Measure 3.14-2c: Develop a TDM Program and Implement VMT Reduction Measures for Subsequent Developments in the North Site Remainder Area

Each project applicant of future proposed projects located within the North Site Remainder Area shall either demonstrate through a technical analysis that its project would not exceed County VMT thresholds or shall implement VMT-reducing infrastructure and/or strategies within the commercial facility to mitigate those impacts. If VMT thresholds are exceeded, the applicant shall prepare and submit a Transportation Demand Management (TDM)

Plan to the County for approval, which shall include a series of measures to reduce project-related VMT. Measures may include strategies such as ridesharing initiatives (e.g., carpooling), subsidizing employee use of public transit, and promoting bicycling, walking, and the use of public transit. The TDM Plan shall be subject to the County's review and approval, and no development shall proceed until the TDM Plan is deemed acceptable to the County.

Significance after Mitigation

A description of the individual effects of each mitigation measure's impact on project VMT reduction is provided below. Although the information on the potential reduction in VMT from each measure is provided, it should be noted that the VMT-reducing benefits of implementing each measure are considered the maximum VMT benefit. There may be diminishing returns when certain measures are implemented together to reduce VMT. For each measure applied, it is likely that a lesser effect would be observed (CAPCOA 2021: 38).

Mitigation Measure 3.14-2a: Provide a Mandatory Commute Reduction Program for Costco Employees

- **Commute Trip Reduction Marketing:** Commute trip reduction marketing would result in an estimated up to 4 percent employee VMT reduction. Information sharing and marketing promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, walking, and biking, thereby reducing VMT.
- **Provide Ridesharing Program:** Ridesharing programs are estimated to result in up to 8 percent employee VMT reduction. Ridesharing encourages carpooled vehicle trips in place of single-occupancy vehicle trips, thereby reducing the number of trips and VMT.
- **Provide End-of-Trip Bicycle Facilities:** Bicycle facilities are estimated to result in up to 4.4 percent employee VMT reduction. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing VMT.

Mitigation Measure 3.14-2b: Provide Pedestrian Network Improvements

The implementation of pedestrian network improvements is estimated to result in up to 6.4 percent employee VMT reduction.

Mitigation Measure 3.14-2c: Develop a TDM Program and Implement VMT Reduction Measures for Subsequent Developments in the North Site Remainder Area

The VMT reduction associated with implementation of this measure is currently unknown due to the lack of detail on development within the North Site Remainder Area.

Implementation of Mitigation Measures 3.14-2a and 3.14-2b would reduce employee trips by requiring Costco to share information about travel choices with employees, develop and implement a ridesharing program, and provide pedestrian facilities and end-of-trip bicycle facilities for employee use. However, employee trips only account for 3,825 daily VMT, which is approximately 18 percent of the project's total daily VMT. For illustrative purposes, the maximum reductions associated with Mitigation Measures 3.14-2a and 3.14-2b were summed and could achieve up to a 22.8 percent reduction in project employee commute VMT. Implementation of the mandatory commute reduction program for Costco employees with 100 percent employee participation and the implementation of pedestrian network improvements would decrease employee VMT by 872, therefore, reducing employee VMT to 2,953 with mitigation. Although Mitigation Measures 3.14-2a and 3.14-2b would reduce employee VMT, the primary source of daily VMT is driven by warehouse shopping by Costco members. The nature of the Costco land use and business model is auto oriented as members purchase items in bulk at Costco facilities, thus making walking, biking, or transit trips to the warehouse retail building impractical. Therefore, even with the implementation of Mitigation Measures 3.14-2a and 3.14-2b, the project would result in a net increase to regional VMT. Implementation of Mitigation Measure 3.14-2c would require the project applicants proposing development in the North Site Remainder Area to conduct project level VMT analyses and, if needed, to develop a TDM plan and implement strategies to reduce VMT associated with commercial development. However, due to the programmatic level of this analysis and lack of project details, it is currently unknown whether VMT associated with future development could be mitigated to a less-than-significant impact. For these reasons, this impact would be **significant and unavoidable**.

Impact 3.14-3: Substantially Increase Hazards Due to a Geometric Design Feature or Incompatible Uses

The project would involve the construction of a new commercial use on the project site. Project applicants would be required to obtain encroachment and transportation permits for oversized vehicles prior to the initiation of project construction. The County standard permit conditions require a traffic control plan to be prepared in accordance with CA MUTCD and Caltrans Standard Plans. The CA MUTCD identifies the necessary traffic control measures that project contractors should provide to minimize transportation hazards and ensure the safety of the traveling public. The project and future development would be required to comply with applicable roadway design standards and regulations, including off-site improvement standards for all modes of transportation. In addition, the project plans would be subject to review by the County to ensure that applicable design standards and regulations are met to minimize transportation hazards during project operations. For these reasons, the project would not substantially increase transportation hazards due to a design feature or incompatible use. This impact would be **less than significant**.

Costco Project

Construction

Implementation of the Costco project would include the construction of three new access roadway connections to Silva Valley Parkway (i.e., two driveways providing ingress/egress to the North Site and one access driveway to the South Site), three new connections to Clarksville Road along the western frontage of the South Site, and the construction of a new full access signalized intersection along Silva Valley Parkway at the project access and a new traffic signal at the partial-access intersection of Silva Valley Parkway and Clarksville Crossing where the North Site northern access meets Silva Valley Parkway. The effects of project construction as they relate to transportation safety hazards would be temporary. As detailed in Chapter 2, "Project Description," construction activities are anticipated to commence in July 2026 and occur over approximately 11 months. Construction would occur 7 days a week, with weekday construction occurring between 7:00 a.m. and 7:00 p.m. and weekend construction occurring between 8:00 a.m. and 5:00 p.m. Project construction would have the potential to increase hazards related to the movement of heavy vehicles and construction materials mixing with vehicles and alternative modes of transportation.

The Costco project contractor would be required to adhere to all County requirements related to construction activities, including provisions set forth in Section 12.08 of the County Code. Pursuant to County Code Section 12.080, an encroachment permit would be required for any work that would occur within the County right-of-way and for the use of an oversized or overloaded vehicle traveling on the County roadway network. The County Department of Transportation has established standard permit conditions including a requirement that a traffic control plan that complies with the requirements in the most recent version of the CA MUTCD and Caltrans Standard Plans be submitted to and approved by County transportation staff prior to the start of construction work (El Dorado County 2024b). The CA MUTCD identifies the necessary traffic control devices (e.g., signs, barricades, object markers, pavement and curb markings, pedestrian control signs, and flagger control) in and near construction work areas on public streets and in school areas to minimize transportation hazards. Preparation of a traffic control plan that complies with the CA MUTCD would ensure the safety of roadway users and would allow for the safe and efficient movement of all modes of travel. Therefore, with adherence to the County requirements for obtaining an encroachment permit and compliance with provisions of the CA MUTCD, the project would not substantially increase transportation hazards during construction activities.

Operations

As detailed in Chapter 2, "Project Description," primary access to the North Site would be provided via a new signalized intersection on Silva Valley Parkway, shared with the South Site's main driveway. A secondary right-in/right-out driveway north of that intersection would separate fueling operations from primary traffic flows. Fuel delivery trucks would enter the northern driveway and exit at the signal to allow safe left turns, thus decreasing the potential for transportation hazards during operations. Most trucks delivering to the warehouse retail building on the South Site would access the site at the southwest driveway along Clarksville Crossing near the receiving docks. As described in Chapter 2, "Project Description," truck travel routes would use Silva Valley Parkway (from US 50 to

Clarksville Road), Clarksville Road (from White Rock Road to Silva Valley Parkway), future Country Club Drive extension to access Clarksville Road, and White Rock Road (from Clarksville Road to US 50). This would avoid traffic interaction with Oak Meadow Elementary School and residential areas to the north of the project site.

All new access driveways and roadway improvements would be subject to and designed in accordance with County roadway design and safety standards, such as the IDSG, which sets forth requirements for roadway design (e.g., roadway width, adequate sight distance) to allow for the safe movement of all modes of transportation. In addition, the project site plans would be subject to County review, which would ensure that the project design, including that of off-site improvements, would comply with applicable design standards related to transportation safety and that the project would not result in transportation hazards during operation.

Summary

The Costco project would be subject to and comply with all County design standards and safety regulations that are intended to reduce transportation hazards during construction and operations. The applicant would be required to prepare and submit a traffic control plan to County transportation staff to ensure that potential safety impacts are minimized during construction. Costco would implement several off-site improvements in accordance with General Plan policies. Roadway improvements would be designed and constructed in accordance with County design standards to reduce the risk of transportation hazards during operation. The project plans would be subject to review by County staff to ensure that applicable design standards and specifications are met to minimize transportation hazards during operations.

North Site Remainder Area

Development of the North Site Remainder Area would likely require the modification of existing roadways (e.g., ingress/egress access driveways) and the construction of new roadways. Access may be obtained from future extension of Country Club Drive (County Capital Improvement Project No. 36105008), when constructed by the County. New and modified roadways associated with development of the North Site Remainder Area would be designed and constructed in accordance with applicable design and safety standards, such as those in the IDSG, which sets forth requirements for roadway design (e.g., roadway width, adequate sight distance) to allow for the safe and efficient movement of all modes of transportation. In addition, the County requires an encroachment permit for any work that would occur within the public right-of-way. In accordance with the County encroachment permit requirements, all permits would be required to provide a traffic control plan in compliance with the CA MUTCD (El Dorado County 2024b). Compliance with the provisions of the CA MUTCD would ensure that development would not substantially increase transportation hazards during construction activities. Furthermore, project plans would be subject to review by County staff to ensure that applicable standards are met to minimize transportation hazards during operations. For these reasons, development of the North Site Remainder Area would not substantially increase transportation hazards.

Conclusions

The Costco project and future development in the North Site Remainder Area would be subject to and comply with County design and safety regulations that are intended to reduce transportation hazards during construction and operations. Project applicants would be required to prepare and submit a traffic control plan to ensure transportation hazards are minimized during construction. In addition, all new and modified roadways would be designed and constructed in accordance with County design standards, which allow for the safe movement of roadway users. All project plans would be subject to review by County staff to ensure compliance with design standards and specifications. For these reasons, the Costco project and future development within the North Site Remainder Area would not substantially increase hazards due to a design feature or incompatible use. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.14-4: Result in Inadequate Emergency Access

The Costco project and future development within the North Site Remainder Area would be designed and constructed in accordance with the standards and regulations identified in the CFC as adopted by the El Dorado Hills Fire Department, including provisions to maintain emergency access during construction and operations. For these reasons, implementation of the project would not result in inadequate emergency access. This impact is **less than significant**.

Costco Project

Construction

The Costco project would be required to comply with the most recent version of the CFC, as adopted by reference by the El Dorado Hills Fire Department. Chapter 33 of the CFC outlines general fire safety precautions during construction to promote prompt responses to fire emergencies. Section 3303.1 of the CFC requires that an owner or authorized agent develop, implement, and maintain an approved written site safety plan that establishes a fire prevention program at the project site applicable during all phases of construction, repair, alteration, or demolition work. Section 3311.1 requires that approved vehicle access be provided to all construction or demolition sites. In addition, El Dorado Hills Fire Department has established additional fire and life safety requirements, including Section 3311.3, which requires an approved address sign be provided at each fire and emergency vehicle access road entry to the project site, prior to and during construction. In addition, the project contractor would be required to adhere to all County requirements related to construction activities, including provisions set forth in Section 12.08 of the County Code. Pursuant to County Code Section 12.080, an encroachment permit would be required for any work that would occur within the County right-of-way and for the use of an oversized or overloaded vehicle traveling on the County roadway network. The Department of Transportation standard permit conditions require that a clear path of travel for all emergency vehicles be provided during construction (El Dorado County 2024b). The project would be required to adhere to these regulations as well as other applicable emergency access requirements included in the County Code. For these reasons, the project would not result in inadequate emergency access during construction.

Operations

The El Dorado Hills Fire Department would provide fire protection and emergency response services to the project area. The project would include circulation improvements, including primary access from Silva Valley Parkway, a signalized intersection at Silva Valley Parkway and Clarksville Crossing, a signalized intersection for the proposed fuel facility along with a right-in/right-out driveway, all of which would serve as emergency access points to the project site. The project would be designed in accordance with County design standards and the CFC. The CFC includes design standards for fire apparatus access (e.g., turning radii, minimum widths) and other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The El Dorado Hills Fire Department Ordinance 2022-01 also provides additional requirements for fire apparatus access roads, including minimum dimensions to allow for adequate access and turning radii for emergency vehicles accessing the project site during operations. The project site plans would be subject to review by the County and the El Dorado Hills Fire Department, thus ensuring that the project would provide adequate emergency access. For these reasons, implementation of the project would not result in inadequate emergency access during operations.

Summary

The project would be required to follow all applicable El Dorado Hills Fire Department, County, and State standards and regulations to ensure that emergency access is provided during construction and operations. The project would be subject to the El Dorado Hills Fire Department and County staff review to ensure that applicable design standards would be met and that adequate emergency access to the project site would be provided. Therefore, implementation of the project would not result in inadequate emergency access.

North Site Remainder Area

Future development of the North Site Remainder Area would be required to comply with the same regulations pertaining to emergency access as described above for the Costco project. Adherence to these requirements would ensure that adequate emergency access is provided during construction activities associated with development in the

North Site Remainder Area. In addition, development within the North Site Remainder Area would be designed in accordance with County design standards and standards included in the CFC, which include requirements for emergency access (e.g., minimum dimensions for turning radii). As described above, project plans would be subject to review by the County and the El Dorado Hills Fire Department, thus ensuring that adequate emergency access to the area would be provided once operational. For these reasons, development within the North Site Remainder Area would not result in inadequate emergency access.

Conclusions

The Costco project and future development within the North Site Remainder Area would adhere to local and state requirements that ensure emergency access is provided during construction and operations. Project site plans would be subject to review by the El Dorado Hills Fire Department and County Staff, thus ensuring that the project and future development would be designed to meet applicable emergency access standards. For these reasons, implementation of the project would not result in inadequate emergency access. This impact would be **less than significant.**

Mitigation Measures

No mitigation is required for this impact.

3.15 TRIBAL CULTURAL RESOURCES

This section analyzes and evaluates the potential impacts of the project on known and unknown (undiscovered or unidentified) Tribal cultural resources (TCRs). This section generally describes the existing TCR conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project while respecting the confidentiality of TCRs. TCRs, as defined by AB 52, Statutes of 2014, in PRC Section 21074, are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that is listed or determined to be eligible for listing in the national or state register of historical resources or listed in a local register of historic resources. A Tribal cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein) associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

The primary sources used to assess the potential effects on TCRs are the record of tribal consultation and confidential appendix for the proposed project. The appendix containing such information is confidential because the California Environmental Quality Act (CEQA) and CEQA Guidelines prohibit lead agencies from including any information from a California Native American tribe about TCRs (e.g., the location) in the environmental document or otherwise disclosing it without prior consent from the tribe that provided the information (Public Resources Code [PRC] Section 21082.3[c] and CEQA Guidelines Section 15120[d]). The California Public Records Act authorizes agencies to exclude from public disclosure archaeological site information; records of Native American graves, cemeteries, and sacred places; and records of Native American places, features, and objects (California Government Code Sections 7927.000 and 7927.005.). In addition, California's open meeting laws (the Brown Act, California Government Code Section 54950 et seq.) protect the confidentiality of Native American cultural place information.

One comment letter regarding Tribal cultural resources was received in response to the Notice of Preparation (see Appendix A). The Native American Heritage Commission (NAHC) requested AB 52 and Senate Bill (SB) 18 compliance information; SB 18 does not apply to the project because there is no General Plan amendment associated with the project (which is the trigger for SB 18 compliance). Additionally, SB 18 is not a CEQA requirement and therefore is not discussed in this section. AB 52 compliance is described below.

3.15.1 Regulatory Setting

Federal, state, and local governments have developed laws and regulations designed to protect and preserve significant cultural resources that may be affected by actions that they undertake or regulate. The National Historic Preservation Act (NHPA) and CEQA are the basic federal and state laws governing the preservation of TCRs of national, regional, state, and/or local or tribal significance within the state.

FEDERAL

American Indian Religious Freedom Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) requires federal agencies and institutions that receive federal funds, including museums, universities, state agencies, and local governments, to repatriate or transfer Native American human remains and other cultural items to the appropriate parties upon request of a culturally affiliated lineal descendant, Indian tribe, or Native Hawaiian organization (43 Code of Federal Regulations [CFR] Section 10.10). Federal NAGPRA regulations (43 CFR Part 10) provide the process for determining the rights of culturally affiliated lineal descendants, Native American tribes, and Native Hawaiian organizations to certain Native

American human remains, funerary objects, sacred objects, or objects of cultural patrimony, which are indigenous to Alaska, Hawaii, and the continental United States but not to territories of the United States, that are (i) in federal possession or control, (ii) in the possession or control of any institution or state or local government receiving federal funds, or (iii) excavated intentionally or discovered inadvertently on federal or tribal lands.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) established the National Register of Historic Places (NRHP) and the President's Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers to carry out some of the functions of the NHPA. The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service, under the US Department of the Interior, the NRHP was authorized under the National Historic Preservation Act, as amended. Its listings encompass all National Historic Landmarks, as well as historic areas administered by the National Park Service.

The NHPA (54 USC Section 300101 et seq.) created the NRHP and the list of National Historic Landmarks. Section 106 of the NHPA requires federal agencies to consider the impact of their actions on historic and archeological properties and provide the Advisory Council on Historic Preservation with an opportunity to comment on projects before implementation (Section 306108). The NRHP and federal guidelines related to the treatment of traditional cultural properties are relevant for the purposes of determining whether significant TCRs, as defined under CEQA, are present and guiding the treatment of such resources.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP.

Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the NHPA directs the following:

> [t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP.

Title 36 of the Code of Federal Regulations, Part 800 (36 CFR 800) implements Section 106 of the NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources with important cultural values; to determine whether they may be adversely affected by a proposed undertaking; and the process for eliminating, reducing, or mitigating the adverse effects.

The content of Title 36 of the Code of Federal Regulations, Section 60.4, defines criteria for determining eligibility for listing in the NRHP. The significance of cultural resources identified during an inventory must be formally evaluated for historic significance in consultation with the ACHP and the California State Historic Preservation Officer to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Regarding criteria A through D of Section 106, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That 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. That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in NRHP guidance, How to Apply the National Register Criteria, as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1997). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (consideration criteria G) to be considered for listing.

A historic property is defined as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria" (Title 36 Code of Federal Regulations Sections 800.16[i][1]).

STATE

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP) are also listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historical resource must be significant at the local, State, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

Criterion 1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

Criterion 2. Is associated with the lives of persons important to local, California, or national history.

Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.

Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP: location, design, setting, materials, workmanship, feeling, and associations.

California Environmental Quality Act

The Native American Historic Resource Protection Act (AB 52), which went into effect July 1, 2015, establishes that TCRs must be considered under CEQA and defines a lead agency's requirements for notification and consultation with California Native American tribes. CEQA requires public agencies to consider the effects of their actions on "[T]ribal cultural resources." PRC Section 21084.2 establishes that "[a] project with an effect that may cause a

substantial adverse change in the significance of a [T]ribal cultural resource is a project that may have a significant effect on the environment." PRC Section 21074 states:

a) "Tribal cultural resources" are either of the following:

    1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following:

        A) Included or determined to be eligible for inclusion in the CRHR.

        B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

    2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe.

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

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

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: "[T]ribal cultural resources," defined in PRC Section 21074. Pursuant to CEQA requirements, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration.

As discussed above, the Native American Historic Resource Protection Act amended CEQA to require public agencies to consider the effects of their actions on TCRs. CEQA also requires that public agencies avoid damaging effects to any TCR, when feasible. If the lead agency determines that a project may cause a substantial adverse change in a TCR, and measures are not otherwise identified in the consultation process, state law provides mitigation measures that may be considered to avoid or minimize the significant adverse impacts. These include:

- Avoidance and preservation in place, including incorporation of the resource into open spaces, parks, or green spaces;
- Treating the resource with appropriate dignity, including protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource;
- Establishing conservation easements or other interests in real property with culturally appropriate management criteria for purposes of preserving or utilizing the resource in place; or
- Otherwise protecting the resource.

CEQA Guidelines Section 15064.5(e), requires that excavation activities be stopped whenever human remains are uncovered, and the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as identified in a timely manner by the NAHC. Section 15064.5 of the CEQA Guidelines directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

Senate Bill 297

SB 297 addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction; and establishes the NAHC to resolve disputes regarding the disposition of such remains. The provisions of SB 297 have been incorporated into Section 15064.5(e) of the CEQA Guidelines.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act of 2001, as amended, requires all state agencies and state-funded museums that have possession or control over collections of California Native American human remains or cultural items to provide a process for the identification, inventory, and repatriation of these items to the appropriate tribes. Lineal descendants of human remains or cultural items may file a claim for the return of the materials by demonstrating the relationship between the lineal descendent and the materials.

Health and Safety Code, Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains and determined whether they are subject to the coroner's authority. If the human remains are determined to be of Native American origin, the county coroner must contact the California NAHC within 24 hours of this identification. An NAHC representative will then identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. In addition, PRC Section 5097.98 and CEQA Guidelines Section 15064.5 specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the NAHC, which notifies (and has the authority to designate) the most likely descendants of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resource Code Section 5097

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

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

LOCAL

El Dorado County General Plan

The El Dorado County General Plan includes policies related to cultural resources related to the project.

- **Objective 7.5.1:** Protection of Cultural Heritage - Creation of an identification and preservation program for the County's cultural resources.
  - **Policy 7.5.1.1.** The County shall establish a Cultural Resources Ordinance. This ordinance shall provide a broad regulatory framework for the mitigation of impacts on cultural resources (including historic, precontact and paleontological resources) by discretionary projects. This Ordinance should include (but not be limited to) and provide for the following:

A. Appropriate (as per guidance from the Native American Heritage Commission) Native American monitors to be notified regarding projects involving significant ground-disturbing activities that could affect significant resources.

B. A 100-foot development setback in sensitive areas as a study threshold when deemed appropriate.

C. Identification of appropriate buffers, given the nature of the resources within which ground-disturbing activities should be limited.

D. A definition of cultural resources that are significant to the County. This definition shall conform to (but not necessarily be limited to) the significance criteria used for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) and Society of Vertebrate Paleontology.

E. Formulation of project review guidelines for all development projects.

F. Development of a cultural resources sensitivity map of the County.

- Policy 7.5.1.2. Reports and/or maps identifying specific locations of archaeological or historical sites shall be kept confidential in the Planning Department but shall be disclosed where applicable.
- Policy 7.5.1.3. Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.
- Policy 7.5.1.6. The County shall treat any significant cultural resources (i.e., those determined California Register of Historical Resources/National Register of Historic Places eligible and unique paleontological resources), documented as a result of a conformity review for ministerial development, in accordance with CEQA standards.
- Policy 7.5.2.4. The County shall prohibit the modification of all National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) listed properties that would alter their integrity, historic setting, and appearance to a degree that would preclude their continued listing on these registers. If avoidance of such modifications on privately owned listed properties is deemed infeasible, mitigation measures commensurate with NRHP/CRHR standards shall be formulated in cooperation with the property owner.
- Policy 7.5.2.4. The County shall prohibit the modification of all National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) listed properties that would alter their integrity, historic setting, and appearance to a degree that would preclude their continued listing on these registers. If avoidance of such modifications on privately owned listed properties is deemed infeasible, mitigation measures commensurate with NRHP/CRHR standards shall be formulated in cooperation with the property owner.

3.15.2 Environmental Setting

ETHNOHISTORY

The project site is located within a boundary zone between traditional Nisenan and Miwok territories; this boundary area has been described as being located between Latrobe on the south and Folsom on the north.

In both Valley Nisenan and Plains Miwok groups, the tribelet, a loose political organization, controlled specific districts usually bounded by the land between drainages. Prior to the gold rush, the establishment of Sutter's Fort,

and the 1833 epidemic, villages were distributed along the banks and tributaries of major rivers such as the Sacramento, American, and Cosumnes (Helix 2025).

Valley Nisenan communities ranged in size from small, extended families of 15 to 25 people to large villages with a population over 500. In the early 1800s, a large group could be found at a single village or a cluster of small camps around a large village. The Valley Nisenan built their villages on low, natural levees along rivers and streams, or on gentle slopes with southern exposure. The post-Sutter Nisenan village of *Kadema* was situated on a low knoll along the American River 20 miles west of Clarksville. The villages varied in size from three to 40 or 50 houses. Living quarters were dome shaped, 10 to 15 feet in diameter, and covered with earth, tule mats or grasses. Brush shelters supported by upright posts were constructed in summer and during seasonal rounds of food-gathering. Specialized structures included the semi-subterranean assembly house located at major villages, the sweat house used for curing and purification, and the acorn granary. The women of most villages made mortar holes in exposures of bedrock to pulverize acorns (Helix 2025).

According to the published literature, foothill Nisenan villages were located on ridges and large flats along major streams. These village sites were smaller than their valley counterparts. Littlejohn reported on the Nisenan village sites of *Bamon* at Shingle Springs, *Yo hi mu* and *Tu lul* near Shingle Springs, *Po lun kit* near Clarksville, and *Wapumi* at Latrobe. In the foothills, it was common for families to live away from the main village. Other sites included seasonal camps, quarries, ceremonial grounds, trading sites, fishing locales, cemeteries, river crossings, and battlefields. The nearest known historic Native American cemetery is located on a ridge between the ravine of Screech Owl Creek and Marble Valley some distance southeast of Clarksville (Helix 2025).

The 1833 epidemic, probably malaria brought south from Oregon by a party of trappers, decimated an estimated 75 percent of California's native population. By the 1840s, a number of the remaining Nisenan people settled around Sutter's Fort and worked for Sutter until the gold rush. Others pressed into traditional Miwok territory. Independent records show the 1840 to 1843 location of *Yusumne*, a Valley Nisenan village, on the valley portion of the American River six miles east of Sutter's Fort. However, in 1846, records show that *Yusumne* was located between Sloughhouse and Plymouth. This apparent move is the first concrete evidence of Nisenan intrusion into Miwok territory (Helix 2025).

A Nisenan group from Carson Creek moved five miles southwest of Clarksville to Walltown under pressure from miners on Carson Creek during the early part of the gold rush. The Walltown Nisenan group attended a "Big Time" (dances and ceremonies) at *Po lun kit*, thereby retaining their connections with the Clarksville area. In the 1870s, however, Walltown residents apparently forced the native people to move again. This time, the move was to *Palmul* at Michigan Bar on the Cosumnes River. Prior to 1848, members of another Nisenan tribelet, the *Wapumne*, were apparently located along the foothills portion of the American River drainage. The tribelet's center may have been near Shingle Springs. However, the tribelet moved to Latrobe, several miles south of Clarksville, sometime between 1847 and 1864 (Helix 2025).

CONTEMPORARY NATIVE AMERICAN SETTING

While historic context is important, some archaeologists focus on past Native American culture while current Native American culture can often be overlooked. This approach is not sufficient to provide a context or set of values maintained by the current Native American community related to their history and the landscape. Tribes view themselves as contemporary stewards of their culture and the landscape, representing a continuum from the past to the present. They are resilient, vibrant, and active in the community. Tribes maintain their connection to their history and ongoing culture by practicing traditional ceremonies, engaging in traditional practices (e.g., basketry), and conducting public education and interpretation. The acknowledgment of Native American history and the persistence of tribes cannot be overlooked and should be recognized.

Defining Tribal cultural resources involves the knowledge and expertise of living California Native Americans. As the embodiment of a continuous connection between tribal history and the landscape, they are uniquely qualified to act as the interpreters and stewards of their culture, including the ability to define the significance of the material remains and landscapes of their ancestor's lifeways.

As archaeologists routinely focus on traditional Native American lifeways and ignore current and vibrant Native American culture, a sufficient context or set of values maintained by the current Native American community related to their history and the landscape is often ignored. To help remedy this for the project, a discussion of the contemporary Native American setting is included below.

Today, many descendants of Valley Nisenan and Plains Miwok still reside on lands once inhabited by their ancestors or on lands set aside for tribal communities by the federal government in California which may or may not been traditionally inhabited by their ancestors. Contemporary Californian Native American tribes with ancestral connections to the study area and Valley Nisenan and Plains Miwok heritage include the United Auburn Indian Community (UAIC), Shingle Springs Band of Miwok Indians (SSBMI), Ione Band of Miwok, and Wilton Rancheria.

These tribes today maintain connection to their history and culture in a multitude of ways, including through ceremony, language and traditional knowledge instruction, community service, and tribal governance. For example, a "Big Time" is typically celebrated every September to mark the start of autumn and acorn gathering time at Chaw'se Grinding Rock State Park in Pine Grove. This celebration includes serving traditional foods, traditional dancing, healing rituals, and worship in the roundhouse. Language and traditional skill classes are offered by most of the tribes, including by the SSBMI which has a Traditional Ecological Knowledge department to assist members with learning about respectful and traditional uses of plants and animals, and the UAIC who has a Pre-K through 8th grade school where key aspects of Indian culture and critical thinking are taught to prepare tribal members to face future challenges (Private School Review 2025; SSBMI 2025a). Tribal community service departments provide family support services to adults and children in order to promote the health and well-being of tribal community members and their families as well as connection to their heritage. Common services offered by all tribes include Indian Child Welfare Act advocacy and intervention, housing assistance, health care assistance, elder programs, and grants and scholarships for higher education (Ione Band of Miwok Indians 2025; SSBMI 2025a; UAIC 2025; Wilton Rancheria 2025a).

Governance on tribal lands is typically outlined by tribally prepared constitutions, codes and/or ordinances, and are carried out by tribal departments which are in turn typically overseen by the tribal council. This includes the office of Tribal Historic Preservation Officer. Because tribes retain inherent sovereign powers over their members and territory, SSBMI and the Wilton Rancheria also have Tribal Courts which serve as culturally- sensitive, independent judicial forums where tribal cultural values are held at the forefront of dispute resolutions (SSBMI 2025b; Wilton Rancheria 2025b). This knowledge of traditions and culture are conveyed through the expertise of the traditionally and culturally affiliated California Native American tribe during consultation with lead agencies, as required by AB 52. During the consultation process, Tribal cultural bearers can share information related to the project areas, such as: what event took/takes place here, and how is that event important to the Tribe; what artistic, professional, and/or ceremonial cultural tradition is represented by the resource; or how can this resource be used to teach others in the Tribe and convey Tribal values.

It should be noted that UAIC, Wilton Rancheria, SSBMI, and Ione Band of Miwok are all also federally recognized Tribes. The tribes have deep spiritual, cultural, and physical ties to their ancestral land and are contemporary stewards of their culture and landscapes.

RECORDS SEARCHES AND CONSULTATION

Records Search

As described in Section 3.4, Cultural Resources, multiple record searches have been performed for this project at the North Central Information Center (NCIC). Six previously recorded archaeological sites are located within the project site; only one site, a bedrock milling feature, is indigenous in nature.

P-09-00017

This archaeological feature is a single shallow bedrock mortar hole located on a greenstone outcrop. The cupule measures 9 centimeters (cm) by 10 cm and is 2 cm deep. No artifacts have been found in association with the feature. In 2013 a single shovel test pit adjacent to the outcrop revealed no artifacts or cultural deposits. Inspection of nearby backdirt from gophers and/or other burrowing animals was also negative. In a June 2012 letter from the US Army

Corps of Engineers (USACE) to the State Historic Preservation Officer (SHPO), the USACE recommended that P-09-00017 was not eligible for the NRHP or the CRHR as an individual resource or as a contributing resource to the Mormon Hill Historic District. The SHPO concurred with these determinations in an August 2012 letter. This feature was not located during the 2018 survey.

Sacred Lands File Search

A search of the NAHC Sacred Lands File was requested; on May 2, 2022 the results were returned as negative for the presence of Native American resources within the project area. An updated search was requested on January 24, 2025, which also resulted in negative results.

Tribal Consultation

Native American Consultation

On August 2, 2021, in compliance with AB 52 requirements, El Dorado County sent notification letters to the following seven California Native American tribal representatives:

- Colfax-Todds Valley Consolidated Tribe; Pamela Cubbler, Treasurer;
- Ione Band of Miwok Indians; Sara D. Setshwaelo, Chairperson;
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe; Mr. Cosme Valdez, Chairperson;
- Shingle Springs Band of Miwok Indians (SSBMI); Regina Cuellar, Chairperson;
- Tsi Akim Maidu; Mr. Don Ryberg, Chairperson;
- UAIC of the Auburn Rancheria; Gene Whitehouse, Chairperson; and
- Washoe Tribe of Nevada and California; Darrel Cruz, Cultural Resources Department.

On August 18, 2021, UAIC responded, and deferred to SSMBI, as the project site is more closely in SSMBI's territory. On September 22, 2021, SSMBI responded to the County's notification letter and requested consultation. On October 6th, the County provided the cultural resources report; the County requested potential meeting dates on October 7th and November 18th of 2021, and again on May 18, 2022. After this point, the project was put on hold and redesigned.

On February 25, 2025, the County sent out formal consultation request letters notifying the tribes that the project had been revised to its current form and therefore was being re-instated and processed by the County. The tribes had 30 days to respond to request consultation. The response window closed on March 27, 2025. These letters were sent to the following tribes/tribal representatives:

- Ione Band of Miwok Indians, Sara Dutschke, Chairperson
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe, Mr. Cosme Valdez, Chairperson
- SSMBI, Regina Cuellar, Chairperson
- Tsi Akim Maidu, Ben Cunningham-Summerfield
- UAIC, Gene Whitehouse, Chairperson
- Washoe Tribe of Nevada and California, Darrel Cruz, Cultural Resources Department
- Wilton Rancheria, Herbert Griffin

UAIC

On March 20, 2025, UAIC requested to officially consult under AB 52, requesting the opportunity to review and comment on the cultural resources report and to conduct a tribal survey for the identification of TCRs as part of UAIC's consultation.

On April 8, 2025, the County, the project applicants, and members of UAIC met at the project site to walk the property, discuss the project, and conduct a survey for TCRs. TCRs were not located during the site visit.

On April 10, at the request of UAIC, the following items were provided to UAIC for their review and records:

- Project site draft geotechnical report
- Project site rough and preliminary grading plans
- Project site Cultural Resource Evaluation from 2013
- Project site Cultural Resources Report from 2020
- Cultural Resources Report Peer Review from April 2022
- Revised Cultural Resources Report from July 2022
- Updated Cultural Resources Report from March 2025

SSBMI

On May 15, 2025, SSBMI requested consultation regarding the project to address cultural and historic resource issues. Cultural reports and studies were sent to SSBMI on May 16, 2025.

On May 27, 2025, a consultation meeting between County staff and SSBMI members under AB 52 was held.

TRIBAL CULTURAL RESOURCES

Tribal cultural resources are defined in CEQA statute Section 21074 (see Regulatory Setting) and may include:

- **Resource Collection Location:** This is a location where Native Americans have historically gone, and are known or believed to go today, to collect resources in accordance with traditional cultural rules of practice.
- **Spiritual Location:** This is a location where Native American religious practitioners have historically gone, and are known or believed to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice.
- **Traditional Location:** This is a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world.
- **Cemetery:** A cemetery is a location that has been selected for human burial or interment. This also includes the soil.

Additionally, different types of archaeological resources may also be tribal cultural resources; they include the following features:

- **Village Site:** Village sites are locations of continuous and concentrated habitation that typically have a large, well-developed cultural soil deposit. They may also contain burials, rock art, bedrock milling stations, or other features.
- **Burial Site:** A burial site or cemetery is a location where intentional human interments are found, either articulated or disarticulated. Burial soils and offerings are included as significant.
- **Milling Site:** This is a boulder or group of boulders or bedrock outcrops that contain at least one modified surface (mortar, slick, or metate) caused by the processing of food or other natural resources. Tribes still consider these as the "kitchens" of their ancestors.
- **Lithic Scatter:** A lithic scatter is a distribution of stone flakes and tool fragments reflecting purposeful modification of parent stone through percussion and/or pressure detachment.
- **Shell Middens:** Shell middens are locations with large amounts of marine shell that extend to an appreciable depth below ground surface.
- **Rock Art:** Rock art consists of designs or design elements on rock surfaces created by surface applications (pictographs) or by etching (petroglyphs).

- **Rock Shelters:** These are natural caves or crevices in rock outcrops in which human use has left artifactual remains.
- **Cultural Objects:** Objects of cultural significance, such as hand stones or projectile points, that are not directly associated with a known cultural site.

No tribal cultural resources have been identified through the AB 52 process for this project.

3.15.3 Impacts and Mitigation Measures

METHODOLOGY

Information related to tribal cultural resources is based on findings reported in the NAHC Sacred Lands File database search, the NCIC records search results, and the results of Native American consultation under AB 52. The analysis is also informed by the provisions and requirements of State and local laws and regulations that apply to cultural resources.

PRC Section 21074 defines "Tribal cultural resources" as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American [T]ribe" that are listed or determined eligible for listing in the CRHR, listed in a local register of historical resources, or otherwise determined by the lead agency to be a Tribal cultural resource.

For the purposes of this impact discussion, "historical resource" is used to describe historic-era, built-environment resources while the term "unique archaeological resource" is used to describe archaeological sites. Tribal cultural resources, which may qualify as "historical resources" pursuant to CEQA, are analyzed separately from built-environment historical resources and unique archaeological resources, which are analyzed in Section 3.03 of this EIR.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on Tribal cultural resources if it would:

- Cause a substantial adverse change in the significance of a Tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe.

ISSUES NOT DISCUSSED FURTHER

All potential tribal cultural resources impacts are evaluated below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.15-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource

Although consultation did not result in the identification of any tribal cultural resources, ground-disturbing activities could damage or destroy previously unknown tribal cultural resources. Therefore, impacts to tribal cultural resources is considered to be **significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

As described previously, the County sent letters notifying that the proposed project was being addressed under CEQA, as required by PRC 21080.3.1, to seven California Native American tribal representatives. SSBMI and UAIC have requested consultation. UAIC conducted a survey for indigenous materials, and none were identified on the project

site, including the precontact archaeological site (P-09-00017) previously identified in the NCIC search. In addition, the search of the NAHC Sacred Lands File database was completed with negative results. For these reasons, no part of the project site meets any of the criteria for tribal cultural resources as defined in PRC Section 21074.

Nevertheless, construction-related activities, both ground-disturbing and staging access, could encounter previously undiscovered or unrecorded resources. This could result in physical changes to sites, structures, and areas that have religious or sacred significance or other cultural significance to the Valley Nisenan and Plains Miwok people. Therefore, this impact would be **significant**.

Mitigation Measures

Mitigation Measure 3.15-1a: Prepare and Implement a Worker Cultural Awareness and Sensitivity Training for Tribal Cultural Resources

Prior to project-specific ground-disturbing activities, the applicant/Contractor shall provide a Tribal Cultural Resources Awareness and Sensitivity Training (training) for all personnel involved in project construction, including field consultants and construction workers, at their own expense. The training shall be developed in coordination with Native American Tribes that have participated in consultation on this project.

The training shall be conducted before any project-related ground disturbing or construction activities begin at the project site. The training will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The training will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American Tribal values.

All ground-disturbing equipment operators shall be required to receive the training and sign a form that acknowledges receipt of the training.

Mitigation Measure 3.15-1a shall be included as a note on any project Improvement Plans subject to review and approval by the El Dorado County Planning and Building Department.

Mitigation Measure 3.15-1b: Tribal Monitoring: Initial Ground Disturbance

The project proponent or their construction contractor shall comply with the following measure to assist with identification of TCRs at the earliest possible time during project-related earthmoving activities:

- The project proponent shall contact the UAIC THPO (thpo@auburnrancheria.com) at least 2 to 3 months prior to project ground-disturbing activities to retain the services of a UAIC Certified Tribal Monitor(s). The duration of the construction schedule and Tribal Monitoring shall be determined at this time.
- A contracted UAIC Certified Tribal Monitor(s) shall monitor the initial ground disturbance in the project area. If there are cultural finds, the UAIC THPO may require additional Tribal Monitoring.
- Tribal Monitors or Tribal Representatives shall have the authority to direct that work be temporarily paused, diverted, or slowed within 100 feet of the immediate impact area if sites, cultural soils, or objects of potential significance are identified. The temporary pause/diversion shall be of an adequate duration for the Tribal Representative to examine the resource.
- Appropriate treatment of TCRs or other cultural finds may include but is not limited to:
    a. Recordation of the resource(s)
    b. Avoidance and preservation of the resource(s)
    c. Recovery and reburial of the resource(s) onsite or in a feasible off-site location in a designated area subject to no future disturbance. The location of the reburial shall be acceptable to the UAIC.

- To track the implementation of this measure, the Tribal Monitor(s) shall document field-monitoring activities on a Tribal Monitor log.
- The Tribal Monitor(s) shall wear the appropriate safety equipment while on the construction site.
- The Tribal Monitor, in consultation with the UAIC THPO and the project proponent shall determine a mutual end or reduction to the on-site monitoring if/when construction activities have a low potential for impacting Tribal Cultural Resources.
- In the event the Tribal Monitor does not report to the job site at the scheduled time after receiving 24-hour business day notice, construction activities may proceed without tribal monitoring. At no time, regardless of the presence or absence of a Tribal Monitor, shall suspected TCRs be mishandled or disrespected.
- The County of El Dorado shall assist with resolution of disagreements between the project proponent/contractor and the Tribe if such occurs on the project.

Mitigation Measure 3.15-1b shall be included as a note on any project Improvement Plans subject to review and approval by the El Dorado County Planning and Building Department.

Mitigation Measure 3.15-1c: Unanticipated Discoveries of Tribal Cultural Resources

During any ground-disturbing activities, including construction, if any suspected Tribal Cultural Resources (TCRs) or resources of cultural significance to any culturally affiliated Tribe, including but not limited to features, anthropogenic/cultural soils, cultural belongings or objects (artifacts), shell, bone, shaped stones or bone, or ash/charcoal deposits, are discovered by any person during construction activities, including ground disturbing activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. Work shall cease in and within the immediate vicinity of the find regardless of whether the construction is being actively monitored by a Tribal Monitor, cultural resources specialist, or professional archaeologist.

A Tribal Representative and the County of El Dorado shall be immediately notified, and the Tribal Representative in coordination with the County of El Dorado shall determine if the find is a TCR (PRC §21074) and the Tribal Representative shall make recommendations for further evaluation and treatment as necessary.

Treatment and Documentation

The culturally affiliated Tribe shall consult with the County of El Dorado to (1) identify the boundaries of the new TCR and (2) if feasible, identify appropriate preservation in place and avoidance measures, including revision or adjustments to the existing construction process, and long-term management, or (3) if avoidance is infeasible, a reburial location in proximity of the find where no future disturbance is anticipated. Permanent curation of TCRs will not take place unless approved in writing by the culturally affiliated Tribe.

The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of TCRs that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the TCR and can range from a small lock box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored.

The construction contractor(s) and the County of El Dorado shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing a reburial location that is consistent with the Tribe's preferences, excavation of the reburial location, and assisting with the reburial, upon request.

Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 2 weeks of the discovery and submitted to the appropriate California Historical Resource Information System (CHRIS center in a timely manner.

Work at the discovery location shall not resume until authorization is granted by the County of El Dorado in coordination with the culturally affiliated Tribe.

If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the County Coroner and the culturally affiliated Tribe shall be contacted immediately. Upon determination by the County Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will work with the project proponent to define appropriate treatment and disposition of the burials.

Mitigation Measure 3.15-1c shall be included as a note on any project Improvement Plans subject to review and approval by the El Dorado County Planning and Building Department.

Significance after Mitigation

Implementation of Mitigation Measures 3.15-1a through 3.15-1c would reduce the proposed project's impact to a **less-than-significant** level by requiring preservation options and proper care of significant artifacts and human remains if they are discovered/recovered.

3.16 UTILITIES AND SERVICE SYSTEMS

This section evaluates the availability of existing utility and infrastructure systems (water, wastewater, electricity, natural gas, and solid waste) to serve the project and the impact of the project on these systems. The analysis is based on documents obtained from public utility service providers and agencies, including the El Dorado Irrigation District (EID), El Dorado Hills Community Services District (EDHCSD), and California Department of Resources Recycling and Recovery (CalRecycle).

During the notice of preparation (NOP) scoping period, commenters expressed concerns about the capacity of existing utility infrastructure and supplies to serve the project, including electricity, water, and stormwater drainage. The availability of sufficient water supplies, including during drought years, is addressed in Section 3.15.3, "Environmental Impacts and Mitigation Measures," below. Energy consumption is addressed in Section 3.5, "Energy." Stormwater drainage is addressed in Section 3.9, "Hydrology and Water Quality." Comments received on the NOP are provided in Appendix A.

3.16.1 Regulatory Setting

DOMESTIC WATER

Federal

Safe Drinking Water Act

As mandated by the Safe Drinking Water Act (SDWA) (Public Law 93-523), passed in 1974, the US Environmental Protection Agency (EPA) regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary Maximum Contaminant Levels (MCLs). MCLs and the process for setting these standards are reviewed every 3 years. Amendments to the SDWA enacted in 1986 established an accelerated schedule for setting drinking water MCLs. EPA has delegated responsibility for California's drinking water program to the State Water Resources Control Board Division of Drinking Water (SWRCB-DDW). SWRCB-DDW is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

State

Urban Water Management Plan

In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMPA) (California Water Code Sections 10610–10656). The UWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet (af) of water annually, 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. This effort includes the adoption of an urban water management plan (UWMP) by every urban-water supplier and an update of the plan every 5 years on or before December 31, of every year ending in a five or zero. The UWMPA has been amended several times since 1983.

EID, the public water agency that would serve the project, adopted its current UWMP on June 28, 2021. Refer to the "Local" regulations section below for additional information about EID's UWMP.

California Safe Drinking Water Act

SWRCB-DDW is responsible for implementing the federal SDWA and its updates, as well as California statutes and regulations related to drinking water. State primary and secondary drinking water standards are promulgated in CCR Title 22, Sections 64431–64501.

The California Safe Drinking Water Act (CA SDWA) was passed in 1976 to build on and strengthen the federal SDWA. The CA SDWA protects the public from contaminants in drinking water by establishing MCLs that are at least as stringent as those developed by EPA, as required by the federal SDWA.

California Green Building Standards Code

In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (CALGreen) (CCR Title 24, Part 11). CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure in California. The currently adopted 2022 CALGreen Code, which took effect on January 1, 2023, includes updates for planning and design, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

CALGreen requires the installation of energy- and water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. It requires residential and nonresidential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use in the building by 20 percent. The 20-percent water savings can be achieved by (1) installing plumbing fixtures and fittings that meet the 20-percent reduced flow rate specified in the CALGreen Code or (2) demonstrating a 20-percent reduction in water use from the building "water use baseline."

California Model Water Efficient Landscape Ordinance

The Water Conservation in Landscaping Act was enacted in 2006, requiring the California Department of Water Resources to update the Model Water Efficient Landscape Ordinance (MWELO) (California Government Code section 65591-65599). In 2009, the Office of Administrative Law approved the updated MWELO, which required a retail water supplier or a county to adopt the provisions of the MWELO by January 1, 2010, or enact its own provisions equal to or more restrictive than the MWELO provisions (CCR Title 23, Division 2, Chapter 27, Section 492.4).

In response to the Governor's executive order (EO B-29-15) dated April 1, 2015, the California Department of Water Resources updated the MWELO and the California Water Commission approved the adoption and incorporation of the updated State standards for MWELO on July 15, 2015. These updated changes have been incorporated into CCR Title 23, Division 2, Chapter 27, Section 490-495. The changes included a reduction in the landscape area that can be planted with high water use plants for non-residential projects. The MWELO applies to all types of new construction with a landscape area greater than 500 square feet (the prior MWELO applied to landscapes greater than 2,500 square feet) (CCR Title 23, Division 2, Chapter 27, Section 490.1). For non-residential projects, the coverage of high-water use plants is reduced due to the new 45 percent water maximum and turf is limited.

In El Dorado County, the El Dorado County Planning and Building Department reviews all new development for conformance with MWELO standards.

Senate Bill x7-7 (Chapter 4, Statutes of 2009)

Senate Bill (SB) x7-7, the Water Conservation Act of 2009, required the State to achieve a 20-percent reduction in urban per capita water use by December 31, 2020. The responsibility for this conservation falls to local water agencies, which must increase water use efficiency through promotion of water conservation standards consistent with the California Urban Water Conservation Council's best management practices (BMPs). Each urban retail water supplier is also required to develop urban water use targets and an interim urban water use target by July 1, 2011, based on the alternative methods set out in the 2009 act. EID is a signatory to the memorandum of understanding that commits California Urban Water Conservation Council members to implementation of the BMPs.

Cortese-Knox-Hertzberg Local Government Reorganization Act

Local agency formation commissions (LAFCOs) are State-mandated quasi-judicial countywide commissions that have the sole discretion to approve, modify, and approve, or disapprove boundary changes of cities and special districts; the formation of new agencies, including the incorporation of new cities and districts; and the consolidation or reorganization of special districts and or cities as provided for under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. LAFCOs are charged to ensure the orderly formation of local governmental agencies, preserve agricultural and open space lands, and discourage urban sprawl. The project would need to be approved into the surrounding service districts.

Local

El Dorado County General Plan

Applicable objectives and policies included in the El Dorado County General Plan relevant to domestic water supplies including the following:

- Objective 5.1.2: Concurrency. Ensure through consultation with responsible service and utility purveyors that adequate public services and utilities, including water supply, wastewater treatment and disposal, solid waste disposal capacity, storm drainage, fire protection, police protection, and ambulance service are provided concurrent with discretionary development or through other mitigation measures provided, and ensure that adequate school facilities are provided concurrent with discretionary development to the maximum extent permitted by State law. It shall be the policy of the County to cooperate with responsible service and utility purveyors in ensuring the adequate provision of service. Absent evidence beyond a reasonable doubt, the County will rely on the information received from such purveyors and shall not substitute its judgment for that of the responsible purveyors on questions of capacity or levels of service.
  - Policy 5.1.2.1: Prior to the approval of any discretionary development, the approving authority shall make a determination of the adequacy of the public services and utilities to be impacted by that development. Where, according to the purveyor responsible for the service or utility as provided in Table 5-1, demand is determined to exceed capacity, the approval of the development shall be conditioned to require expansion of the impacted facility or service to be available concurrent with the demand, mitigated, or a finding made that a CIP project is funded and authorized which will increase service capacity.
  - Policy 5.1.2.2: Provision of public services to new discretionary development shall not result in a reduction of service below minimum established standards to current users, pursuant to Table 5-1 [presented in this EIR as Table 3.16-1].

    The following Levels of Service shall apply to the review of discretionary projects.

Table 3.16-1 General Plan Table 5-1: Minimum Levels of Service

	Community Region	Rural Center and Rural Region
Public water source	As determined by purveyor	As determined by purveyor, when applicable
Private wells	Environmental Management	Environmental Management
Public water treatment capacity	As determined by purveyor	As determined by purveyor
Public sewer treatment capacity	As determined by purveyor	As determined by purveyor
On-site sewage disposal	Environmental Management	Environmental Management
Storm drainage	Department of Transportation	Department of Transportation
Solid waste	Environmental Management	Environmental Management
County and state road circulation system	E	D
Schools	As determined appropriate by the school districts	As determined appropriate by the school districts
Parks	Specific plan for new communities or Quimby Fee/dedication program for tentative maps	Quimby Fee/dedication program for tentative maps
Fire district response	8-minute response to 80% of the population	15 to 45-minute response
Sheriff	8-minute response to 80% of the population	No standard
Ambulance	10-minute response to 80% of the population	20-minute response in Rural Regions and "as quickly as possible" in wilderness areas*

*In accordance with State standards.

Source: El Dorado County General Plan Public Services and Utilities Element.

- **Policy 5.1.2.3:** New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the general plan land use map to the extent allowed by State law.

- **Objective 5.2.1: County-Wide Water Resource Program.** Establish a county-wide water resources development and management program to include the activities necessary to ensure adequate future water supplies consistent with the General Plan.
  - **Policy 5.2.1.2:** An adequate quantity and quality of water for all uses, including fire protection, shall be provided for with discretionary development.
  - **Policy 5.2.1.3:** All medium-density residential, high-density residential, multifamily residential, commercial, industrial and research and development projects shall be required to connect to public water systems when located within Community Regions and to either a public water system or to an approved private water systems in Rural Centers.
  - **Policy 5.2.1.6:** Priority shall be given to discretionary developments that are infill or where there is an efficient expansion of the water supply delivery system.
  - **Policy 5.2.1.7:** In times of declared water shortages, the Board of Supervisors shall give priority within the affected water district to approving affordable housing and non-residential development projects.
  - **Policy 5.2.1.9:** In an area served by a public water purveyor or an approved private water system, the applicant for a tentative map or for a building permit on a parcel that has not previously complied with this requirement must provide a WSA that contains the information that would be required if a water supply assessment were prepared pursuant to Water Code section 10910. In order to approve the tentative map or building permit for which the assessment was prepared the County must (a) find that by the time the first grading or building permit is issued in connection with the approval, the water supply from existing water supply facilities will be adequate to meet the highest projected demand associated with the approval on the lands in question; and (b) require that before the first grading permit or building permit is issued in connection with the approval, the applicant will have received a sufficient water meters or a comparable supply guarantee to provide adequate water supply to meet the projected demand associated with the entire approval. A water supply is adequate if the total entitled water supplies available during normal, single, dry, and multiple dry years within a 20-year projection will meet the highest projected demand associated with the approval, in addition to existing and 20-year projected future uses within the area served by the water supplier, including but not limited to, fire protection, agricultural, and industrial uses, 95 percent of the time, with cutbacks calculated not to exceed 20 percent in the remaining 5 percent of the time.
  - **Policy 5.2.1.10:** The County shall support water conservation and recycling programs and projects that can reduce future water demand consistent with the policies of the general plan. The County will develop and implement a water use efficiency program for existing and new residential, commercial/industrial, and agricultural uses. The County will also work with each of the County's water purveyors to develop a list of the type of uses that must utilize reclaimed water if feasible. The feasibility of using reclaimed water will be defined with specific criteria developed with public input and with the assistance of EID, and will be coordinated with their ongoing reclaimed water (also referred to as recycled water) planning and implementation process. The County shall encourage all water purveyors to implement the water conservation-related Best Management Practices already implemented by EID and in compliance with the related criteria established by U.S. Bureau of Reclamation.
  - **Policy 5.2.1.11:** The County shall direct new development to areas where public water service already exists. In Community Regions, all new development shall connect to a public water system. In Rural Centers, all new development shall connect either to a public water system or to an approved private water system.

- **Objective 6.10.1: Encourage Water Efficiency.** Promote cost-effective water conservation and water efficiency measures.
  - **Policy 6.10.1.2:** Continue to enforce the County Landscape and Irrigation Standards, where applicable, including parking lot shading; incorporating stormwater best management practices into landscape areas; requiring water conservation methods that encourage the use of native, drought tolerant species; and promoting knowledge of Appendix C to the Standards, El Dorado County Drought Resistant Plant List, to encourage use in private development).
  - **Policy 6.10.1.3:** Require new development to demonstrate that adequate water is available before project approval and to fund its fair-share costs associated with the provision of water service.
  - **Policy 6.10.1.5:** Enforce the Model Water Efficient Landscape Ordinance (MWELO) for new development and retrofitted landscapes, as referenced by Title 24, Part 11, Chapters 4 and 5 of the CalGreen Building Code.

El Dorado Local Agency Formation Commission

El Dorado LAFCO is a state-mandated local agency whose jurisdiction is all of El Dorado County. The California Legislature directs El Dorado LAFCO to promote orderly growth and development, discourage urban sprawl while preserving open space and agricultural lands, and encourage efficient service areas for local governments, as provided under the Cortese-Knox-Hertzberg Local Government Reorganization Act.

LAFCOs are responsible for reviewing and approving proposed boundary changes for most public agencies, including annexations and detachments of territory to or from cities and special districts; incorporations of new cities; formations of new special districts; and consolidations, mergers, and dissolutions of existing districts. In addition, LAFCOs must review and approve contractual service agreements, must determine spheres of influence (SOIs) (plans that show future service areas and boundaries) for each city and district, and may initiate proposals involving district consolidation and dissolution. As described in Chapter 2, "Project Description," the project involves annexation into the EID and El Dorado Hills Fire Department. Policies related to water supply that are relevant to the project include the following:

- **Policy 3.1.4:** states that applicants must provide adequate information to permit LAFCO to consider the timely availability of water supplies adequate for projected needs.
- **Policy 3.2.16:** describes conditions for which LAFCO will identify impacts as potentially significant and adverse, including if a proposed project does the following:
  - includes plans for infrastructure, especially water and sewer lines, that exceed the needs of the proposed project and may be used to serve areas not planned for development, especially those containing prime agricultural land, mineral, sensitive plant and wildlife or other important resources; or
  - causes health and safety or other physical impacts because a service provider is incapable of providing service the proposal has an illogical boundary, or elements needed to provide service (water supply, treatment facilities, equipment, energy) are not available, or stressed beyond capacity.

El Dorado Irrigation District

El Dorado Irrigation District is a public water agency that provides potable, irrigation, and recycled water directly to retail customers throughout its approximately 220 square mile service area boundary. The following sections describe EID plans, policies, and regulations applicable to the project.

Administrative Regulations

EID has adopted numerous administrative regulations in support of its strategic goals, which include maintaining continuous, dependable water service. Administrative regulations relevant to the project include the following:

- **AR 5010.1 Annual reporting:** The District will maintain adequate water supply and demand records to ensure accurate monitoring and reporting. The General Manager will ensure that an updated Water Resources and Service Reliability Report is prepared annually for review by the Board of Directors. The report will include the current

system firm yield of the overall District, along with the water supply and infrastructure capacity, potential demands, existing commitments, and meter availability for each water service area of the District as defined in the report.

- AR 5010.2 Shortages: The Water Resources and Service Reliability Report will use a system firm yield method to determine that sufficient water supply exists to meet potential demands. Under this methodology, approximately 95 percent of the time sufficient water supply is available to meet normal water demands, but during the remaining 5 percent of the time water shortages may occur. Such shortages may result in the implementation of voluntary or mandatory conservation measures.
- AR 5010.3 New meter restrictions: Should findings in the Water Resources and Service Reliability Report warrant restrictions on the issuance of new water meters, the General Manager will bring the situation to the attention of the Board of Directors. During emergency conditions when supplies are restricted or limited, the General Manager may also bring to the Board's attention possible restrictions on water meter availability.
- AR 9028.6 Letters issued by the District: The District will issue a FIL [facility improvement letter] for water, wastewater, and/or recycled water services to applicants requesting service to existing parcels, lands being subdivided, and lands being rezoned or involving petition for amendment to the County or City general plans. The FIL will be valid for three years from the date of issuance. This document will state the current availability of service and the ability of the District's existing system to provide the requested service. The District may require the submittal of a Facility Plan Report for approval if deemed necessary because of project size or complexity. An extension of up to one year for the FIL may be granted upon request and submittal of the appropriate application and fee.

Integrated Water Resources Master Plan

EID's Integrated Water Resources Master Plan (IWRMP), adopted in 2013, considers potable water and recycled water resources for the EID service area. The IWRMP addresses the maintenance of EID's existing water and recycled water facilities and the development of future water resource infrastructure. To serve the existing and anticipated development in EID's service area, the IWRMP contains the following relevant objectives:

- Develop a reliable, long-term water resources program which considers existing water supply, future demand, hydroelectric power generation, and environmental and economic constraints.
- Define the long-term role of recycled water within the District's water resources portfolio.
- Identify and implement approaches to address future constraints, which may impact the District's service to its customers.
- Develop integrated and prioritized water, wastewater, and recycled water system capital improvements that are consistent with the District's long-term goals and objectives.

The IWRMP considers key water supply issues facing EID's service area, including reliability, infrastructure constraints, competing water resource needs, and the future role of recycled water. It identifies existing and projected water demands and the water supplies and distribution systems that serve them, proposes and evaluates alternative future water supply solutions, and recommends a specific water resources plan to maximize water supply availability and reliability.

2022 Water Supply and Demand Report

The EID Water Supply and Demand Report is updated every 3 years to determine the current water supply and water meter availability in the EID. Board Policy 5010, Water Supply Management, states that EID will not issue any new water meters if there is insufficient water supply. The report summarizes current water supply and total potential demand, water commitments, and historical trends in water demand (EID 2022).

Drought Action Plan

EID's Drought Action Plan addresses the requirements of California Water Code Section 10632 for water shortage contingency plans. The plan includes specific actions for management of EID's water supply and demand during drought conditions and facilitates the timely implementation of effective drought responses. The plan outlines response actions during various water supply conditions, ranging from normal water supply to extremely restricted

water supplies, and drought stages, ranging from none to Stage 4. During a Stage 1 drought, when water supplies are slightly restricted, the plan encourages voluntary conservation measures to achieve up to a 15 percent reduction in water demand. During a Stage 4 drought, when water supplies are extremely restricted, the plan enforces mandatory measures to achieve greater than 50 percent reduction in water demand (EID 2021a).

2020 Urban Water Management Plan

EID prepared the 2020 UWMP (EID 2021b) to comply with the UWMPA requirements for urban water suppliers. The 2020 UWMP addresses water management planning efforts to assure adequate water supplies to meet forecast demands over the next 25 years. As required by the UWMPA, the 2020 UWMP assesses the availability of its supplies to meet forecasted water uses during average, single-dry, and five consecutive dry years through 2045. The 2020 UWMP is also a comprehensive water planning document that describes existing and future supply reliability, forecasts future water uses, presents demand management progress, identifies local and regional cooperative efforts to meet projected water use, and describes water shortage contingency planning. The 2020 UWMP also provides a description of the service area, potable water system, local climate, and regional population, employment, and housing. The UWMP reflects EID's planning assumptions and goals and is designed to be a valuable water management and planning tool to guide and inform the EID's Board of Directors, managers, customers, and the State about its water management practices.

Water and Recycled Water Master Plan

EID's 2024 Water and Recycled Water Master Plan identifies water and recycled water system deficiencies and recommends capital improvements to serve existing customers and additional connections from new development approved by El Dorado County (EID 2024a). The planning horizon for the Master Plan is 2045.

El Dorado Water Agency Water Resources Development and Management Plan

The 2024 EDWA (formerly El Dorado County Water Agency) Water Resources Development and Management Plan (WRDMP) identifies water sources and demands and resource management strategies to counter droughts, wildfires, deteriorated headwaters, limited groundwater resources, and fragmented water management threats to the county (EDWA 2024). The WRDMP is the countywide water plan to support the realization of the vision established in the County General Plan. The goal of the resource management strategies presented in the plan is to proactively address changing water resources needs, regulatory requirements, and climate variability. The focused and defined role and responsibility in implementing actions for advancing these strategies would ensure effectiveness and efficiency in achieving anticipated outcomes while promoting the agency's long-term organizational and financial sustainability. The WRDMP identifies several principal implementing agencies and their roles, including EID, the Georgetown Divide Public Utility District, Grizzly Flats Community Services District, El Dorado LAFCO, the South Tahoe Public Utility District, the Tahoe City Public Utility District, and the Tahoe Regional Planning Agency.

WASTEWATER AND STORMWATER

Federal

No federal plans, policies, regulations, or laws related to wastewater and stormwater are applicable to the project.

State

NPDES Permit for the El Dorado Hills Wastewater Treatment Plant

The Central Valley Regional Water Quality Control Board issued Order R5-2023-0025 (NPDES No. CAG585001) to EID for its El Dorado Hills Wastewater Treatment Plant (EDHWWTP), which treats wastewater from the community of El Dorado Hills before discharging to Carson Creek. The NPDES permit specifies discharge prohibitions, effluent limitations, receiving water limitations, and other provisions that are intended to protect the beneficial uses of the EDHWWTP's receiving waters.

Cortese-Knox-Hertzberg Local Government Reorganization Act

Refer to the discussion above under "Domestic Water."

Local

El Dorado County General Plan

The reader is referred to the discussion above under "Domestic Water." The following objectives and policies related to wastewater service are applicable to the project:

- **Objective 5.3.1: Wastewater Capacity.** Ensure the availability of wastewater collection and treatment facilities of adequate capacity to meet the needs of multifamily, high-, and medium-density residential areas, and commercial and industrial areas.
  - **Policy 5.3.1.1**: High-density and multifamily residential, commercial, and industrial projects may be required to connect to public wastewater collection facilities if reasonably available as a condition of approval. In the Rural Centers of Camino/Cedar Grove/Pollock Pines, the long term development of public sewer service shall be encouraged.
  - **Policy 5.3.1.7**: In Community Regions, all new development shall connect to public wastewater treatment facilities. In Community Regions where public wastewater collection facilities do not exist project applicants must demonstrate that the proposed wastewater disposal system can accommodate the highest possible demand of the project.

El Dorado Irrigation District

Board Policies and Administrative Regulations

EID has adopted numerous board policies and administrative regulations in support of its strategic goals, which include providing quality wastewater collection, treatment, and disposal service. The board policy and administrative regulations relevant to the project include the following:

- **BP 6010 Wastewater System Management:** The District will maintain a wastewater collection, treatment, and disposal system that complies with applicable state and federal wastewater discharge requirements and regulations.
- **AR 6020 Wastewater Discharge and Disposal:** Where sufficient capacity exists in mainline and collection sewers, the District will make service available subject to applicable connection procedures and fees. Connection to the District's sewer shall not cause objectionable odors or significant corrosive conditions such as those associated with effluent-only systems or pumped services.
- **AR 9028.6 Letters issued by the District:** The District will issue a FIL [facility improvement letter] for water, wastewater, and/or recycled water services to applicants requesting service to existing parcels, lands being subdivided, and lands being rezoned or involving petition for amendment to the County or City general plans. The FIL will be valid for three years from the date of issuance. This document will state the current availability of service and the ability of the District's existing system to provide the requested service. The District may require the submittal of a Facility Plan Report for approval if deemed necessary because of project size or complexity. An extension of up to one year for the FIL may be granted upon request and submittal of the appropriate application and fee.

El Dorado Irrigation District Wastewater Facilities Master Plan

The 2013 Wastewater Facilities Master Plan (WWFMP) provides a long-term program for the collection and treatment of wastewater and the use of recycled water resources for EID (EID 2013). The WWFMP provides recommendations and an implementation plan for the development of recommended wastewater and recycled water infrastructure to serve anticipated growth within the EID service area. Key issues addressed within the WWFMP include wastewater discharge alternatives and future role of recycled water, future regulatory requirements, and aging infrastructure. The WWFMP includes estimates of existing and projected wastewater flows from the area served by EID's wastewater

collection system. The WWFMP projects wastewater treatment needs for the EID service area based on the El Dorado County General Plan land use designations and the number of anticipated connections associated with development of specific plans. The WWFMP also identifies system expansion and upgrade needs to meet the projected increases in wastewater flows associated with anticipated growth. In addition, the WWFMP recommends system enhancements, such as improvements to lift stations and sewer pipelines.

El Dorado Local Agency Formation Commission

Refer to the discussion above under "Domestic Water."

SOLID WASTE

Federal

No federal plans, policies, regulations, or laws related to solid waste are applicable to the project.

State

California Building Standards Code

CALGreen establishes mandatory minimum green building standards and requirements for construction and demolition (C&D) material diversion. Under Section 5.408 of the CALGreen Code, projects involving C&D activities are required to recycle and/or salvage for reuse a minimum of 65 percent of their nonhazardous C&D material. Applicable projects are required to prepare and implement a construction waste management plan.

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act (CIWMA) of 1989 created the California Integrated Waste Management Board, now known as CalRecycle. CalRecycle is the agency designated to oversee, manage, and track California's 92 million tons of waste generated each year. CalRecycle promotes a sustainable environment in which these resources are not wasted but can be reused or recycled. In addition to many programs and incentives, CalRecycle promotes the use of new technologies to divert resources away from landfills. CalRecycle is responsible for ensuring that waste management programs are carried out primarily through local enforcement agencies.

The CIWMA is the result of two pieces of legislation: Assembly Bill (AB) 939 and SB 1322. The CIWMA was intended to minimize the amount of solid waste that must be disposed of through transformation and land disposal by requiring all cities and counties to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. The 50 percent diversion requirement is measured in terms of per capita disposal expressed as pounds per day per resident and per employee. The per capita disposal and goal measurement system uses an actual disposal measurement based on population and disposal rates reported by disposal facilities, and it evaluates program implementation efforts. SB 1383 established new targets addressing waste diversion, discussed below.

Mandatory Commercial Recycling Law

AB 341 (Chesbro, Chapter 476, Statutes of 2011), also known as the Mandatory Commercial Recycling Law, requires CalRecycle to issue a report to the legislature that includes strategies and recommendations that would enable the State to recycle 75 percent of the solid waste generated in the State by January 1, 2020; requires businesses that meet specified thresholds in the bill to arrange for recycling services by July 1, 2012; and also streamlines various regulatory processes.

Mandatory Commercial Organics Recycling Act

AB 1826, also known as the Mandatory Commercial Organics Recycling Act, requires businesses to recycle their organic waste (e.g., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste), depending on the amount of waste they generate per week. This law also requires local jurisdictions across the State to implement an organic waste recycling program to divert organic waste generated by businesses, including some multi-family residential dwellings. This law was superseded by SB 1383, discussed below.

Short-Lived Climate Pollutant Reduction Strategy

SB 1383, formally known as California's Short-Lived Climate Pollutant Reduction Strategy, was signed into law in September 2016 and establishes methane emissions reduction targets in a Statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's economy. As it pertains to solid waste, SB 1383 establishes targets to achieve a 50-percent reduction in the volume of statewide disposal of organic waste from 2014 levels by 2020 and a 75-percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

Mandatory Recycling and Organics Recycling Bins

Effective July 1, 2020, AB 827, also known as the Customer Access to Recycling Law, mandates food service establishments to provide customers with disposal containers for food scraps, recyclables, and trash generated from products purchased and consumed onsite. Businesses subject to this law are businesses subject to Mandatory Commercial Recycling and Mandatory Commercial Organics Recycling requirements, as well as any food generating establishment where customers bus their own tables, such as fast-food restaurants.

Local

El Dorado County General Plan

The reader is referred to the discussion above under "Domestic Water." The following objectives and policies related to solid waste are applicable to the project:

- **Objective 5.5.2: Recycling, Transformation, and Disposal Facilities.** Ensure that there is adequate capacity for solid waste processing, recycling, transformation, and disposal to serve existing and future users in the County.
  - **Policy 5.5.2.1:** Concurrent with the approval of new development, evidence will be required that capacity exists within the solid waste system for the processing, recycling, transformation, and disposal of solid waste.

El Dorado County Code

The following sections of the El Dorado County Code are applicable to project and relevant to solid waste.

County Solid Waste Management Ordinance

Chapter 8.42, "Solid Waste Management," governs the accumulation, storage, collection, and disposal of solid waste generated on residential, commercial, and industrial properties within the County. The ordinance prohibits the disposal or depositing of any hazardous or biomedical waste onto land, into soil, rock, air, or water or at unauthorized disposal sites, transfer stations, resource recovery facilities, buy-back centers, drop-off recycling centers, or any container to be collected and ultimately deposited unless otherwise approved in advance and in writing by the Board of Supervisors or the County Director of Environmental Management.

Construction and Demolition Debris Recycling Ordinance

Chapter 8.43, "Construction and Demolition Debris Recycling Within the County," establishes a program for the recycling and salvage of construction and demolition debris. The ordinance requires at least 50 percent of debris from any project, work, or activity that requires an application for building or demolition permit to be diverted from landfills through recycling and reuse. Before the issuance of a permit, the project applicant must file a Debris Recycling Acknowledgment with the El Dorado County Environmental Management Division. A Debris Recycling Report demonstrating compliance with the 50 percent diversion goal must be filed within 60 days after final and/or occupancy approval.

Organic Waste Disposal and Diversion Ordinance

Chapter 8.45, "Organic Waste Disposal and Diversion," requires commercial business organic waste generators to subscribe to organic waste collection services, or meet self-hauler requirements, and establishes guidelines for organic waste storage. Section 8.45.120 requires new construction to comply with the requirements of the CALGreen Code or more stringent County requirements.

El Dorado County Solid Waste Management Plan

The *El Dorado County Solid Waste Management Plan*, adopted January 31, 2012, was designed to assist the County with reaching a future 75 percent landfill diversion goal (El Dorado County 2012). The plan provides a strategic roadmap to use in planning for coordinated, countywide, and jurisdiction-wide cooperation and initiating near-, intermediate-, and long-term programs and infrastructure strategies. The plan includes the estimated potential diversion gains for each strategy and methods to track strategy progress. The plan also includes estimated costs and funding methods for the program and infrastructure strategies.

ENERGY

Refer to Section 3.5, "Energy," for plans, policies, regulations, and laws that are applicable to energy for the project.

3.16.2 Environmental Setting

Public utilities in the project area are provided by various entities, as identified in Table 3.16-2 and discussed in detail below.

Table 3.16-2 Utility Service Providers for the Project Site

Utility	Agency/Provider
Water Supply	El Dorado Irrigation District
Wastewater Collection, Conveyance, and Treatment	El Dorado Irrigation District
Solid Waste Collection	El Dorado Hills Community Services District
Electrical Service and Natural Gas	Pacific Gas and Electric Company

Source: Data compiled by Ascent in 2025.

WATER SUPPLY

EID provides water service to communities in the western half of El Dorado County. Its service area, which covers 220 square miles, stretches from El Dorado Hills, which is the western boundary, to Strawberry, which is the most eastern boundary. EID does not use groundwater as a supply source and depends on surface water from the watersheds of the Sierra Nevada to serve existing and future customers through a complex network of storage, treatment, and transmission facilities. EID's water conveyance system is a combination of pipelines, regulating reservoirs, diurnal storage tanks, and a few Gold Rush-era ditches. EID maintains two primary interconnected water systems in its contiguous service area—the El Dorado Hills system and the Western/Eastern system—along with a separate recycled water system.

EID has developed and maintains several water resource plans, including the 2020 UWMP (EID 2021b) and the 2022 Water Supply and Demand Report (EID 2022). The following sections summarize relevant water supply information from these reports.

2020 Urban Water Management Plan

Existing Water Supply

The El Dorado Hills region obtains its primary supplies under rights and entitlements from Folsom Reservoir. The water supply is delivered from Folsom Reservoir through intake facilities and treated for consumptive use at the El Dorado Hills water treatment plant. Water assets from these upstream diversions can be delivered by gravity feed to the El Dorado Hills area, but assets from Folsom Reservoir are not delivered outside the El Dorado Hills area because of infrastructure limitations (EID 2021b).

In addition to a potable water system, EID operates a recycled water system that provides tertiary treated recycled water used primarily for residential and commercial landscape irrigation. The recycled water is delivered from the EDHWWTP

and the Deer Creek Wastewater Treatment Plant (DCWWTP) to serve portions of the service area to the west bordering Sacramento County. The recycled water system consists of an interconnected network of transmission and distribution pipelines, pump stations, storage tanks, pressure-reducing stations, and facilities located in the communities of El Dorado County. Daily wastewater influent flows and a 70-million-gallon recycled water storage reservoir limit current recycled water supplies to approximately 3,500 afy. EID does not anticipate any significant expansion of the recycled water system in the future, because of the current supply and demand imbalance, the additional cost of recycled water infrastructure, long-term operational costs, and sufficiency of potable water supplies. EID's 2020 UWMP uses the conservative assumption that the recycled water supply is 3,500 afy and remains at 3,500 afy throughout the planning period, to avoid the risk of potentially overestimating the availability of recycled water supplies (EID 2021b).

Water Supply and Demand Projections

EID estimates future water demand based on El Dorado County's General Plan and County growth projections. Total demand in EID's service area for all water use types is anticipated to be 38,980 acre-feet per year (afy) in 2025, 40,920 afy in 2035, and 43,320 afy in 2045 (EID 2021b).

Based on existing supplies, the average water supply under normal conditions is 70,800 afy with a current demand of 35,910 afy. An additional 7,500 afy of planned supplies and 3,500 afy of recycled water are expected to be available after 2045. Combined, EID anticipates the total average future water supplies to equal 78,294 afy. By the third year of a multiple-year drought, water availability associated with existing supplies would be reduced to 55,300 afy, whereas an estimated total of 56,600 afy would be available after 2040 when planned supplies are accounted for.

These planned water sources are as follows:

- Central Valley Project Fazio Water: 7,500 afy (normal year – available in 2035),
- El Dorado-Sacramento Municipal Utility District Agreement: 40,000 afy (currently 30,000 afy through 2025 and increased to 40,000 thereafter), and
- Recycled water: 3,500 afy (does not anticipate expansion of the existing recycled water system) (EID 2021b).

Tables 3.16-3, 3.16-4, and 3.16-5 summarize EID water supply and demand estimates.

Table 3.16-3 EID Water Supply and Demand Comparison – Average Year (acre-feet per year)

	2025	2030	2035	2040	2045
Supply	70,800	70,800	78,300	78,300	78,300
Demand	38,980	39,770	40,920	42,130	43,320
Difference	31,820	31,030	37,380	36,170	34,980

Source: EID 2021b.

Table 3.16-4 EID Water Supply and Demand Comparison – Single Dry Year (acre-feet per year)

	2025	2030	2035	2040	2045
Supply	63,400	63,400	67,100	67,100	67,100
Demand	40,930	41,760	42,970	44,240	45,490
Difference	22,470	21,640	24,130	22,860	21,610

Source: EID 2021b.

Table 3.16-5 EID Water Supply and Demand Comparison – Multiple Dry Years (acre-feet per year)

		2025	2030	2035	2040	2045
Year 1	Supply	63,400	63,400	63,400	63,400	63,400
	Demand	40,930	41,760	42,970	44,240	45,490
	Difference	22,470	21,640	20,430	19,160	17,910
Year 2	Supply	59,400	59,400	63,100	63,100	63,100
	Demand	41,100	42,000	43,220	44,490	45,490
	Difference	18,300	17,400	19,880	18,610	17,610
Year 3	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,270	42,240	43,470	44,740	45,490
	Difference	14,030	13,060	13,130	11,860	11,110
Year 4	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,440	42,480	43,720	44,990	45,490
	Difference	13,860	12,820	12,880	11,610	11,110
Year 5	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,610	42,720	43,970	45,240	45,490
	Difference	13,690	12,580	12,630	11,360	11,110

Source: EID 2021b.

2022 Water Supply and Demand Report

Table 3.16-6 provides water supply and demand and water meter availability in the El Dorado Hills supply area from EID's 2022 Water Supply and Demand Report (EID 2022). The report estimates that the El Dorado Hills Supply Area obtains 21,235 af annually from Folsom Reservoir. This allocation includes a water service contract with the US Bureau of Reclamation for 7,550 af (1,235 af in multiple-dry years), a Warren Act contract for the Ditch/Weber Reservoir water rights totaling 4,560 af (3,000 af in multiple-dry years), and 17,000 af from Water Right Permit 21112. The demand comes from the following user categories: commercial, single- and multi-family residential, single-family dual plumbed dwellings (potable), recreational turf services, and small farm irrigation.

Table 3.16-6 2022 Water Supply, Demand, and Meter Availability in the El Dorado Hills Supply Area

Water Supply from Folsom Reservoir	21,235 AF
Total Potential Demand	11,635 AF
Unallocated Water Supply	9,600 AF
Water Meter Availability	16,910 EDUs[1]

AF = acre-feet; EDU = equivalent dwelling unit

[1] An EDU represents the annual water requirement of a typical single-family residential dwelling served by a ¾-inch water meter. Larger water meters, such as those for commercial applications, require additional EDUs.

Source: EID 2022.

WASTEWATER AND STORMWATER

EID operates and maintains a sanitary sewer system serving a population of approximately 62,000 people over a 77-square-mile service area. The system is divided into the El Dorado Hills, Deer Creek, Gold Ridge, and Camino Heights sewershed areas. The project site is within the El Dorado Hills sewershed, which encompasses approximately 24.9 square miles located between the western El Dorado County Boundary and Bass Lake Road and Folsom Lake and 3 miles south of Highway 50. In 2019, there were approximately 12,000 sewer connections equating to approximately 13,600 EDUs within the El Dorado Hills sewershed. The collection system consists of 30 lift stations, 249 miles of pipeline ranging between four and 42 inches in diameter, and 19 miles of force mains. Pipelines are comprised of

gravity sewers, force mains, and portions of laterals owned by EID (EID 2021c). Approximately 2,100 linear feet of 18- and 21-inch gravity sewer lines are located along Silva Valley Parkway, which bisect the project site. The existing sewer lines are under evaluation for potential upsizing to accommodate future flows in EID's WWFMP (EID 2013).

The EDHWWTP serves the project area and is located approximately 1.25 miles south of US 50, directly adjacent to Latrobe Road and situated along a hillside with both Carson Creek and Latrobe Road bordering the plant to the west and a 66-million-gallon storage pond bordering the plant to the east. The El Dorado Hills wastewater system serves an area of approximately 24.9 square miles located between the western El Dorado County boundary and Bass Lake Road (EID 2021c).

Wastewater flows described in the EID WWFMP are based on growth defined by the County General Plan and the portions of the city of Placerville served by EID (EID 2013). The fundamental planning basis for developing water demands and projected wastewater flows is the planned land use presented in the County General Plan over the 20-year planning horizon of the plan, including the specific plans developed for the communities of Bass Lake Hills, Carson Creek, El Dorado Hills, Northwest El Dorado Hills, Promontory and Valley View (El Dorado County 2019). EID uses its wastewater generation rates, combined with the County General Plan land use designations and the number of planned connections in each of these specific plans, to project wastewater flows for the El Dorado Hills and Deer Creek collection systems (EID 2013).

The WWFMP assumes that approximately 1,800 acres of development, including residential, commercial, and industrial properties, will be in the El Dorado Hills collection system area, primarily consisting of infill and new developments along the eastern and southern perimeters of the El Dorado Hills collection system. The WWFMP predicts total wastewater flows of 5.45 mgd for the El Dorado Hills system after full buildout is complete in the service area (EID 2013: 93). The plan predicts future flows of 0.88 mgd in areas with land use designations but no specific plan and an additional 1.92 mgd wastewater production from planned communities in the EDHWWTP's service area. The total future wastewater flows of 5.45 mgd for the El Dorado Hills system, as described above, were determined by adding these projections to existing flows. The future wastewater flows would be beyond the EDHWWTP's capacity. However, EID has planned expansion projects for the system. In 2013, the EDHWWTP was expanded to manage an average dry weather flow of 4.0 mgd, and a subsequent expansion is planned to manage the predicted future flows (EID 2013: 151). EID's Capital Improvement Plan identifies project proposals to continue to expand EDHWWTP's capacity to treat future wastewater flows (EID 2024b). Additionally, per EID administrative regulations, individual developers will be responsible for the planning, engineering, and construction of proposed sewer systems located in their respective development projects. Proposed sewer systems must be designed in accordance with EID's design standards and are subject to EID approval (EID 2013).

Wastewater Treatment and Disposal

Treated effluent is either recycled or discharged to Carson Creek, a tributary to the Cosumnes River in the San Joaquin watershed. The EDHWWTP discharges to Carson Creek between November and April and distributes all treated effluent to the recycled water system between May and October. According to 2022 records, approximately 363 af of water was treated at the EDHWWTP and was sent to the recycled water system for reuse (EID 2022: 13). Disinfected tertiary treated recycled water produced at the EDHWWTP is distributed for irrigation of residential and commercial landscapes and for use at construction sites. Currently, the EDHWWTP and DCWWTP produce more than 900 million-acre feet of recycled water each year for more than 5,600 customers and businesses in the El Dorado Hills community (EID 2025).

Stormwater

As stated in Section 3.9, "Hydrology and Water Quality," and Chapter 2, "Project Description," all stormwater would be managed on the Costco project site. A more extensive analysis of the stormwater plan and management is described in Section 3.9, "Hydrology and Water Quality."

SOLID WASTE

The project site is within the EDHCSD boundary. EDHCSD contracts with El Dorado Disposal Service, a Wastes Connections Company, for franchised solid waste collection, disposal, and recycling services. The Western El Dorado Recovery Systems Material Recovery Facility in the City of Placerville handles mixed municipal waste and has a maximum permitted throughput of 400 tons per day (CalRecycle 2024).

Transferred materials are disposed either at Sacramento County Landfill (Kieffer), Forward Landfill, Potrero Hills Landfill, or another Class III permitted landfill. Table 3.16-7 provides information on the permitted and estimated remaining capacity of these landfills, as well as their estimated closure dates.

Table 3.16-7 Landfills and Remaining Capacities

Facility	Maximum Permitted Throughput (tons per day)	Maximum Permitted Capacity (cubic yards)	Estimated Remaining Capacity (cubic yards)	Percent Remaining Capacity	Estimated Closure Year
Sacramento County Landfill (Kiefer) (34-AA-0001)	10,815	117,400,000	102,300,000	87%	2080
Forward Landfill, Inc. (39-AA-0015)	8,668	59,160,000	24,720,669	42%	2036
Potrero Hills Landfill (48-AA-0075)	4,330	83,100,000	13,872,000	17%	2048
Total	**23,813**	**259,660,000**	**140,892,669**	**54%**	—

Source: Data compiled by Ascent in 2025 from the CalRecycle Solid Waste Information System database.

The EDHCSD is contracted with El Dorado Disposal until June 2030 for waste recycling (EDHCSD 2025). El Dorado Disposal collects mixed recycling and green waste materials on alternate weeks from residences in the EDHCSD service area and allows residents to bring recycling material to the Diamond Springs Materials Recovery Facility (MRF) (EDD 2025). El Dorado Disposal encourages residents to dispose of yard waste through home composting, through curbside pickup, or by taking it to a transfer station that accepts "clean green" materials (El Dorado County 2012). In addition, El Dorado Disposal operates several recycling and e-waste buyback centers to which residents are encouraged to bring additional recyclables; the center nearest to the project site is located at 4421 Latrobe Road in the El Dorado Hills community. The EDHCSD provides diversion reports, documenting compliance with its source reduction and recycling programs and the amount of waste disposed of or diverted to El Dorado County on a quarterly basis.

The large-scale recycling facility nearest to the project site is the Diamond Springs MRF, operated by El Dorado Disposal at 4100 Throwita Way in Diamond Springs. In addition to household recycling, the Diamond Springs MRF accepts a wide variety of waste materials, including mixed loose waste, clean wood waste, appliances, car bodies, and construction waste (lumber, concrete) (EDD 2025).

Hazardous waste in El Dorado County consists primarily of waste oil, old paint, and lead acid car batteries (El Dorado County 2025). Waste oil is collected at more than 21 public waste oil collection sites that are open 7 days a week. Other hazardous materials, such as old paint, car batteries, expired or banned pesticides or herbicides, and solvents, are collected through a cooperative arrangement with the El Dorado Hills Fire Department and the Diamond Springs MRF to operate a permanent collection facility for hazardous waste. In addition, all curbside solid waste is screened for hazardous waste (El Dorado County 2025). Analysis about hazards that may be generated from the project is presented in Section 3.8, "Hazards and Hazardous Materials."

ENERGY

The Pacific Gas and Electric Company (PG&E) provides electricity and natural gas service to the El Dorado Hills community. It charges connection and user fees for all new developments, in addition to sliding rates for energy service based on use. Because many agencies in California have adopted policies seeking increased use of renewable resources (and have established minimum standards for the provision of energy generated by renewable resources),

it is expected that PG&E would continue to meet future demand for energy through an increasing reliance on renewable resources, including small-scale sources, such as photovoltaic panels and wind turbines, in addition to larger-scale facilities, such as wind farms. Electrical capacity and projected uses are detailed in Section 3.5, "Energy."

PG&E electric infrastructure and natural gas pipelines are currently located along Clarksville Crossing.

3.16.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Water and Wastewater

As required by EID, water and sewer service is determined through the allocation of EDUs. An EDU represents the annual water requirement of a typical single-family residential dwelling served by a ¾-inch water meter. Larger water meters, such as those for commercial applications, require additional EDUs. The potential for EDU availability for the Costco project was provided in a Facilities Improvement Letter (FIL), submitted by EID to the project applicant on June 10, 2025 and refined information regarding fire flow provided on September 3, 2025 (Kalvass 2025). Water and wastewater demand from future development of the North Site Remainder Area, which is designated for commercial uses and is assumed to include approximately 138,000 square feet of development, are also evaluated. Because the types of commercial uses that would be developed in the North Site Remainder Area are not currently known, water and sewer demand were estimated based on the water and sewer demand for a reference project (approved Montano De El Dorado Phase I and II Master Plan) that is in EID's service area boundary with a mix of commercial uses. The reference project involves the construction of 144,000 square feet of building space with retail, office, restaurants, drive-thru restaurant, and hotel uses. Based on the Facility Plan Report for the reference project, EID estimated that the reference project would require 90 EDUs of water and 87 EDUs of sewer service (RFE Engineering, Inc. 2019). The same ratio of EDUs to square feet of building space was applied to estimate the water and sewer demand for the North Site Remainder Area; however, actual water requirements would vary depending on the types of commercial uses that are proposed for future development in the North Site Remainder Area. This analysis also evaluates the project's consistency with El Dorado LAFCO's policies related to its proposed annexation to EID for water service.

Electricity and Natural Gas

Impacts related to electricity and natural gas were evaluated by determining whether any new facilities would need to be constructed to serve the project, whether PG&E would be able to serve the project, and whether the construction of necessary improvements would adversely affect PG&E capacity or infrastructure or interrupt utility service during construction. The reader is directed to Section 3.5, "Energy," for additional analysis of energy.

Solid Waste

CalRecycle's *Targeted Statewide Waste Characterization Study* evaluates waste disposal and diversion practices for different types of commercial establishments (CalRecycle 2006). The study found that retail big-box stores on average generate 7,798 pounds of waste material per employee per year. Of the total waste generation, about 4,932 pounds, or 63 percent, is diverted per employee per year. When accounting for diversion, a rate of 2,866 pounds of waste material per employee per year was used to estimate the solid waste generation from the proposed Costco warehouse retail building on the South Site.

CalRecycle also maintains a reference list of solid waste generation rates, which can be used to estimate the amount of solid waste generated by new developments (CalRecycle 2019). The reference list includes estimates of solid waste generation rates for various land use types in the commercial, industrial, institutional, residential, and service sectors. These generation rates are compiled from various sources, including local agency planning guidance and environmental documents. The list does not include solid waste generation rates for fuel facilities; therefore, the rate used to estimate solid waste generation from the proposed fuel facility on the North Site is based on a rate of 0.9 pounds of solid waste per 100 square feet per day for auto dealer and service stations.

Solid waste generation for the North Site Remainder Area was calculated by applying the County's 2023 per capita disposal rate of 16.5 pounds per employee per day (CalRecycle 2023).

THRESHOLDS OF SIGNIFICANCE

An impact on utilities and service systems is considered significant if the project would do any of the following:

- require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- the water service provider would not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments;
- generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

ISSUES NOT DISCUSSED FURTHER

All potential utilities and service system issues identified in the significance criteria are evaluated below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.16-1: Significant Environmental Effects from the Relocation or Construction of New or Expanded Utility Infrastructure

The project would involve development of commercial uses on vacant land. The extension of existing utility infrastructure in the vicinity of the project site would be required to serve the water, sewer, stormwater drainage, electricity, telecommunications, and natural gas requirements for the overall project site. Connections to existing infrastructure would occur within new paved areas of Silva Valley Parkway and Clarksville Crossing along the project site's frontage. The environmental impacts associated with the extension of existing utility infrastructure are evaluated and disclosed in Sections 3.1 through 3.16 of this EIR because this work would be part of the grading and construction phases of the Costco project on the North Site and South Site. No additional utility infrastructure would be needed off site to adequately serve the overall project site. This impact would be **less than significant**.

The project would involve development of commercial uses on vacant land. The extension of existing utility infrastructure would be required to serve the water, sewer, stormwater drainage, electricity, telecommunications, and natural gas requirements of these commercial land uses. The following sections evaluate the potential for construction and operation of the Costco project and the North Site Remainder Area to result in significant environmental effects from the relocation or construction of new or expanded utility infrastructure.

Costco Project

The project would develop a new warehouse retail building on the South Site, a fuel facility and employee parking on the North Site, and associated site improvements. As described in Chapter 2, "Project Description," the extension of existing utility infrastructure in the vicinity of the project site would be required to serve the water, sewer, stormwater drainage, electricity, telecommunications, and natural gas requirements for the overall project site. Connections to existing infrastructure would occur within new paved areas of Silva Valley Parkway and Clarksville Crossing along the

project site's frontage. The project proposes to incorporate multiple energy- and water-efficiency features that would reduce overall demand on utility infrastructure. These include high-efficiency HVAC systems, a computerized energy management system, LED lighting with photo sensors and timers, pre-manufactured insulated wall panels, and deep root watering systems for landscaping. These features would reduce peak energy and water demands and minimize impacts on the capacity of existing offsite infrastructure.

All utility connections would be made in accordance with the County's and EID's ordinances and requirements, as applicable. These requirements may include the following: approval of engineered improvement plans, extension of facilities applications and fees, payment of applicable wastewater connection feeds, and agreements approved and signed by the EID Board of Directors.

Connections to existing infrastructure would be made within new on-site driveways and paved areas and would be limited to areas on the project site. The environmental impacts associated with the extension of existing water, sewer, stormwater drainage, electricity, telecommunications, and natural gas lines are evaluated and disclosed in Sections 3.1 through 3.17 of this EIR because this work would be part of the grading and construction phase of the project. The project would not require utility service providers to upgrade their existing utility infrastructure or construct new facilities offsite to adequately serve the project (see Impact 3.16-2 and 3.16-3 for additional information related to the capacity of water and wastewater systems to serve the project). Therefore, the project would not result in significant environmental effects from the construction or relocation of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. This impact would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of development; however, the types of commercial uses that would be developed in the future are not currently known. Similar to the project, future commercial development within the North Site Remainder Area would require the extension of existing utility facilities along Silva Valley Parkway to serve the water, wastewater treatment, stormwater drainage, electricity, telecommunications, and natural gas demands. The environmental impacts associated with the extension of utility infrastructure are evaluated and disclosed in Sections 3.1 through 3.17 of this EIR because this work would be part of the grading and construction phases of future commercial development within the North Site Remainder Area. The North Site Remainder Area is designated for commercial uses; therefore, future development that is consistent with the site's land use and zoning designations would not increase utility demands beyond what is already forecasted by utility service providers. Accordingly, future commercial development within the North Site Remainder Area is not currently anticipated to require the construction of new facilities offsite beyond what is already planned by utility service providers. Applicants for future development in the North Site Remainder Area would be required to coordinate with utility service providers as part of the development application process to ensure that utility infrastructure is adequately sized to serve the development and that sufficient capacity is available to serve the development. This impact would be **less than significant**.

Conclusion

The project would involve development of commercial uses on vacant land. The extension of existing utility infrastructure in the vicinity of the project site would be required to serve the water, sewer, stormwater drainage, electricity, telecommunications, and natural gas requirements for the project and the North Site Remainder Area. Connections to existing infrastructure would occur within new paved areas and would be limited to areas within the project site. The environmental impacts associated with the extension of existing utility infrastructure are evaluated and disclosed in Sections 3.1 through 3.16 of this EIR because this work would be part of the grading and construction phases of the project and the North Site Remainder Area. No additional utility infrastructure would be needed offsite to adequately serve the project and the North Site Remainder Area. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.16-2: Sufficient Water Supplies Available to the Serve the Project

The project would involve development of commercial uses on vacant land, which would be annexed into EID's service area. According to a FIL provided by EID to the applicant on June 10, 2025, the Costco project would require approximately 20.7 EDUs of water supply. The North Site Remainder Area could require approximately 86.3 EDUs of water supply, depending on the types of commercial uses that are proposed for future development. As of January 2022, there were approximately 16,910 EDUs of water supply available in El Dorado Hills Water Supply Region. EID determined in its 2020 UWMP that its water supply portfolio is capable of meeting water demand in its service area in normal, single dry, and consecutive dry years from 2020 through 2045. The parcels that encompass the project area were considered in the water demand projections for the UWMP. Construction-related water use for activities such as dust control and concrete mixing would be temporary and would not represent an ongoing commitment by EID. Therefore, this impact would be **less than significant**.

Project implementation would result in development of land that is currently vacant with no existing use of municipal water. The project proposes annexation to EID for water service. Upon annexation, the project would be in EID's El Dorado Hills water supply region. The following sections evaluate the potential for construction and operation of the project and the North Site Remainder Area to increase water demand such that EID would not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

Costco Project

Costco project construction would require the use of water, primarily for dust control. As discussed in Section 3.2, "Air Quality," the construction site would be watered twice daily in accordance with El Dorado County Air Quality Management District Rule 223-1 for fugitive dust control. Typical water application rates for dust control are 4,000 gallons per acre per pass (Profile Products n.d.). Therefore, up to approximately 47,464,872 gallons or 146 acre-feet of water could be needed for twice daily watering of the project site over a period of 211 days of on-site construction site clearing and grading. In addition, up to approximately 7,545,600 gallons or 23 acre-feet of water could be needed for twice daily watering of 7.2 acres of offsite roadway improvements over a period of 131 days of offsite construction site clearing and grading. Smaller amounts of water would also be needed for mixing concrete and other related activities. However, construction-related water demands would be based on actual construction conditions at the time, temporary, and would not represent an ongoing commitment by EID.

The Costco project would include development of a the warehouse retail building and a fuel facility, which would involve the consumption of water for operational activities (e.g., plumbing, sanitation, maintenance, air conditioning, food preparation/service). New water pipelines would be extended from existing pipelines along Clarksville Crossing or Silva Valley Parkway to deliver potable municipal water service to the Costco project and a looped water line extension would be constructed to meet fire flow requirements. The proposed buildings would be required to include design features that meet the most current CALGreen requirements for reducing potable water use (e.g., high-efficiency restroom fixtures). Landscaping for the project would be required to comply with the MWELO, which would reduce potable water demand (e.g., use of water-efficient landscaping and reclaimed water for landscape irrigation use). Additional design features that would reduce potable water use include climate-adapted landscaping, use of deep root watering bubblers for trees, and high-efficiency HVAC systems with reduced cooling water demand.

According to the FIL prepared by EID on June 10, 2025, the Costco project would require approximately 20.7 EDUs of water supply. EID's most recent Water Supply and Demand Report states that approximately 16,910 EDUs of water supply were available in the El Dorado Hills water supply region in 2022 (EID 2022). Tables 3.16-3, 3.16-4, and 3.16-5 in Section 3.14.2, "Environmental Setting," provide a comparison of existing and planned water supply from 2020 to 2045 for a normal year, single dry year, and multiple dry years. EID determined in its 2020 UWMP that its water supply portfolio is capable of meeting water demand in its service area in normal, single dry, and consecutive dry years from 2020 through 2045. Additional water supply above existing and anticipated water demands would be available to accommodate the project and additional growth in EID's service area through 2045:

- In a normal year, water supply is projected to exceed demand by amounts ranging from 31,030 to 37,380 afy.
- In a single dry year, water supply is projected to exceed demand by amounts ranging from 21,610 to 24,130 afy.
- During multiple dry years, water supply is projected to exceed demand by amounts ranging from 11,110 to 22,470 afy (EID 2021b).

Future water demands projected in EID's UWMP consider new commercial connections in the El Dorado Hills water supply region. The UWMP conservatively projects that 375 new non-residential connections would be needed to support population growth within the El Dorado Hills region, mostly within the commercial and landscape classifications. The parcels that encompass the project area were considered in the water demand projections for the UWMP (EID 2021b: Figure 2-7). Therefore, EID would have sufficient water supplies to serve the Costco project. Further, the water supply projections in EID's UWMP do not consider other water supplies that could be pursued by the district in the future, which include securing an additional 7,500 afy through the Fazio Central Valley Project supply and 30,000 afy through an El Dorado-Sacramento Municipal Utility District Cooperation Agreement (EID 2021b). In addition, EID implements voluntary and mandatory measures to manage water supply during drought conditions of varying severity (EID 2021b).

The Costco project would require annexation action by the El Dorado LAFCO to obtain domestic water service. The annexation of the site is a logical extension of the existing service area boundaries and would be contiguous to the existing services provided by EID. The Costco project would be consistent with El Dorado LAFCO policies related to ensuring that water supply service capacity is adequate and that required improvements to meet the project's demand would not affect existing water services provided by EID or serve areas not planned for development (e.g., Policies 3.1.4 and 3.2.16).

Because EID would have sufficient water supply available to serve the Costco project, this impact would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development; however, the types of commercial uses are not currently known.

As with the project, construction of future commercial uses within the North Site Remainder Area would require the use of water for dust control, mixing concrete, and other related activities. Using the same assumptions described for the Costco project above, up to approximately 23,277,520 gallons or 71 acre-feet of water could be needed for twice daily watering of the entire 13.79-acre North Site Remainder Area over a period of 211 days of construction site clearing and grading. However, construction-related water demands would be based on actual construction conditions at the time, temporary, and would not represent an ongoing commitment by EID.

Like the project, future commercial development within the North Site Remainder Area would involve the consumption of water for operational activities (e.g., plumbing, sanitation, maintenance, air conditioning, food preparation/service). New buildings and landscaping would be required to comply with the same requirements for water efficiency described for the project above (i.e., CALGreen and MWELO). As discussed under "Analysis Methodology" above, the ratio of water EDUs per square foot of building area for a reference project within EID's service area boundary with a mix of commercial uses (i.e., retail, office, restaurants, drive-thru restaurant, and hotel uses) was used to estimate the EDUs of water demand for the North Site Remainder Area (RFE Engineering, Inc. 2019). When applying the same ratio of water EDUs per square foot of building area assumed for the reference project (i.e., 90 EDUs for 144,000 square feet), the 138,000 square feet of commercial uses in the North Site Remainder Area would require approximately 86.3 EDUs of water supply during operations. This estimate assumes a similar mix of commercial land uses to the reference project; however, actual water requirements would vary depending on the types of commercial uses that are proposed for future development.

As stated above, there were approximately 16,910 EDUs of water supply available in El Dorado Hills Water Supply Region as of January 2022. EID determined in its 2020 UWMP that its water supply portfolio is capable of meeting water demand in its service area in normal, single dry, and consecutive dry years from 2020 through 2045. Future water demands projected in EID's UWMP consider new commercial connections in the El Dorado Hills water supply

region. The parcel that encompasses the North Site Remainder Area was considered in the water demand projections for the UWMP (EID 2021b: Figure 2-7). Therefore, EID would have sufficient water supplies to serve the water supply required for the North Site Remainder Area and this impact would be **less than significant**.

Conclusion

The project would involve development of commercial uses on vacant land, which would be annexed into EID's service area. The Costco project would require approximately 20.7 EDUs of water supply and the North Site Remainder Area could require approximately 86.3 EDUs of water supply, depending on the types of commercial uses that are proposed for future development. As of January 2022, there were approximately 16,910 EDUs of water supply available in El Dorado Hills Water Supply Region. EID determined in its 2020 UWMP that its water supply portfolio is capable of meeting water demand in its service area in normal, single dry, and consecutive dry years from 2020 through 2045. Future water demands projected in EID's UWMP consider new commercial connections in the El Dorado Hills water supply region. The parcels that encompass the project area were considered in the water demand projections for the UWMP (EID 2021b: Figure 2-7). Construction-related water use for activities such as dust control and concrete mixing would be temporary and would not represent an ongoing commitment by EID. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.16-3: Adequate Wastewater Treatment Capacity

The project would involve development of commercial uses on vacant land, which would be annexed into EID's service area. The Costco project would require approximately 12.7 EDUs of sewer service and the North Site Remainder Area could require approximately 83.4 EDUs of sewer service, depending on the types of commercial uses that are proposed for future development. EID provided a FIL to the applicant on June 10, 2025, which confirmed that adequate wastewater treatment capacity is currently available to serve the project. EID is evaluating upgrades to the existing wastewater collection and treatment system; however, these upgrades would be necessary to accommodate future growth in the service area independently of the project. This impact would be **less than significant**.

The project proposes annexation into EID's service area to serve the project's wastewater treatment demands. The following sections evaluate the potential for construction and operation of the Costco project and the North Site Remainder Area to result in a determination by EID that it has adequate capacity to serve the project's projected demand in addition to the EID's existing commitments.

Costco Project

The Costco project would include development of a 165,000-square-foot warehouse retail building and a fueling station, which would generate wastewater from operational activities (e.g., plumbing, sanitation, maintenance, air conditioning, food preparation/service). As described under Impact 3.16-1 above, new sewer lines would be extended from an existing 21-inch gravity sewer pipeline within Silva Valley Parkway, adjacent to the project site. The applicant would be required to construct an extension of the existing sewer pipeline of adequate size to serve the project. All connections to existing wastewater collection and conveyance infrastructure would be made in accordance with the County's and EID's ordinances and requirements.

The project applicant requested sewer service to the project site from EID. EID provided a FIL to the applicant on June 10, 2025, which indicates that the Costco project would require approximately 12.7 EDUs of sewer service and that EID has adequate wastewater treatment capacity available. While the existing sewer line currently has adequate capacity, it is being evaluated for potential upsizing in EID's WWFMP (EID 2013). However, upsizing is not required to accommodate the project. EID is monitoring the available capacity in this sewer line and would be responsible for constructing upgrades as needed.

Wastewater generated from the Costco project would be conveyed to the EDHWWTP. As discussed in Section 3.14.2, "Environmental Setting," the EDHWWTP is expected to approach capacity in approximately 2026. EID's Wastewater

Facilities Mater Plan recommends expansion of the EDHWWTP to a buildout capacity of 5.45 mgd to accommodate future growth in the collection system (EID 2013). EID is currently evaluating upgrades to existing wastewater treatment infrastructure; however, modifications to the existing EDHWWTP are not required to accommodate the project. The constituents in the wastewater flows from the project to the EDHWWTP would be typical of commercial uses and similar to flows from other commercial development in the El Dorado Hills; wastewater flows would not contain constituents that would cause permitted effluent limitations to be exceeded. Therefore, the Costco project would be consistent with General Plan Objective 5.1.2 and associated Policies 5.1.2.1 and 5.1.2.2 and Objective 5.3.1 and Policies 5.3.1.1 and 5.3.1.7.

The Costco project would require annexation action by the El Dorado LAFCO to obtain wastewater service. The project would be consistent with El Dorado LAFCO policies related to ensuring that wastewater service capacity is adequate and that required improvements to meet the project's demand would not affect existing wastewater services provided by EID or serve areas not planned for development (e.g., Policies 3.1.4 and 3.2.16).

Based on the above discussion, EID currently has adequate wastewater treatment capacity to serve the project. EID is evaluating upgrades to the existing wastewater collection and treatment system; however, these upgrades would be necessary to accommodate future growth in the service area independently of the Costco project. Therefore, this impact would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development; however, the types of commercial uses are not currently known. Similar to the project, future commercial development within the North Site Remainder Area would generate wastewater from operational activities (e.g., plumbing, sanitation, maintenance, air conditioning, food preparation/service). As discussed under "Analysis Methodology" above, the ratio of sewer EDUs per square foot of building area for a reference project within EID's service area boundary with a mix of commercial uses (i.e., retail, office, restaurants, drive-thru restaurant, and hotel uses) was used to estimate the EDUs of sewer demand for the North Site Remainder Area (RFE Engineering, Inc. 2019). When applying the same ratio of sewer EDUs per square foot of building area assumed for the reference project (i.e., 87 EDUs for 144,000 square feet), the 138,000 square feet of commercial uses in the North Site Remainder Area could require approximately 83.4 EDUs of sewer service. This estimate assumes a similar mix of commercial land uses to the project; however, actual water requirements would vary depending on the types of commercial uses that are proposed for future development. Remainder Area. As described for the project above, EID is evaluating upgrades to the existing wastewater collection and treatment system; however, these upgrades would be necessary to accommodate future growth in the service area independently of future development within the North Site Remainder Area. This impact would be **less than significant**.

Conclusion

The project would involve development of commercial uses on vacant land, which would be annexed into EID's service area. The Costco project would require approximately 12.7 EDUs of sewer service and the North Site Remainder Area could require approximately 83.4 EDUs of sewer service, depending on the types of commercial uses that are proposed for future development. EID provided a FIL to the applicant on June 10, 2025, which confirmed that adequate wastewater treatment capacity is currently available to serve the Costco project. EID is evaluating upgrades to the existing wastewater collection and treatment system; however, these upgrades would be necessary to accommodate future growth in the service area independently of the project. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.16-4: Generate Excess Solid Waste, Impair Attainment of Solid Waste Reduction Goals, or Fail to Comply with Regulations Related to Solid Waste

The Costco project would generate small amounts of construction debris and, once operational, approximately 2,368 pounds of solid waste per day. The North Site Remainder Area is assumed to include approximately 138,000 square feet of future development, which has potential to generate up to 2,970 pounds of solid waste per day. This solid waste would represent a small percentage of the maximum daily throughput and permitted capacity of existing solid waste disposal facilities. The overall project would adhere to all State requirements and County ordinances that govern waste management, including requirements for construction and demolition debris recycling, solid waste diversion, mandatory commercial recycling and organic waste disposal, and hazardous materials disposal. The project would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure; impair the attainment of solid waste reduction goals; or conflict with federal, State, and local management and reduction statutes and regulations related to solid waste. This impact would be **less than significant**.

As discussed in Section 3.14.2, "Environmental Setting," the project site is located within the EDHCSD boundary where the El Dorado Disposal Service provides solid waste collection, disposal, and recycling services. The following sections evaluate the potential for construction and operation of the Costco project and the North Site Remainder Area to generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure; impair the attainment of solid waste reduction goals; and conflict with federal, State, and local management and reduction statutes and regulations related to solid waste.

Costco Project

The Costco project would generate standard construction debris, which may include concrete, asphalt, wood waste, glass, metals, gypsum, and cardboard. No substantial demolition debris would be generated because the project site is currently vacant; however, offsite improvements would result in approximately 1,284 tons of demolition waste based on air quality modeling conducted for the project (see Appendix B). In accordance with the Construction and Demolition Debris Recycling Ordinance (Chapter 8.43 of the El Dorado County Code), the project applicant would file a Debris Recycling Acknowledgment with the El Dorado County Environmental Management Division and demonstrate compliance with the County's goal of diverting at least 50 percent of debris. Compliance with the County's Construction and Demolition Debris Recycling Ordinance would ensure compliance with State regulations pertaining to waste management, including AB 939. Hazardous waste generated during project construction would be disposed of in accordance with applicable laws and regulations described in Section 3.8, "Hazards and Hazardous Materials."

The North Site would include development of an approximately 13,000-square-foot fuel facility. As discussed under "Analysis Methodology," above, the rate used to estimate solid waste generation for auto dealer and service stations is 0.9 pounds of solid waste per 100 square feet per day. Using this generation rate, the proposed fuel facility would generate approximately 12 pounds of solid waste per day.

The South Site would include up to approximately 165,000 square feet of building area that would include a Costco warehouse retail building and tire sales and installation center. As discussed under "Analysis Methodology," above, the waste generation rate for big box retail is 2,866 pounds of waste material per employee per year, when accounting for diversion (CalRecycle 2006). Assuming that the Costco warehouse retail building would employ up to 300 employees, the Costco warehouse retail building would generate approximately 859,800 pounds of solid waste per year, or roughly 2,356 pounds of solid waste per day.

When considering the North Site and South Site combined, the project would generate approximately 2,368 pounds or 1.2 tons of solid waste per day. Costco has achieved a waste diversion rate of 82.1 percent, as reported in their Climate Action Plan (Costco 2024). Therefore, actual solid waste generation from the project is anticipated to be less. In addition to diversion practices, the project would incorporate sustainability features such as recycled and locally sourced materials, no-VOC floor sealants, and extensive recycling and reuse programs for tires, cardboard, grease, plastics, and electronic waste. Costco also avoids plastic bags and requires suppliers to reduce packaging.

The solid waste generated from project operations represents approximately 0.3 percent of the maximum permitted throughput of the Western El Dorado Recovery Systems Material Recovery Facility. This relatively small increase in solid waste would not consume a substantial proportion of the permitted capacity of 400 tons per day. Transferred

materials would be disposed of at Kieffer Landfill, Forward Landfill, Potrero Hills Landfill, or another Class III permitted Landfill. These landfills are anticipated to operate through 2036, 2048, and 2080, and have a combined maximum permitted throughput of 23,813 tons per day and a combined remaining capacity of 140,892,669 cubic yards (refer to Table 3.16-7). Therefore, these facilities would have sufficient capacity to accommodate the solid waste generated from the project.

Costco project operations would comply with the County's ordinances that govern the accumulation, storage, collection, and disposal of solid waste generated on commercial properties (Chapter 8.42 of the El Dorado County Code) and the disposal of organic waste (Chapter 8.45 of the El Dorado County Code). Compliance with these ordinances would ensure that the County continues to meet or exceed the requirements of the State's solid waste reduction goals and requirements, including CIWMA, AB 341, AB 1826, SB 1383, and AB 827.

Based on the discussion above, the Costco project would not generate solid waste in excess of the capacity of local infrastructure. In addition, the Costco project would comply with all applicable State and local requirements, including those pertaining to solid waste, construction waste diversion, and recycling. For these reasons, the impact would be **less than significant**.

North Site Remainder Area

The North Site Remainder Area is designated for commercial uses and is assumed to include approximately 138,000 square feet of future development; however, the types of commercial uses are not currently known. Construction of commercial uses in the North Site Remainder Area would generate similar types of solid waste as described for the project above. In addition, construction activities for the North Site Remainder Area would comply with the same regulations pertaining to waste management as described above for the project. Once operational, the commercial uses in the North Site Remainder Area may generate up to 180 new employees. Applying the County's 2023 per capita disposal rate of 16.5 pounds per employee per day (CalRecycle 2023), the North Site Remainder Area could generate approximately 2,970 pounds of solid waste per day or 1.5 tons of solid waste per day. The solid waste generated from the North Site Remainder Area represents less than 0.4 percent of the maximum permitted throughput of the Western El Dorado Recovery Systems Material Recovery Facility. As discussed for the project above, this relatively small increase in solid waste would not consume a substantial proportion of the permitted capacity of existing solid waste facilities (e.g., Kieffer Landfill, Forward Landfill, Potrero Hills Landfill). Therefore, these facilities would have sufficient capacity to accommodate the solid waste generated from the North Site Remainder Area. Commercial operations within the North Site Remainder Area would comply with the same ordinances governing the disposal of solid waste, as described for the project above, which would ensure that the County continues to meet or exceed the requirements of the State's solid waste reduction goals and requirements.

Based on the discussion above, the North Site Remainder Area would not generate solid waste in excess of the capacity of local infrastructure. In addition, the North Site Remainder Area would comply with all applicable State and local requirements, including those pertaining to solid waste, construction waste diversion, and recycling. For these reasons, the impact would be **less than significant**.

Conclusion

The Costco project and North Site Remainder Area would generate small amounts of construction debris. When considered together, the Costco project and North Site Remainder Area would generate approximately 6,631 pounds of solid waste per day once operational. This solid waste would represent approximately 0.8 percent of the maximum daily throughput and permitted capacity of existing solid waste disposal facilities. The overall project would adhere to all State requirements and County ordinances that govern waste management, including requirements for construction and demolition debris recycling, solid waste diversion, mandatory commercial recycling and organic waste disposal, and hazardous materials disposal. The project would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure; impair the attainment of solid waste reduction goals; or conflict with federal, State, and local management and reduction statutes and regulations related to solid waste. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

3.17 WILDFIRE AND EVACUATION

This section evaluates potential effects related to wildfire that could result from implementation of the project based on the Costco Wholesale Project Fire Safe Plan and El Dorado Hills Costco Warehouse Evacuation Analysis provided in Appendix K. The section includes a description of existing wildfire hazard conditions, relevant fire prevention policies and regulations, and a discussion of potential impacts that could result from the project.

Comments received on the notice of preparation (NOP) regarding wildfire included concerns that the project could exacerbate fire risk, fire potential related to onsite uses (i.e., the bakery and fuel facility), and the potential for insufficient fire-fighting equipment. These comments are addressed where appropriate throughout this section. The NOP and comments submitted in response to the NOP are included in Appendix A.

3.17.1 Regulatory Setting

FEDERAL

There are no federal regulations regarding wildfire that pertain to the project.

STATE

Office of the State Fire Marshal and California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of the state's privately-owned wildlands. PRC Sections 4125–4137 establish that CAL FIRE has the primary financial responsibility of preventing and suppressing fires in State Responsibility Areas (SRAs). PRC Section 4290 states that CAL FIRE also has responsibility for enforcement of State Minimum Fire Safe Regulations (Fire Safe Regulations), including road standards for fire equipment access and civilian evacuation; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; fuel breaks; and greenbelts. PRC Section 4291 gives CAL FIRE the authority to enforce 100 feet of defensible space around all buildings and structures on SRA lands, or nonfederal forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material.

Additionally, CAL FIRE is also responsible for a broad range of programs that guide forest policy and planning within California and for implementing the Fire Resource and Assessment Program (FRAP). The FRAP assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines. Fire Hazard Severity Zones for community planning are developed under FRAP and identify areas with very high fire hazards in both the SRA and local responsibility area.

New developments located in SRAs and Very-High Fire Hazard Severity Zones (VHFHSZs) are subject to the following requirements:

- Determination that new subdivisions are consistent with regulations adopted by the State Board of Forestry and Fire Protection pursuant to PRC Sections 4290 and 4291 or are consistent with local ordinances certified by the State Board of Forestry and Fire Protection as meeting or exceeding the state regulations (California Code of Regulations [CCR], Title 14, Section 1266.01).
- Defensible space of 100 feet around all buildings and structures (PRC Section 4291; CCR, Title 14, Section 1299.03).
- Provision of adequate emergency access and egress (PRC Sections 4290 and 4291; CCR, Title 14, Sections 1273.01–1273.09).
- Emergency water requirements (CCR, Title 14, Sections 1275.01–1275.04).
- Building signing and number requirements (PRC Sections 4290 and 4291; CCR, Title 14, Sections 1274.01–1274.04).

Fire Safe Regulations

The Fire Safe Regulations apply to areas within the SRA and Local Responsibility Area (LRA) VHFHSZ. They contain standards for design and construction of structures, subdivision and developments within these areas and lay out provisions for basic emergency access and perimeter wildfire protection measures. Standards apply to the following topics.

- Ingress and Egress
- Signing and Building Numbering
- Emergency Water Standards
- Building siting, Setbacks and Fuel Modifications

These standards apply to future development; they apply to new commercial and residential construction and expansions to existing commercial construction within the SRA and LRA VHFSZ.

2018 Strategic Fire Plan

The 2018 Strategic Fire Plan for California is the state's road map for reducing the risk of wildfire. The plan aims to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. The primary goals of the plan are summarized as follows (CAL FIRE 2018):

- Improve the availability and use of consistent, shared information on hazard and risk assessment;
- Promote the role of local planning processes, including general plans, new development, and existing developments, and recognized individual landowner/homeowner responsibilities;
- Fosters a shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as Community Wildfire Protection Plans;
- Increase awareness and actions to improve fire resistance of man-made assets at risk and fire resilience of wildland environments through natural resource management;
- Integrate implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers;
- Determine and seek the needed level of resources for fire prevention, natural resource management, fire suppression, and related services; and
- Implement needed assessments and actions for post-fire protection and recovery.

Emergency Services Act

Under the Emergency Services Act, Government Code Section 8550, et seq., the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving wildfire and other natural and/or human-caused incidents is an important part of the plan, which is administered by the Governor's Office of Emergency Services (OES). The office coordinates the responses of other agencies, including the California Environmental Protection Agency (CalEPA), the California Highway Patrol (CHP), regional water quality control boards, air quality management districts, and county disaster response offices.

California Public Resources Code

CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (PRC sections 4201-4204; Government Code sections 51175–51189). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE has identified two types of wildland fire risk areas: (1) wildland areas that may contain substantial forest fire risks and hazards; and (2) very high fire hazard risk zones.

PRC section 4291 gives CAL FIRE the authority to enforce 100 feet of defensible space around all buildings and structures on SRA lands. PRC sections 4790 through 4799.04 provide the regulatory authority for CAL FIRE to

administer the California Forest Improvement Program. PRC sections 4113 and 4125 give CAL FIRE the responsibility to prevent and extinguish wildland fires in SRAs. The PRC also includes fire safety statutes that restrict the use of equipment that may produce a spark, flame, or fire; requires the use of spark arrestors on construction equipment with internal combustion engines; specifies requirements for the safe use of gasoline-powered tools in fire hazard areas; and specifies fire suppression equipment that must be provided for various types of work in fire-prone areas.

New development located in SRAs are subject to the following requirements:

- Determination that new subdivisions are consistent with regulations adopted by the State Board of Forestry and Fire Protection pursuant to PRC sections 4290 and 4291 or are consistent with local ordinances certified by the State Board of Forestry and Fire Protection as meeting or exceeding the state regulations (CCR, title 14, section 1266.01)
- Defensible space of 100 feet around all buildings and structures (PRC section 4291; CCR, title 14, section 1299.03)
- Provision of adequate emergency access and egress (PRC sections 4290 and 4291; CCR, title 14, sections 1273.01–1273.09)
- Emergency water requirements (CCR, title 14, sections 1275.01–1275.04)
- Building Siting, Setbacks, and Fuel Modification (PRC 4290 and 4291; CCR, title 14, sections 1276.01-1276.03)
- Building signing and number requirements (PRC sections 4290 and 4291; CCR, title 14, sections 1274.01-1274.04)

California Fire Code

The 2022 California Fire Code (CFC) (CCR, title 24, Part 9) establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to construction, alternation, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of buildings or structures or any appurtenances connected or attached to such building structures throughout California.

Chapter 49 of the CFC, contains requirements to reduce the likelihood of life and property loss due to a wildfire through the use of performance and prescription requirement for development and construction in LRAs designated as Very High Fire Hazard Severity Zones and areas designated by the Board of Forestry and Fire Protection as SRAs. Strategies included in Chapter 49 of the CFC include: development of fire protection plans, development of landscape plans and long-term vegetation management, and creation and maintenance of defensible space to protect structures and subdivisions.

California Building Code

The California Building Code (CBC) contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. CBC provisions provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures and certain equipment.

Within the 2022 California Building Code, Title 24, Part 2, section 701A.3 ("Application") requires that new buildings located in any Fire Hazard Severity Zone within SRAs, any local agency Very-High Fire Hazard Severity Zone VHFHSZs, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted, shall comply with all the requirements of Chapter 7A. Standards for new development, addressed in Chapter 7A, include conditions of ignition-resistant construction materials as well as specifications, including those pertaining to roofing, vents, exterior covering, exterior windows, skylight, doors, and decking. Additionally, Chapter 7A requires local buildings officials to certify that a new building complies with all applicable building standards. As part of final approval of building permits, properties with new development must demonstrate compliance with the vegetation management requirements prescribed in California Fire Code Section 4906, including Public Resources Code 4291 or California Government Code Section 51182.

LOCAL

El Dorado County General Plan

The County General Plan Public Services and Utilities Element (El Dorado County 2015) and Public Health, Safety, and Noise Element (El Dorado County 2024) include the relevant wildfire hazard and evacuation objectives and policies that are applicable to the topic and project. The reader is also referred to Section 3.12, "Public Services and Recreation," for applicable policies related to fire protection service provision and standards for service.

Public Services and Utilities Element

- **Objective 5.7.1: Fire Protection (Community Regions).** Ensure sufficient emergency water supply, storage, and conveyance facilities are available, and that adequate access is provided for, concurrent with development.
  - **Policy 5.7.1.1:** Prior to approval of new development, the applicant would be required to demonstrate that adequate emergency water supply, storage, conveyance facilities, and access for fire protection either are or would be provided concurrent with development.
- **Objective 5.7.4: Medical Emergency Services.** Adequate medical emergency services available to serve existing and new development recognizing that levels of service may differ between Community Regions, and Rural Centers and Regions.
  - **Policy 5.7.4.1:** Prior to approval of new development, the applicant shall be required to demonstrate that adequate medical emergency services are available and that adequate emergency vehicle access would be provided concurrent with development.
  - **Policy 5.7.4.2:** Prior to approval of new development, the Emergency Medical Services Agency shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.

Public Health, Safety, and Noise Element

- **Objective 6.1.2:** Expand community resilience to support effective emergency response and recovery during and after emergency events.
  - **Policy 6.1.2.1:** Support an emergency mass evacuation and sheltering plan that prioritizes the needs of at-risk, vulnerable, and disadvantaged people and individuals with disabilities, access and functional needs, and other special needs by providing meaningful opportunities in emergency planning efforts.
- **Objective 6.2.1: Defensible Space.** All existing and new development and structures shall meet "defensible space" requirements to minimize wildland fire hazards.
  - **Policy 6.2.1.1:** Implement Fire Safe ordinance to attain and maintain defensible space through conditioning of tentative maps and in new development at the final map and/or building permit stage.
  - **Policy 6.2.1.2:** Coordinate with the local Fire Safe Councils, California Department of Forestry and Fire Protection (CAL FIRE), and federal and state agencies having land use jurisdiction in El Dorado County in the development of a countywide fuels management strategy.
  - **Policy 6.2.1.4:** Require consistency with fire code and development standards that ensure adequate defensible space clearance around all existing and new structures in compliance with the California Fire Code, Public Resources Code Section 4291 (ember-resistant zone), Government Code Section 51175-51188, CCR Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299.03, and in the County Code of Ordinances Chapter 8.09.
  - **Policy 6.2.1.5:** Maintain and enforce the County Defensible Space Ordinance and Fire Prevention Programs and Plans in coordination with local the VHFHSZs and other fire agencies and continue to support related fire prevention programs associated with defensible space inspections as detailed in County Code of Ordinances Chapter 8.09, fire development standards, and public education.

- **Objective 6.2.2: Limitations to Development.** Regulate development in areas of high and very high fire hazard as designated by the California Department of Forestry and Fire Protection Fire Hazard Severity Zone (FHSZ) Maps.
  - **Policy 6.2.2.1:** FHSZ Maps shall be consulted in the review of all projects so that standards and mitigation measures appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures in areas designated as high or very high fire hazard.
  - **Policy 6.2.2.2:** The County shall preclude development, including public facilities and essential services (see definition in the Background Information Report in Appendix B), in areas of high and very high wildland fire hazard or in areas identified as Wildland-Urban Interface (WUI) communities within the vicinity of Federal lands that are a high risk for wildfire, as listed in the Federal Register Executive Order 13728 of May 18, 2016, unless such development can be adequately protected from wildland fire hazard, as demonstrated in a WUI Fire Safe Plan prepared by a qualified professional as approved by the El Dorado County Fire Prevention Officers Association. The WUI Fire Safe Plan shall be approved by the local FPD having jurisdiction and/or CAL FIRE. (Resolution 124- 2019, August 6, 2019)
- **Objective 6.2.3: Adequate Fire Protection.** Application of uniform fire protection standards to development projects by fire districts.
  - **Policy 6.2.3.1:** As a requirement for approving new development, the County must find, based on information provided by the applicant and the responsible FPD that, concurrent with development, adequate emergency and peak load water supply, water flow, fire access, and firefighting personnel and equipment would be available in accordance with applicable State and local fire district standards to support fire suppression efforts.
  - **Policy 6.2.3.2:** As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.
  - **Policy 6.2.3.4:** All new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements.
  - **Policy 6.2.3.5:** Identify actions to ensure noncompliant development meets current fire safe standards and road standards as defined in Title 14 CCR, Division 1.5, Chapter 7 Fire Protection, Subchapter 2, Articles 1-5, SRA Fire Safe Regulations through the WUI Fire Safe Plan review process and through collaboration with the FPDs and local fire agencies when reviewing Fire Protection Plans and provisions for new development.
  - **Policy 6.2.3.6:** All new development within an SRA or very high (VHFHSZs) shall prepare a Fire Protection Plan that complies with established fire safety standards. Ingress and egress to the new development would be constructed utilizing the most current State Fire Safe Regulations, Fire Code, and/or County Code that meets these minimum requirements. Key components of a Fire Protection Plan include:
    1. risk analysis;
    2. fire response capabilities;
    3. fire safety requirements – defensible space, infrastructure, and building ignition resistance;
    4. mitigation measures and design considerations for non-conforming fuel modification;
    5. wildfire education, maintenance, and limitations, and
    6. evacuation planning.

    Existing development within an SRA or VHFHSZ can meet these requirements through retro-fitting and home hardening.
  - **Policy 6.2.3.7:** Enforce the most recent California Uniform Building Code Fire Code to safeguard life and property from the hazards of fires and explosions; dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; and hazardous conditions in the use or occupancy of building or premises.

- **Objective 6.11.2: Evacuation Route Maintenance.** Ensure viability of future use of evacuation routes.
  - **Policy 6.11.2.1:** Development shall be served by a street system with at least two evacuation routes capable of carrying peak load traffic and have sufficient capacity to meet project needs, or they must provide the necessary capacity to ensure the development has adequate fire protection and safe ingress and egress routes in conformance with the California Fire Safe Regulations (Section 1273 and 1274) of the California Code of Regulations – Title 14, Division 1.5, Chapter 7, Articles 2 and 3).
  - **Policy 6.11.2.2:** Construction of new roads, streets, and evacuation routes must be adequate in terms of width, turning radius, and grade to facilitate access by firefighting apparatus. Priorities for road improvements would be based on evacuation accessibility.
  - **Policy 6.11.2.4:** Continue to coordinate with the County Sheriff's Department, CAL FIRE, local FPDs, and other fire agencies to identify, assess, and maintain evacuation routes to support the adequate capacity, safety, and viability of those routes under a range of emergency scenarios. Identify designated evacuation routes that are not compliant with Fire Safe Regulations (14 CCR Section 1270.00) for roadway standards and develop a plan to bring those roads into conformance to promote adequate and safe accessibility in communities.

El Dorado County Local Hazard Mitigation Plan

The El Dorado County Local Hazard Mitigation Plan (LHMP) provides guidance for the County's response to emergency situations, including earthquakes, levee failures, flood events, wildlife, and severe weather events. The LHMP was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that the County would be eligible for the Federal Emergency Management Agency's (FEMA's) Pre-Disaster Mitigation and Hazard Mitigation Grant programs.

The County followed a planning process prescribed by FEMA, which began with the formation of a hazard mitigation planning committee (HMPC) comprised of key County representatives, and other regional stakeholders. The HMPC conducted a risk assessment that identified and profiled hazards that pose a risk to the County, assessed the County's vulnerability to these hazards, and examined the capabilities in place to mitigate them. The County is vulnerable to several hazards that are identified, profiles, and analyzed in the LHMP, including wildfires. Based on the risk assessment, the HMPC identified the following goals for reducing the County's vulnerability to hazards.

- **Goal 1:** Minimize risk and vulnerability of El Dorado County to the impacts of natural hazards and protect lives and reduce damages and losses to property, economy, public health and safety, and the environment.
- **Goal 2:** Provide protection for critical facilities, infrastructure, utilities and services from hazard impacts.
- **Goal 3:** Improve public awareness, education, and preparedness for all hazards.
- **Goal 4:** Increase communities' capabilities to mitigate losses and to be prepared for, respond to, and recover from a disaster event.
- **Goal 5:** Maintain FEMA Eligibility/Position the communities for grant funding.

El Dorado County Emergency Operations Plan

The El Dorado County Emergency Operations Plan (2023) establishes the policies, responsibilities, and procedures necessary to protect public health and safety, property, infrastructure, and the environment from the effects of emergencies and disasters. The plan also establishes the operational concepts and procedures associated with both field responses and Emergency Operations Center activities.

El Dorado County Department of Forestry State Responsibility Area Fire Safe Regulations

The El Dorado County Department of Forestry State Responsibility Area Fire Safe Regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in State Responsibility Areas. The future design and construction of structures, subdivisions, and developments in the State Responsibility Areas must provide for basic emergency access and perimeter wildfire protection measures. Required measures include provisions for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification.

El Dorado County Fire Safe Council

The El Dorado County Fire Safe Council was organized in September 2001 and currently has over 150 members from the public and private sectors. Through community outreach and public education, the Council endeavors to make residents of the County aware of the risks of living within a Wildland Urban Interface and what they should do to protect their home and property from wildfire. The Council and its partners have implemented many fire safe projects in the County, including the chipper program, defensible space inspections, and vegetation reduction projects.

Western El Dorado County Community Wildfire Protection Plan

The Western El Dorado County Community Wildfire Protection Plan (ECCWPP) identifies the risks and hazards associated with wildland fires in the WUI areas of Western El Dorado County. The ECCWPP also identifies recommendations aimed at preventing and reducing both infrastructure and ecosystem damage associated with wildland fires. Fuel reduction projects identified in the approved ECCWPP receive priority for federal funds. The ECCWPP was last updated in 2022.

El Dorado County Code

Chapter 8.08 (Fire Prevention) of the El Dorado County Code specifies limits on campfires, fireworks, smoking, and incinerators for all discretionary and ministerial developments. Chapter 8.09 (Vegetation Management and Defensible Space) of Title 8 of the County Code requires the removal or abatement of all hazardous vegetation and describes the means of enforcement.

El Dorado Hills Fire Department

Ordinance 2022-01

The El Dorado Hills Fire Department has adopted the 2022 California Fire Code (CFC) with several local amendments which are more restrictive than those described in the CFC. The El Dorado Hills Fire Department updates its local fire code ordinance in conjunction with the triennial update to the California Building Standards Code. Specific local amendments contained within the ordinance that are applicable to the project include the following:

- Fire apparatus access road design criteria as described in Section 503.2.1
- Dead end roads and driveways as described in Section 503.2.5
- Fire lane marking requirements described in Section 503.3.1
- Security gate design criteria as described in Section 503.6
- Address identification criteria as described in Section 505.1
- Liquid propane gas storage tank limits as described in Section 6104.2
- Fire-flow requirements for buildings as described in Appendix B
- Fire apparatus access road design criteria described in Appendix D

Ordinance 2023-01

Ordinance 2023-01 regulates hazardous vegetation management on unimproved parcels. Specific provisions contained within the ordinance include the following:

- Hazardous vegetation maintenance on unimproved parcels that are one (1.0) acre in size or smaller
- Hazardous vegetation maintenance on unimproved parcels over one-acre (1.01) in size or larger
- Unimproved parcels known to contain, or that the property owner believes, may contain habitat for rare, threatened, or endangered plant or animal species
- Duty of property owner to abate fire hazards on their property
- Acceptable methods of clearance of hazardous vegetation and combustible materials

- Reoccurring fire hazards
- Penalties for violating the ordinance

3.17.2 Environmental Setting

WILDFIRE

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fire. Various factors contribute to the intensity and spread of wildfires: humidity, wind speed and direction, vegetation type, the amount of vegetation (i.e., fuel), and topography. While wildfires are a natural component of California's fire-adapted ecosystems, they represent a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition-resistant. The impacts of wildfire on a community are far-reaching. The most significant impacts would be loss of life, loss of property, and environmental damage.

Wildfires are a substantial threat in California, particularly in recent years as the landscape responds to climate change and decades of fire suppression. It is estimated that since 1985, more than 50 percent of the increase in the area burned by wildfire in the western U.S. is attributable to anthropogenic climate change (Abatzoglou and Williams 2016). As climate change persists, it would produce increasing temperatures and drier conditions that would generate abundant dry fuels. All wildfires (those initiated by both natural and manmade sources) tend to be larger under drier atmospheric conditions and when fed by drier fuel sources (Balch et al. 2017).

Wildfire behavior is a product of several variables, primarily weather, vegetation, topography, and human influences, which intermix to produce local and regional fire regimes that affect how, when, and where fires burn. The fire regime in any area is defined by several factors, including fire frequency, intensity, severity, and area burned. Fire frequency refers to the number of fires that occur in a given area over a given period of time; fire intensity refers to the speed at which fire travels and the heat that it produces; fire severity involves the extent to which ecosystems and existing conditions are affected or changed by a fire; and area burned is the size of the area burned by wildfire.

WILDLAND URBAN INTERFACE

Throughout California, communities are increasingly concerned about wildfire safety as increased development in the foothills and mountain areas and subsequent fire control practices have affected the natural cycle of the ecosystem. While wildfire risk is predominantly associated with wildland urban interface (WUI) areas, significant wildfires can also occur in heavily populated areas. The WUI is a general term that applies to development adjacent to landscapes that support wildland fire. The WUI describes those communities that are mixed in with grass, brush, and timbered covered lands (wildland). These are areas where wildland fire once burned only vegetation but now burns homes as well. The WUI for El Dorado County consists of communities at risk as well as the area around the communities that pose a fire threat (El Dorado County 2018).

There are two types of WUI environments. The first is the true urban interface where development abruptly meets wildland. The second WUI environment is referred to as the wildland urban intermix, which includes communities that are rural and low density where homes are intermixed in wildland areas. Wildland urban intermix communities are difficult to defend because they are sprawling communities over a large geographical area with wild fuels throughout. This profile makes access, structure protection, and fire control difficult as fire can freely run through the community (El Dorado County 2018).

WILDFIRES IN EL DORADO COUNTY

Wildland fires affect grass, forest, and brush lands, as well as any structures located within them. Where there is human access to wildland areas, such as the Sierra Nevada and foothills areas, the risk of fire increases due to a greater chance for human carelessness and historical fire management practices. Within the El Dorado County, the

area starting in the foothills just east of El Dorado Hills and extending east, as well as north and south to the County lines is most vulnerable and prone to wildfire due to the climate, topography, and vegetation. Wildfires may occur in areas of El Dorado County, including the most populated areas of EL Dorado Hills, Cameron Park/Shingle Springs, Placerville, Camino/Pollock Pines, and South Lake Tahoe (El Dorado County 2018).

Since January 2024, at least seven fire incidents have occurred in the county based on a search of California Department of Forestry and Fire Protection's (CAL FIRE's) fire incident database (Tabel 3.17-1).

Table 3.17-1 Fire Incidents in the El Dorado County January 2024-June 2025

Incident	Date Started	Acres Affected
Creek Fire	6/29/2024	16
Moccasin Fire	7/2/2024	51
Pay Fire	7/6/2024	77
Silver Fire	8/7/2024	41
Crozier Fire	9/9/2024	1,938
Bell Fire	9/14/2024	12
Bonanza Fire	6/17/2025	181

Source: CAL FIRE 2025.

As indicated in Table 3.17-1, wildfire generally occurs in the county between May and October. It could be due to the high fuel load and long, dry summers the County has been experiencing. Fires would continue to occur on an annual basis in El Dorado County. The threat of wildfire and potential losses are constantly increasing as human development and population increase and the WUI areas expand (El Dorado County 2018).

PROJECT SITE CONDITIONS

The North Site and South Site contain grasslands that extend onto adjacent properties and are only interrupted by the roads that border the project boundaries (e.g., Tong Road, Clarksville Road). Fuel heights in these grasslands are between two and three feet. Vegetation cover transitions to riparian woodlands surrounding the drainage near the intersection of Clarksville Road and Silva Valley Parkway, and in the small drainage that flows from Oak Meadow Elementary School to Silva Valley Parkway. Valley Oak woodlands are present in the drainage that crosses the Costco South development from north to south (Dudek 2025).

The general terrain of the project site is composed of a southwest-facing average slope of 6 percent and slopes that range from 0 to 37 degrees. Elevations range from 693 feet at the southwest corner of the South Site near Clarksville Road to 791 feet above mean sea level along the north boundary of the North Site. The general terrain on the site is broken up by a north-to-south oriented drainage that crosses through the center of the project and a depression for a storm drain at the northern tip of the project site (Dudek 2025).

Annual grasslands provide the most substantial fuel within the project site. In the absence of strong winds, a terrain-driven wildfire would likely move upslope following the general terrain. The drainages are not deep enough to create or funnel winds that would be substantially different from the prevailing wind conditions expected across the rest of the project site. There are no terrain features present on the project site that would substantially affect fire intensity or rate of spread (Dudek 2025).

Areas surrounding the project site consist of residential communities on the east and west, an elementary school to the north, and US 50 to the south. Vacant undeveloped land is present between these developed uses and the project site (Dudek 2025).

FIRE HAZARD SEVERITY ZONES

The project is located in the CAL FIRE state responsibility area (SRA), which has been designated as a Moderate Fire Hazard Severity zone (MFHSZ). The CAL FIRE adopted updated SRA Fire Hazard Severity Zone maps in April 2024, and the designated fire hazard severity zone for the project site was unchanged. Adjacent lands to the north are within the Local Responsibility Area (LRA) and are designated as a Moderate Fire Hazard Severity Zone. The SRA Moderate Fire Hazard Severity Zone continues to the east. To the south, the SRA transitions to the High Fire Hazard Severity Zone south of US 50. To the west is the LRA Moderate Fire Hazard Severity Zone. Figure 3.17-1 contains the CAL FIRE Hazard Severity Zone map for the project area

3.17.3 Impact Analysis and Mitigation Measures

ANALYSIS METHODOLOGY

This analysis relies upon the Costco Wholesale Project Fire Safe Plan (FSP) and El Dorado Hills Costco Warehouse Evacuation Analysis provided in Appendix K. The FSP meets the requirements of the El Dorado Hills Fire Department for new development in moderate, high, and very high fire hazard severity zones, as described in the El Dorado Hills Fire Department standard #W-002. The FSP assessed the property location, topography, surrounding combustible vegetation (fuel types), climatic conditions, and fire history. The plan addresses water supply, access, structural ignitability, and fire-resistant building features, as well as fire protection systems and equipment, impacts on existing emergency services, community evacuation routes, defensible space, and vegetation management. The FSP relied upon scientifically based fire behavior models, comparisons with actual wildfires in similar terrain and fuels, and experienced judgment to predict fire behavior and provided recommendations to reduce fire risk.

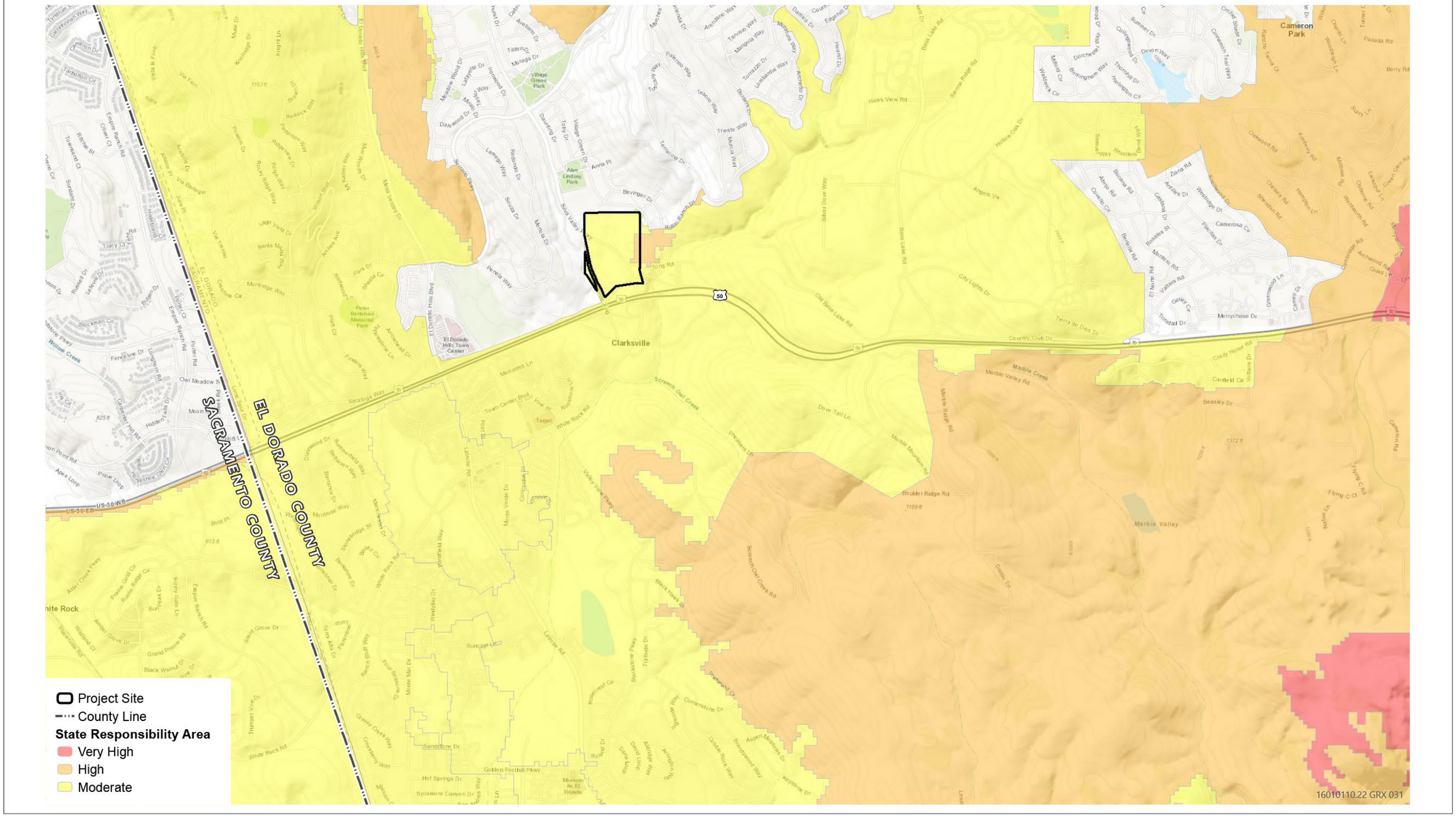
Evacuation is addressed in the FSP. The El Dorado Hills Costco Evacuation Analysis provided a quantified analysis of the project's impact to travel times in the event of a wildfire and evacuation. Specifically, this analysis was used to determine if there are significant impacts in the ability to safely evacuate the project occupants and/or if the project has a significant impact on the ability of the surrounding community to concurrently evacuate during a wildfire evacuation scenario. This evacuation analysis addresses both the Costco project and the future development of the North Site Remainder Area.

In order to evaluate how the proposed project may affect traffic volumes during a wildfire scenario in the evacuation analysis, fire progression and fire behavior modeling was conducted for the project area. The modeling considered wildfire history, ignition sources, fuels/vegetation, and historical weather patterns for the project site and surrounding areas. Two primary wildfire evacuation scenarios were selected for further analysis. The following scenario details were assumed for Wildfire Scenario #1, as shown in Figure 3.17-2, in the evaluation analysis:

- The fire scenario for Wildfire Scenario #1 was assumed to ignite northeast of the project site, spreading southwest towards the project site.
- The wind direction was assumed to be directed from the north/northeast
- The duration for the wildfire to reach the project site was assumed to take approximately 143 minutes (2 hours and 23 minutes).

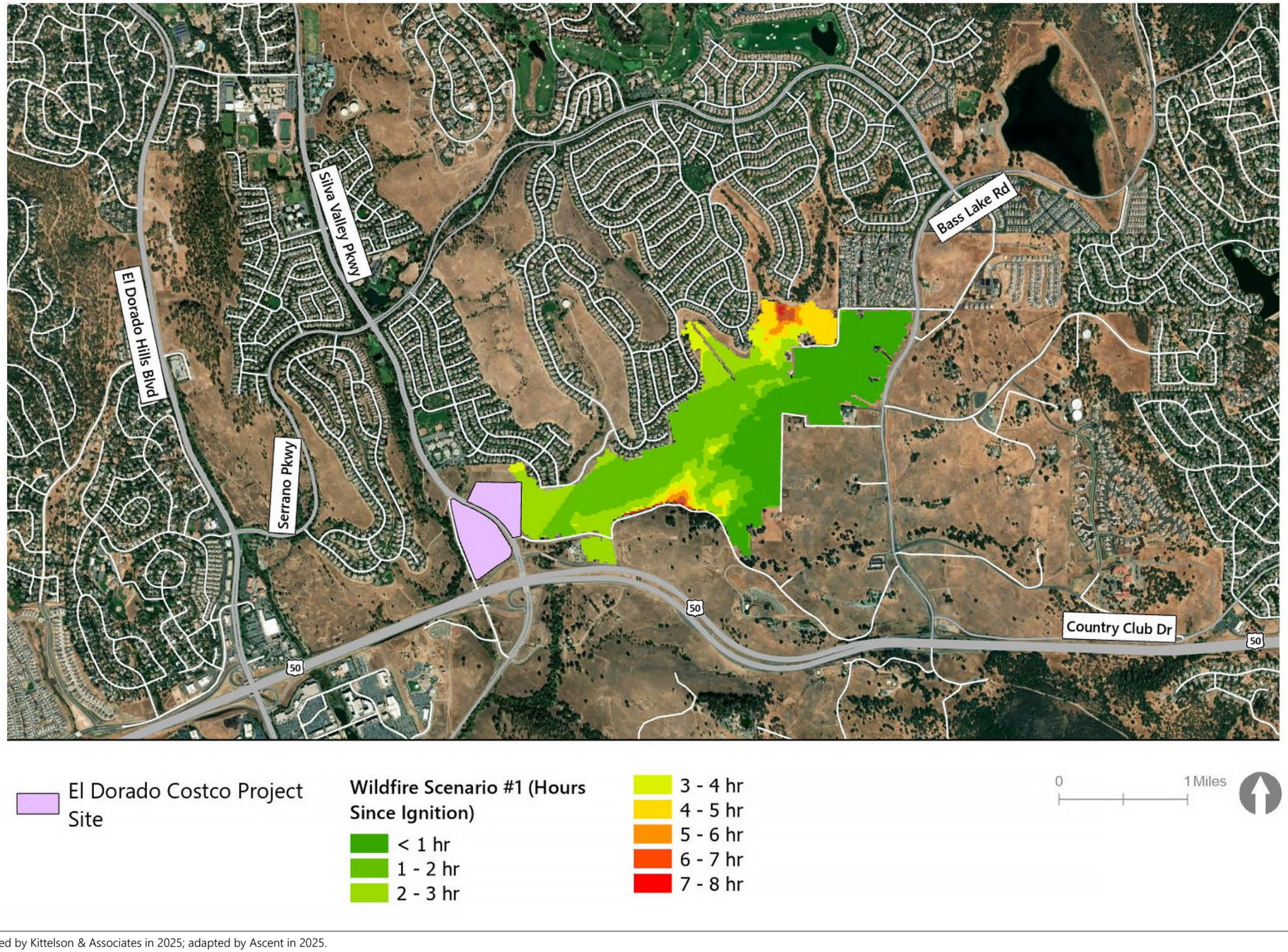
Additionally, the following scenario details were assumed for Wildfire Scenario #2, as shown in Figure 3.17-3, in the evaluation analysis:

- The fire scenario for Wildfire Scenario #2 was assumed to ignite southwest of the project site, spreading northeast towards the project site.
- The wind direction was assumed to be directed from the southwest.
- The duration for the wildfire to reach the project site was not determined, as the wildfire would not reach the project site due to natural fire breaks, including riparian vegetation and a paved roadway located west of the project site. .



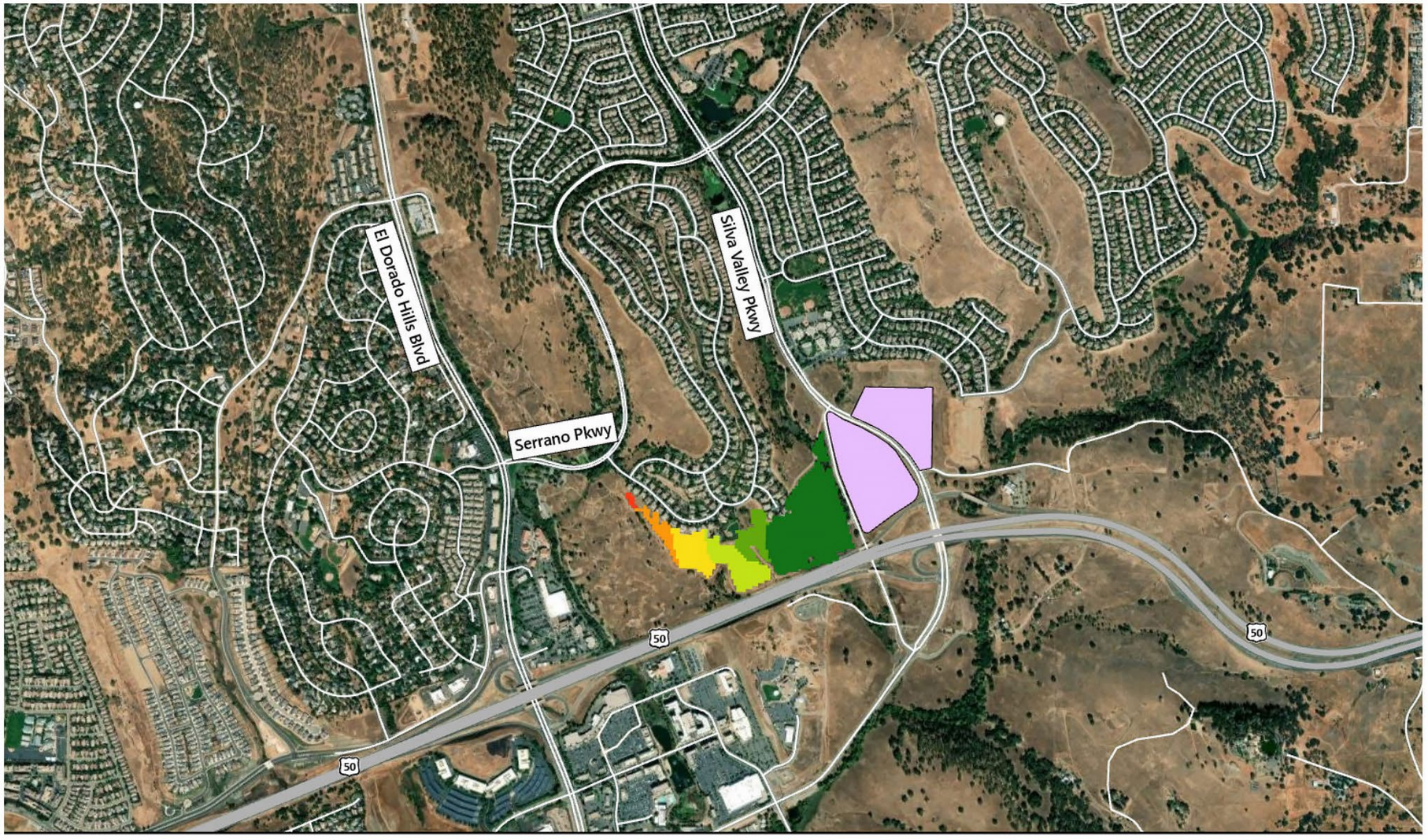
Source: adapted by Ascent in 2025.

Figure 3.17-1 Fire Hazard Severity Zones



Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-2 Wildfire Scenario #1



Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-3 Wildfire Scenario #2

To account for the worst-case scenario, the two wildfire scenarios were evaluated under the existing conditions, existing conditions plus Costco project, the near-term (year 2034) conditions, and the near-term (year 2034) plus Costco project and North Site Remainder Area development conditions during the PM peak hours to represent the peak traffic volume during a typical week. Given that the timing of future development of the North Site Remainder Area is not currently known, the North Site Remainder Area was not included in existing conditions analysis.

A combination of baseline travel, normal travel patterns during the PM peak hours, and Evacuation travel (estimated evacuation trips and travel time from each evacuation traffic analysis zone (TAZ) to an evacuation destination), were assigned to each model's TAZs based on its presence in the designated evacuation area. Estimated evacuation trips were determined by calculating the trips generated at household uses and trips generated by employees at non-residential land uses. Data obtained from the American Community Survey (ACS) 2023 5-year estimates estimated an average of 2.03 vehicles per household in El Dorado County. The number of evacuating households was multiplied by 2 to estimate the number of evacuating residential vehicles. Each evacuating employee was assumed to use one vehicle. The evacuation analysis conservatively assumed that 75 percent of residents and 75 percent of employees would need to evacuate during a wildfire event. Both wildfire evacuation scenarios also determined evacuation area boundaries, with Wildfire Scenario #1 being bounded by Serrano Parkway on the north, US 50/Old White Roack Road on the south, Silva Valley Parkway on the west, and Bass Lake Road on the east, and Wildfire Scenario #2 being bounded by Serrano Parkway on the north, US 50/White Rock Road on the south, El Dorado Hills Boulevard on the west, and areas surrounding Tong Road between Silva Valley Parkway and Bass Lane Road. The modeling also assumed that 65 percent of Costco members and employees would evacuate eastward toward Placerville and 35 percent would evacuate westward toward Folsom. Residents and employees in the evacuation area outside of the project site were assumed that 80 percent would evacuate westward toward Folsom, and 20 percent would evacuate eastward toward Placerville. Roadway capacity and roadway closures were represented in each scenario, with Bass Lake Road assumed to be restricted to outbound/evacuating traffic only, with no access allowed for inbound traffic identified in Wildfire Scenario #1, and residential streets in the communities north of the project site assumed to be closed to incoming traffic and only open for evacuating vehicles in Wildfire Scenario #2. Evacuating vehicles were also modeled to use US 50 to evacuate towards Folsom to the west or Placerville to the east, with the number of trips assigned to each evacuation destination based on location and direction of evacuation based on the trip destination. These assumptions are shown in Figures 3.17-4 and 3.17-5.

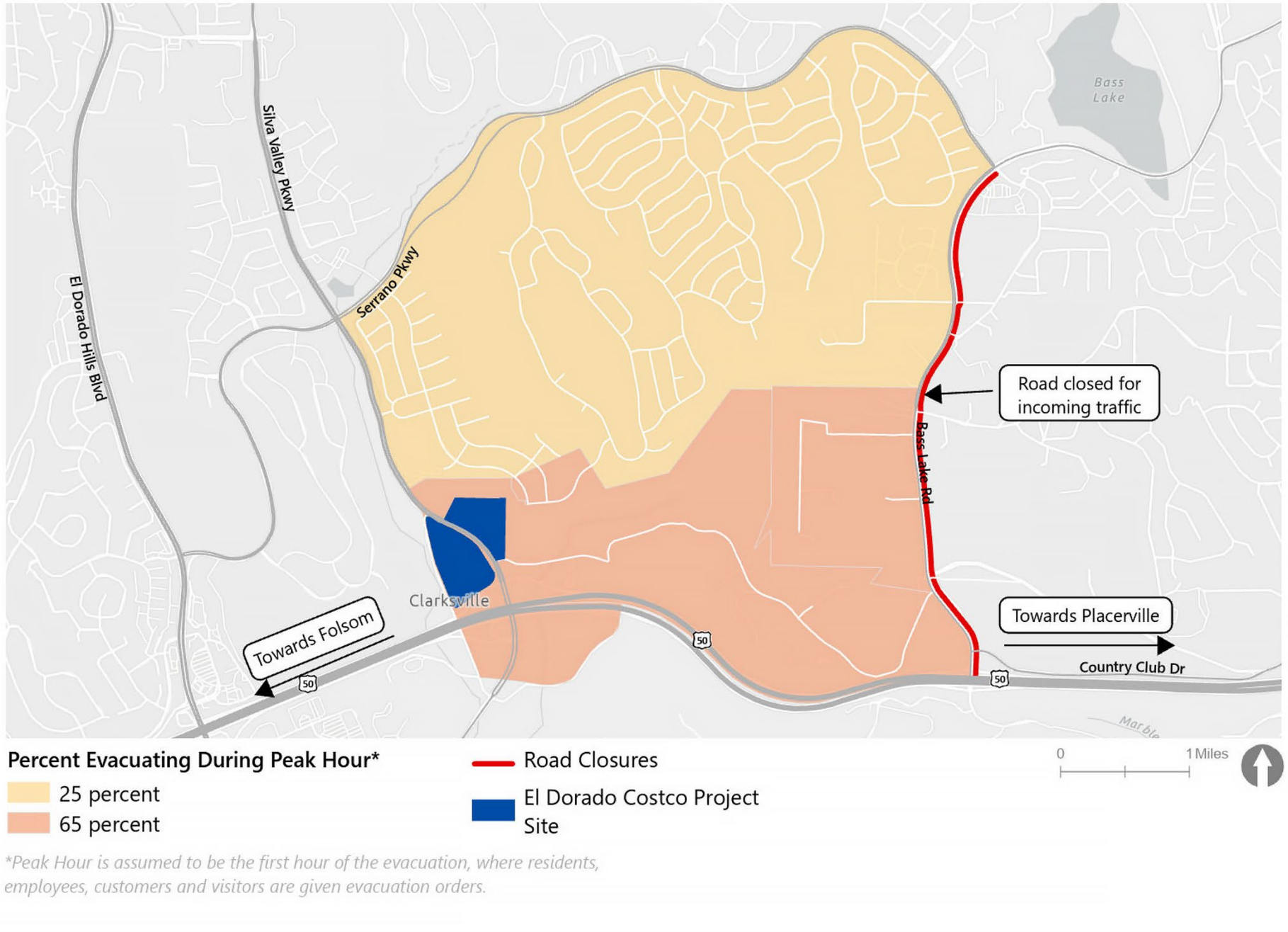
The evacuation analysis used the El Dorado County travel demand model to estimate roadway congestion and travel times in an evacuation under No Project and Project conditions. The current travel model was calibrated and validated for a 2018 base year and includes a 2040 future scenario with 2040 land use forecasts and transportation improvement assumptions in the project area.

THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are based on wildfire and evacuation issues identified in Appendix G of the State CEQA Guidelines, Section IX (Hazards and Hazardous Materials) and XX (Wildfire). If located in or near SRAs or lands classified as Very High FHSZs, the project would result in a significant impact related to wildfire if it would:

- substantially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires,
- due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

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Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-4 Wildfire Scenario #1 Percent Evacuating During Peak Hour



Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-5 Wildfire Scenario # 2 Percent Evacuating During Peak Hour

ISSUES NOT EVALUATED FURTHER

All issues are evaluated below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.17-1: Physically Interfere with or Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

All development proposed for the project would be designed, constructed, and maintained to comply with applicable local, regional, state, and/or federal requirements related to emergency access, fire protection, and evacuation. The project would not impair implementation of or physically interfere with the El Dorado County Emergency Operations Plan or the county hazard mitigation plans, as it would not have any effect on the framework or procedural guidance in these plans or otherwise affect plans for wildfire mitigation or preparedness. Therefore, the project would not interfere with adopted emergency response plans and the impact would be **less than significant.**

Costco Project

The Costco project and surrounding vicinity are subject to a number of emergency response plans, most notably the El Dorado County LHMP, which provides guidance for the County's response in emergency situations, including wildfire and emergency evacuation. Impairment of emergency response plans or emergency evacuation plans would occur if the project would introduce an undue or extraordinary burden on emergency responders as they respond to an emergency incident. For example, project placement or design that could preclude access by emergency responders or the orderly evacuation of a site in the event of a wildfire incident. Responding to a wildfire incident where a project design obstructs response and evacuation efforts can result in an inordinate expenditure of personnel and equipment resources during a wildfire incident and/or an evacuation, which can be particularly problematic when those resources are also needed elsewhere during a large-scale and rapidly unfolding wildfire incident.

The Costco project design does not include any physical alterations to Silva Valley Parkway, Clarksville Road, US 50, or any other roadway facility in the El Dorado Hills community that would reduce their capacity to accommodate traffic during an evacuation. The Costco project access road connections and the internal access roads would meet state and El Dorado Hills Fire Department fire access requirements. Internal access roads, not including driveways and parking lot alleys, would exceed 20 feet in width (approximately 30 feet in width), with the exception of the access on the east side of the structure, which is reduced to 15 feet because of topographical constraints. Driveways and parking lot alleys would be a minimum of 15 feet wide. Internal access roads would be designed and maintained to support the weight of a fully loaded fire apparatus and surfaced to provide all-weather driving conditions. No traffic calming features would be installed on interior access roads that would impact emergency vehicle access. Designated Fire Apparatus Access Roads would be marked appropriately and have signage that contains the words "NO PARKING- FIRE LANE." Designated Fire Apparatus Access Roads include the main access road loop around the fueling facility at the North Site, the access road that traverses the South Site from Silva Valley Parkway to Clarksville Road, and the truck route at the southwest corner of the Costco South site. There are no dead ends or gates at either the North Site or South Site.

El Dorado County Sheriff's OES's primary method of alerting communities to evacuate is going door to door in the evacuation zones. Secondary, the El Dorado County Sheriff's OES uses an electronic alter system powered by Rave to contact the community in the event of an emergency such as evacuations due to wildfires, hazardous material spill, or urgent law enforcement operations. Residents who signed up with the Rave would be notified through phone call, text message, or email during emergency evacuation. In addition, El Dorado County Sheriff's OES acquired Perimeter Platform to bolster emergency operations and improve communication channels with the public during critical situations. The Perimeter Map serves as a centralized hub for essential information during crises, particularly wildfires. The map shows evacuation zones, routes, road closures, and shelter locations.

As part of the evaluation, the El Dorado County travel demand model was used to estimate travel times and volume-to-capacity (V/C) ratios for each analysis scenario to understand how the project would impact residents, employees, and Costco members in the evacuation areas for each wildfire scenario. Congestion locations were identified for Wildfire Scenario #1 for existing conditions under Evacuation No Project and Evacuation Plus Project scenarios, as shown in Figure 3.17-6 and Figure 3.17-7. The locations operating near or over capacity in the existing conditions No Project and Plus Project scenarios are listed below:

No Project

- Eastbound US 50 toward Placerville
- Eastbound and Westbound US 50 toward Folsom
- Serrano Parkway between Silva Valley Parkway and El Dorado Hills Boulevard
- El Dorado Hills Boulevard between Serrano Parkway and US 50

Plus Project

- Eastbound US 50 toward Placerville including sections adjacent to the evacuation area
- Eastbound and Westbound US 50 toward Folsom
- Serrano Parkway between Silva Valley Parkway and El Dorado Hills Boulevard
- El Dorado Hills Boulevard between Serrano Parkway and US 50

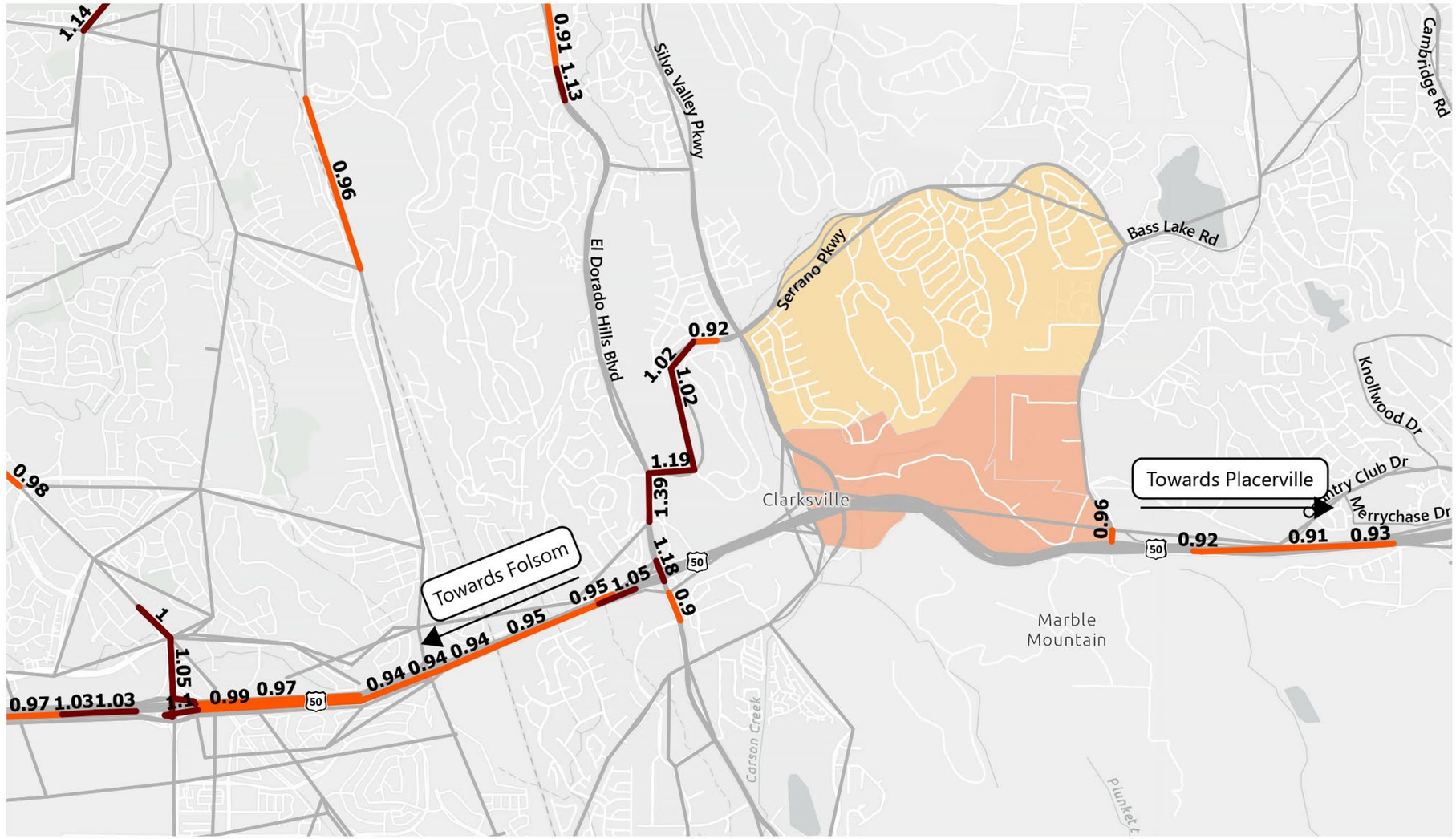
Table 3.17-2 below shows the travel times, in minutes, during Wildfire Scenario #1 for existing conditions under No Evacuation, Evacuation No Project, and Evacuation Plus Project scenarios. Table 3 also shows an increase in travel time with project traffic that varies between 0.1 to 1.0 minutes, a 0-5 percent increase.

Table 3.17-2 Travel Times (minutes), Wildfire Scenario #1 – Existing Conditions

Origin	Destination	No Evacuation Travel Time (mins)	Evacuation – No Project Travel Time (mins)	Evacuation – Plus Project Travel Time (mins)	Evacuation – Difference (mins)	Evacuation – Difference (percent)
S. of Serrano Pkwy.	Folsom	9.5	10.1	10.2	0.1	1%
	Placerville	22.9	23.8	24.7	0.9	4%
W. of Bass Lake Rd.	Folsom	8.0	8.3	8.3	0.0	0%
	Placerville	19.0	19.8	20.6	0.8	4%
Old White Rock Rd.	Folsom	5.4	5.7	5.8	0.1	2%
	Placerville	19.6	20.3	21.1	0.8	4%
Village Green Dr.	Folsom	5.8	6.2	6.4	0.2	3%
	Placerville	20.6	21.3	22.3	1.0	5%
Costco	Folsom	4.6	5.0	5.2	0.2	4%
	Placerville	19.4	20.1	21.0	0.9	4%

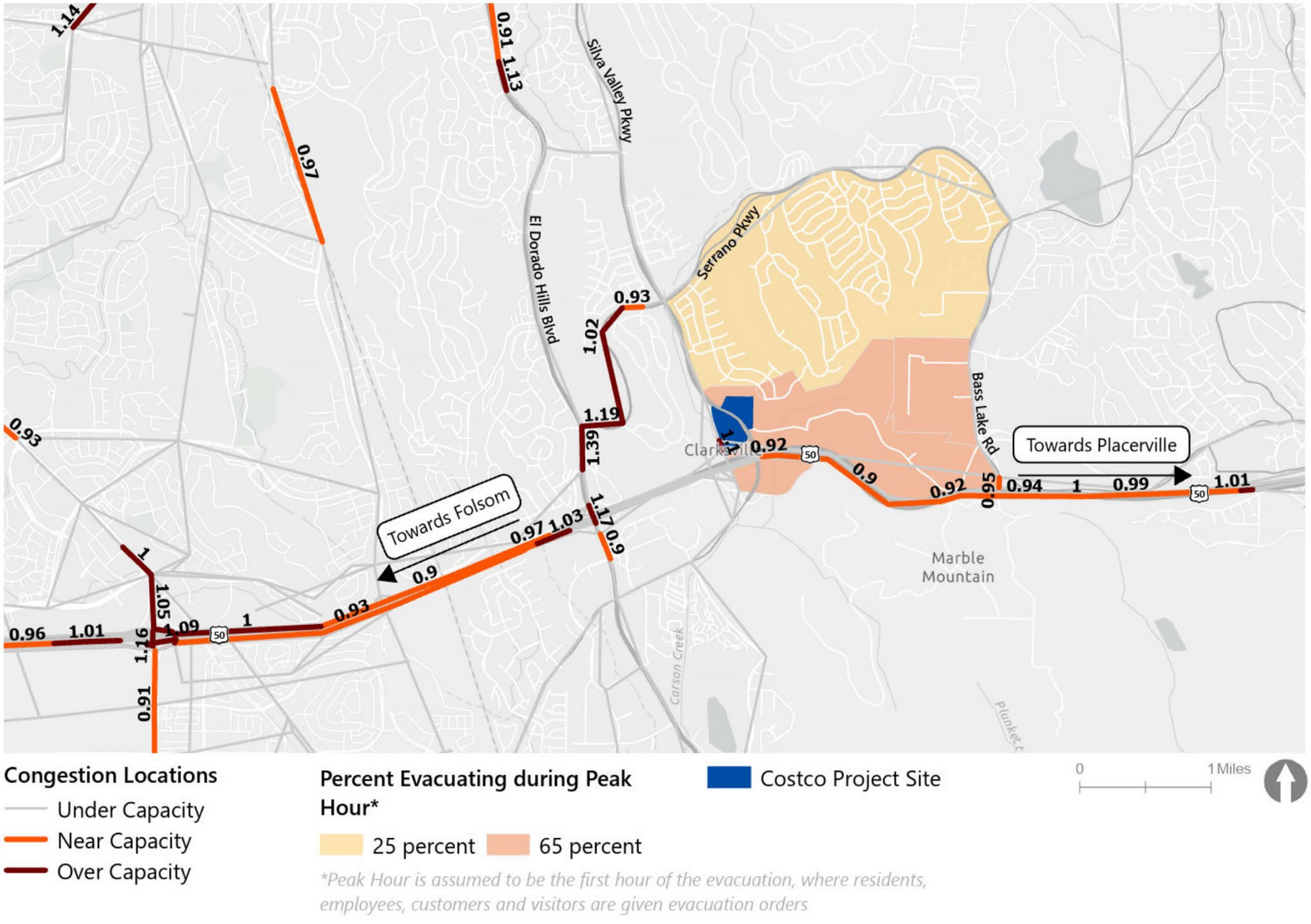
Source: Kittelson & Associates, Inc. 2025.

Congestion locations were also identified for Wildfire Scenario #1 for near term (2034) conditions under Evacuation No Project and Evacuation Plus Project scenarios, as shown in Figure 3.17-8 and Figure 3.17-9. The locations operating near or over capacity in the near term (2034) conditions No Project and Plus Project scenarios are listed below:.



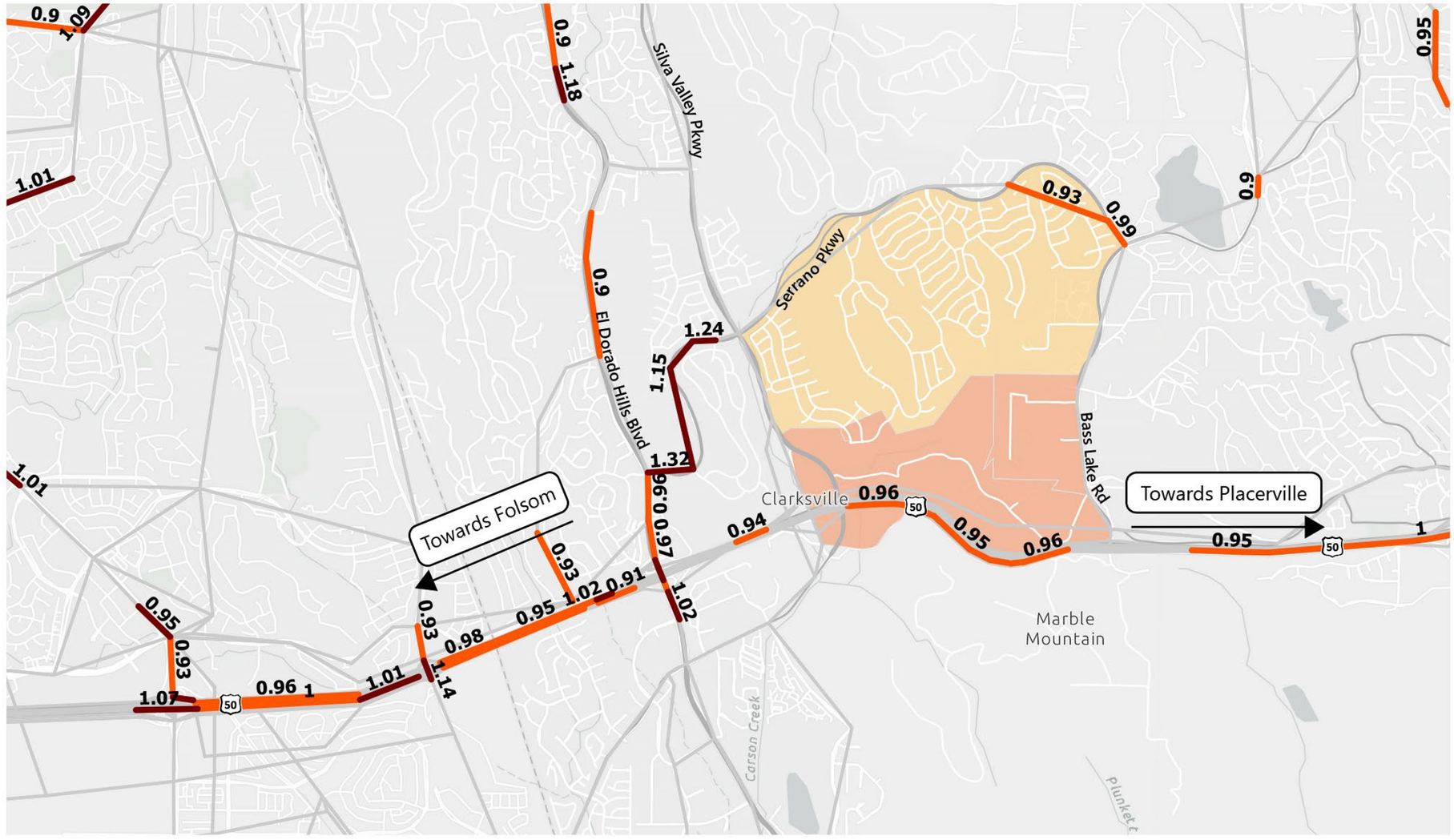
Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-6 Wildfire Scenario #1 Congestion Locations - No Project Under Existing Conditions



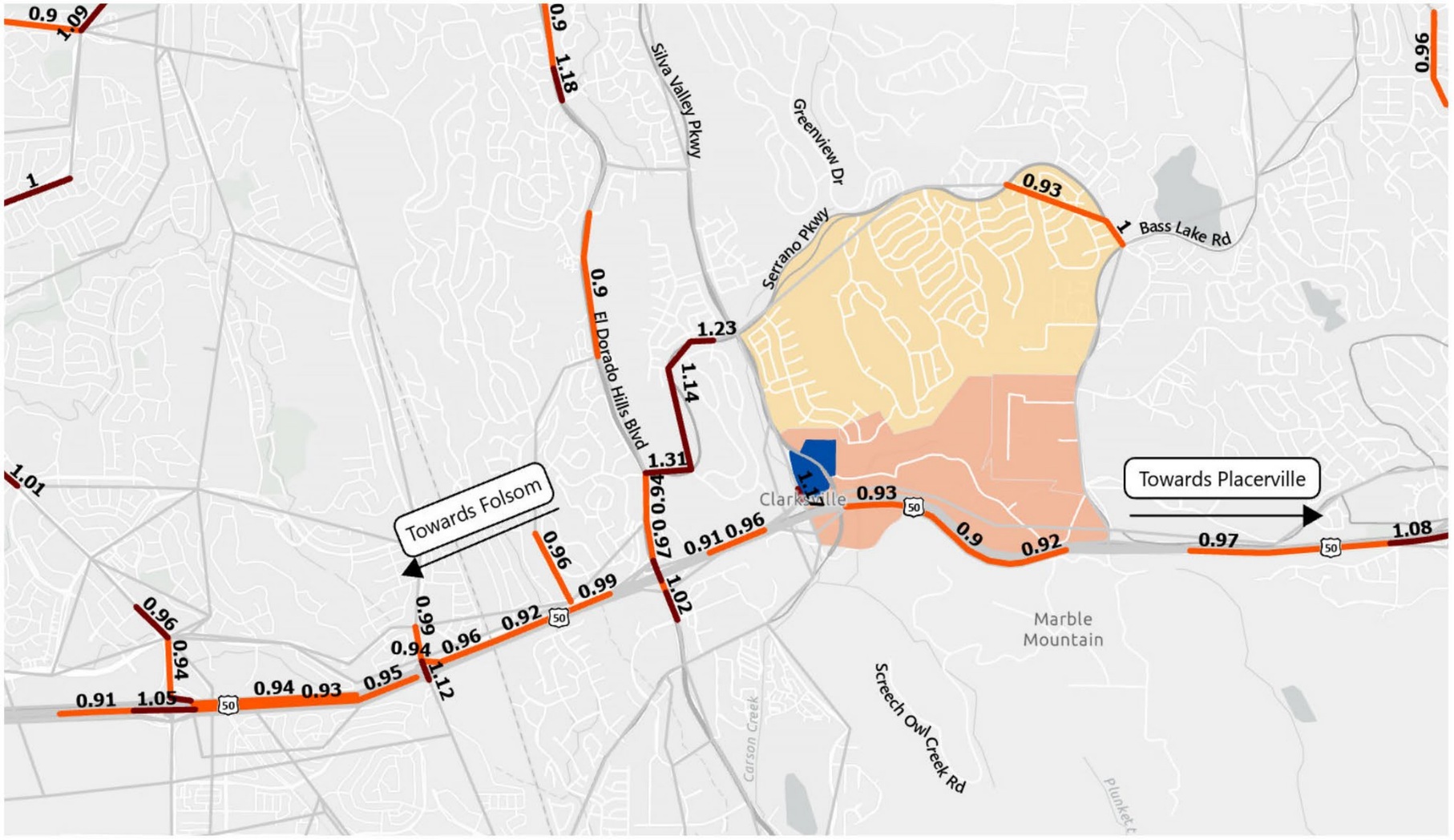
Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-7 Wildfire Scenario #1 Congestion Locations – Plus Project Under Existing Conditions



Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-8 Wildfire Scenario #1 Congestion Locations – No Project Under Near-Term Conditions (2034)



Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-9 Wildfire Scenario #1 Congestion Locations – Plus Project Under Near-Term Conditions (2034)

No Project

- Eastbound US 50 toward Placerville
- Eastbound and Westbound US 50 toward Folsom
- Serrano Parkway connecting evacuation area to Bass Lake Road
- Serrano Parkway between Silva Valley Parkway and El Dorado Hills Boulevard
- El Dorado Hills Boulevard between Serrano Parkway and US 50

Plus Project

- Eastbound US 50 toward Placerville
- Eastbound and Westbound US 50 toward Folsom
- Serrano Parkway connecting evacuation area to Bass Lake Road
- Serrano Parkway between Silva Valley Parkway and El Dorado Hills Boulevard
- El Dorado Hills Boulevard between Serrano Parkway and US 50

Table 3.17-4 below shows the travel times, in minutes, during Wildfire Scenario #1 for near term (2034) conditions under No Evacuation, Evacuation No Project, and Evacuation Plus Project and North Site Remainder Area development scenarios. Table 4 also shows an increase in travel time with project traffic that varies between 0.1 to 0.8 minutes, a 1-4 percent increase.

Table 3.17-4 Travel Times (minutes), Wildfire Scenario #1 – Near Term (2034) Conditions

Origin	Destination	No Evacuation Travel Time (mins)	Evacuation – No Project Travel Time (mins)	Evacuation – Plus Project and North Site Remainder Area Travel Time (mins)	Evacuation – Difference (mins)	Evacuation – Difference (percent)
S. of Serrano Pkwy.	Folsom	8.6	9.4	9.6	0.2	2%
	Placerville	22.2	22.9	23.4	0.5	2%
W. of Bass Lake Rd.	Folsom	8.3	9.0	9.1	0.1	1%
	Placerville	18.5	18.8	19.4	0.6	3%
Old White Rock Rd.	Folsom	5.3	5.9	6.0	0.1	2%
	Placerville	18.9	19.0	19.7	0.7	4%
Village Green Dr.	Folsom	4.9	5.5	5.7	0.2	4%
	Placerville	19.0	19.2	20.0	0.8	4%
Costco	Folsom	4.5	5.2	5.3	0.1	2%
	Placerville	18.7	18.9	19.6	0.7	4%

Source: Kittelson & Associates, Inc. 2025.

Wildfire Scenario #2 also identified congestion locations for existing conditions under Evacuation No Project and Evacuation Plus Project scenarios, as shown in Figure 3.17-10 and Figure 3.17-11. The locations operating near or over capacity in the existing conditions No Project and Plus Project scenarios are listed below:

No Project

- Serrano Parkway between Silva Valley Parkway and El Dorado Hills Boulevard
- El Dorado Hills Boulevard between Serrano Parkway and US 50
- Eastbound US 50 between Folsom and El Dorado Hills

Plus Project

- Serrano Parkway between Silva Valley Parkway and El Dorado Hills Boulevard
- El Dorado Hills Boulevard between Serrano Parkway and US 50
- A few sections of Eastbound US 50 between Folsom and Placerville including those adjacent to the Project site

Table 3.17-5 below shows the travel times, in minutes, during Wildfire Scenario #2 for existing conditions under No Evacuation, Evacuation No Project, and Evacuation Plus Project scenarios. Table 3.17-5 also shows an increase in travel time with project traffic that varies between 0 to 1.2 minutes, a 0-6 percent increase.

Table 3.17-5 Travel Times (minutes), Wildfire Scenario #2 – Existing Conditions

Origin	Destination	No Evacuation Travel Time (mins)	Evacuation – No Project Travel Time (mins)	Evacuation – Plus Project Travel Time (mins)	Evacuation – Difference (mins)	Evacuation – Difference (percent)
Souza Dr.	Folsom	5.6	5.7	5.8	0.1	2%
	Placerville	21.6	21.8	23.0	1.2	6%
Town Center	Folsom	4.4	4.5	4.6	0.1	2%
	Placerville	20.5	20.7	21.8	1.1	6%
Raley's	Folsom	3.8	3.9	3.9	0.0	0%
	Placerville	20.5	20.7	21.8	1.1	5%
Costco	Folsom	4.6	4.7	4.8	0.1	2%
	Placerville	19.4	19.6	20.8	1.2	6%

Source: Kittelson & Associates, Inc. 2025.

Congestion locations were also identified for Wildfire Scenario #2 for near term (2034) conditions under Evacuation No Project and Evacuation Plus Project scenarios, as shown in Figure 3.17-12 and Figure 3.17-13. The locations operating near or over capacity in the No Project and Plus Project scenarios are listed below:

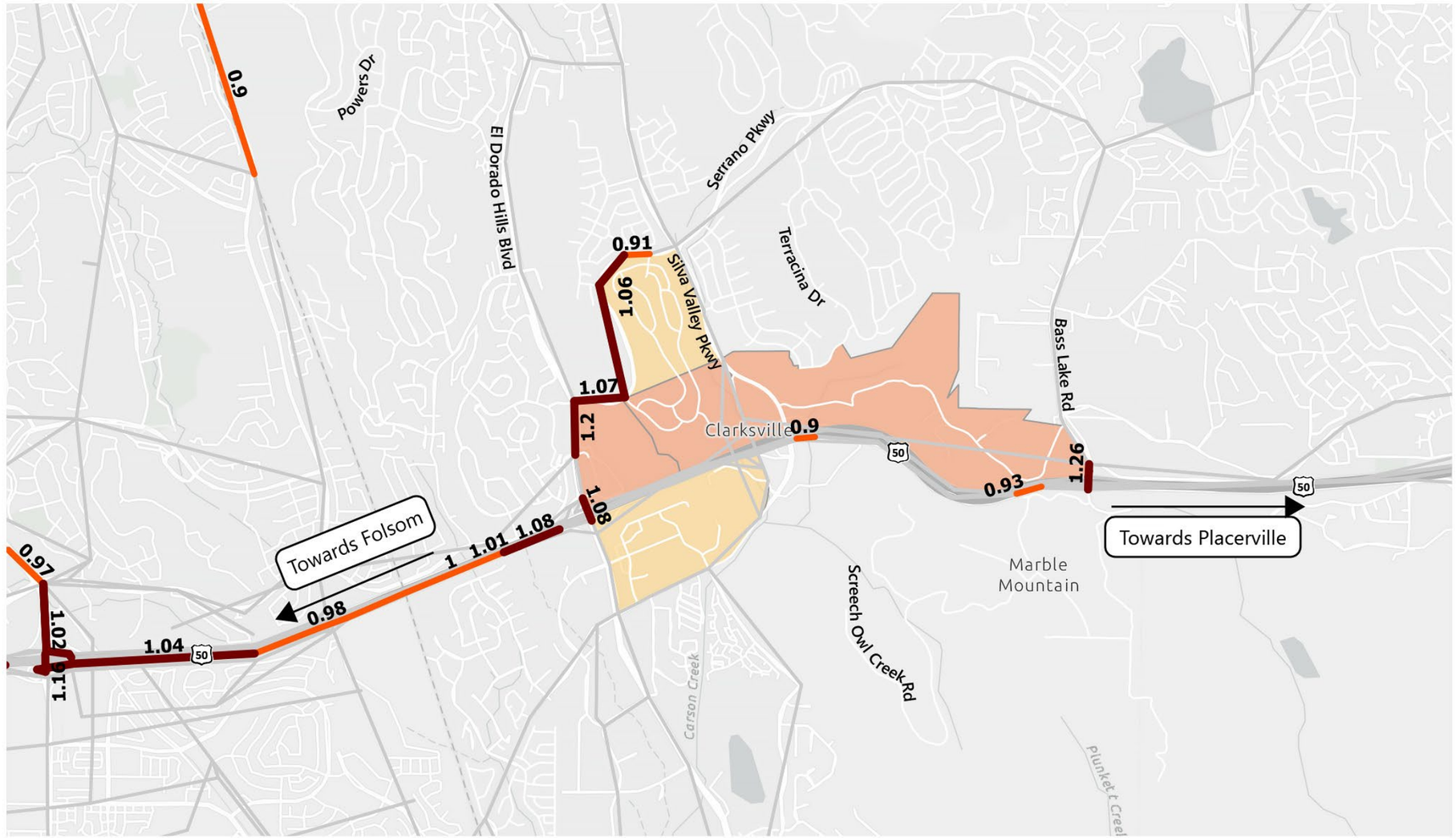
No Project

- Serrano Parkway between Silva Valley Parkway and El Dorado Hills Boulevard
- Eastbound US 50 between El Dorado Hills and Placerville
- Eastbound and Westbound US 50 between El Dorado Hills and Folsom

Plus Project

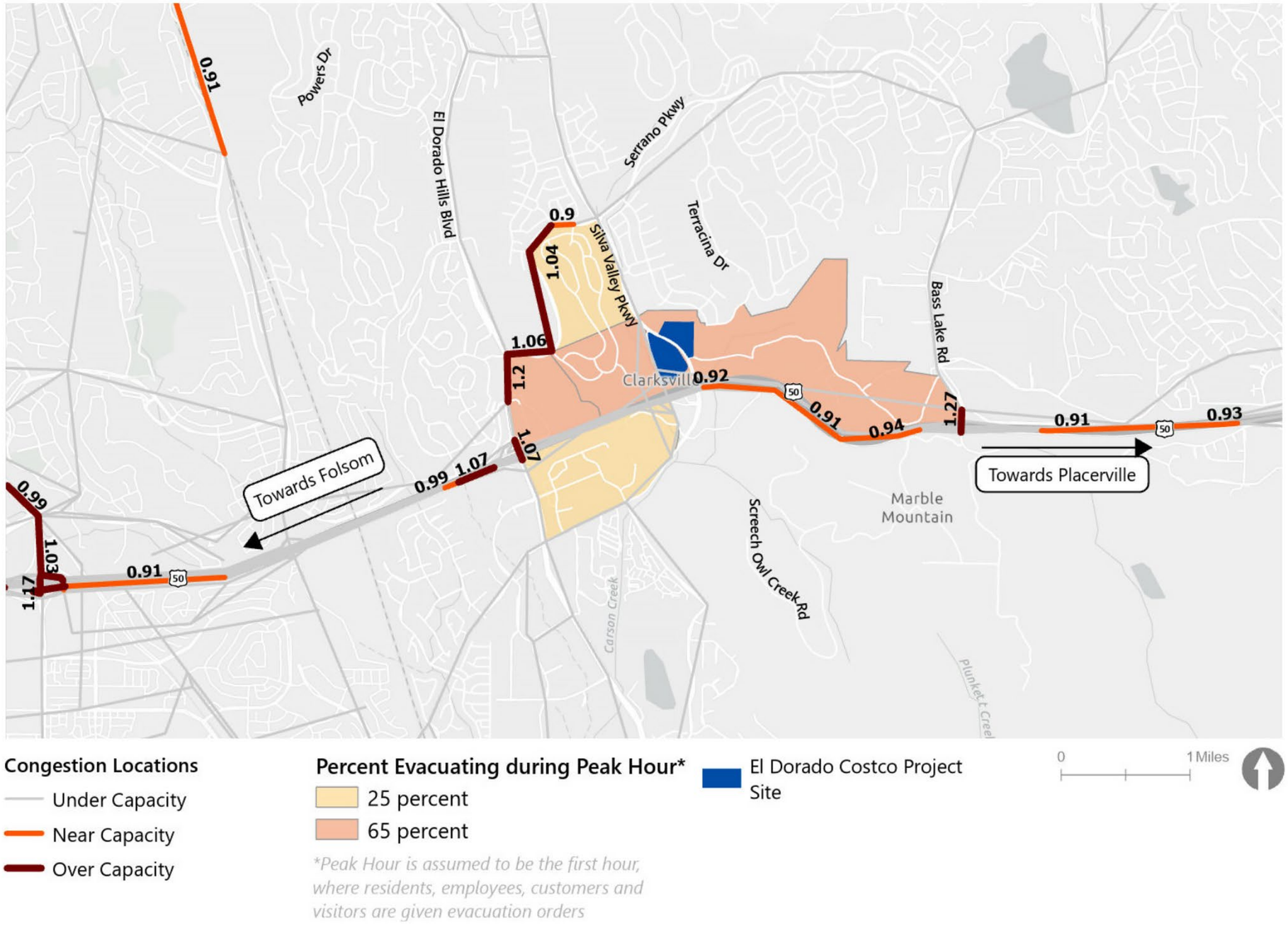
- Serrano Parkway between Silva Valley Parkway and El Dorado Hills Boulevard
- Eastbound US 50 between El Dorado Hills and Placerville
- Eastbound US 50 and some sections of westbound US 50 between El Dorado Hills and Folsom

Table 3.17-6 below shows the travel times, in minutes, during Wildfire Scenario #2 for near term conditions under No Evacuation, Evacuation No Project, and Evacuation Plus Project and North Site Remainder Area future development scenarios. Table 3.17-6 also shows an increase in travel time with project traffic that varies between 0 to 0.6 minutes, a 1-3 percent increase.



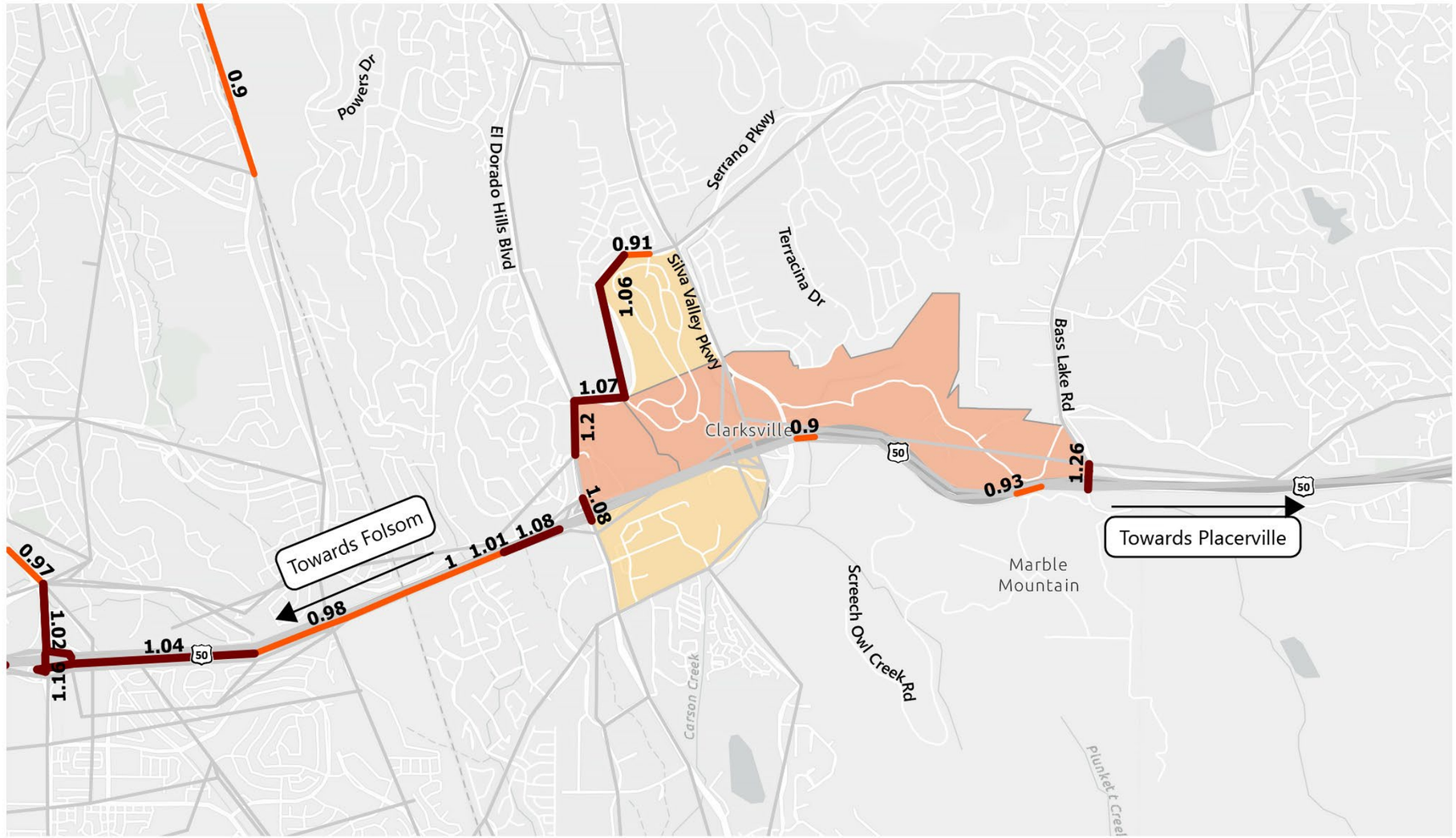
Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-10 Wildfire Scenario #2 Congestion Locations - No Project Under Existing Conditions



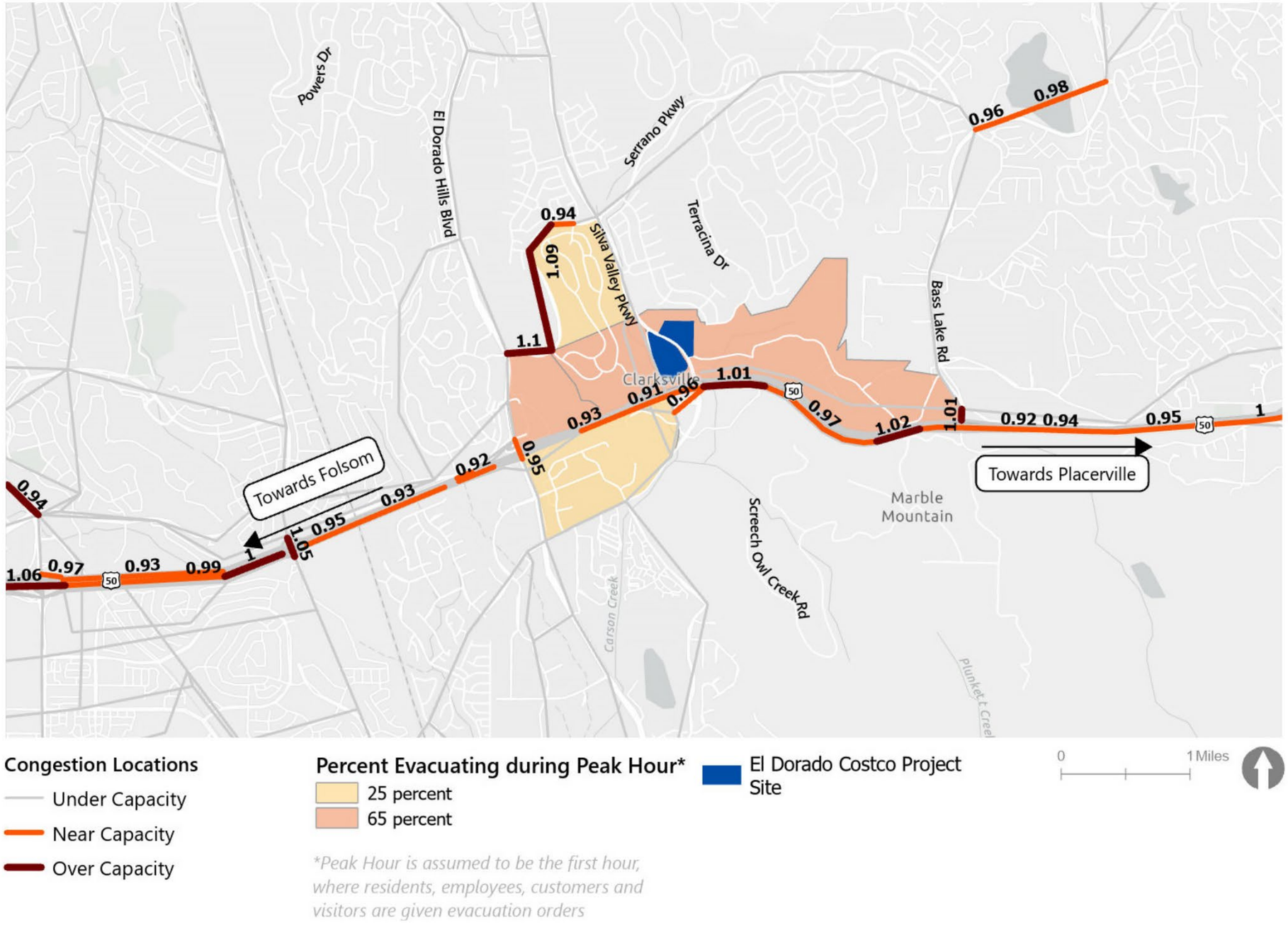
Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-11 Wildfire Scenario #2 Congestion Locations – Plus Project Under Existing Conditions



Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-12 Wildfire Scenario #2 Congestion Locations – No Project Under Near-Term Conditions (2034)



Source: Image produced and provided by Kittelson & Associates in 2025; adapted by Ascent in 2025.

Figure 3.17-13 Wildfire Scenario #2 Congestion Locations – Plus Project Under Near-Term Conditions (2034)

Table 3.17-6 Travel Times (minutes), Wildfire Scenario #2 – Near Term (2034) Conditions

Origin	Destination	No Evacuation Travel Time (mins)	Evacuation – No Project Travel Time (mins)	Evacuation – Plus Project and North Site Remainder Area Travel Time (mins)	Evacuation – Difference (mins)	Evacuation – Difference (percent)
Souza Dr.	Folsom	5.9	6.0	6.1	0.1	2%
	Placerville	20.1	20.1	20.7	0.6	3%
Town Center	Folsom	4.7	4.8	4.8	0.0	0%
	Placerville	19.9	19.9	20.3	0.4	2%
Raley's	Folsom	4.1	4.2	4.2	0.0	0%
	Placerville	19.9	20.0	20.3	0.3	2%
Costco	Folsom	4.5	4.6	4.7	0.1	2%
	Placerville	18.7	18.7	19.3	0.6	3%

Source: Kittelson & Associates, Inc. 2025.

Both wildfire scenarios under existing and near term (2034) conditions, including No Project and Plus Project scenarios would see an increase in roadway capacity on roadways near and adjacent to the project site, such as Silva Valley and Serrano Parkway, as residents, customers, and employees evacuate.

As identified above, the Costco project and North Site Remainder Area impact to overall roadway capacity and evacuation travel times would be minimal (0.1 to 1.2 minutes) under both wildfire scenarios are not expected to impair implementation of or physically interfere with evacuation efforts and associated implementation of the El Dorado County Emergency Operations Plan or the county hazard mitigation plans.

North Site Remainder Area

As detailed in Chapter 2, "Project Description," the North Site Remainder Area is designated for commercial uses and assumed to include approximately 138,000 square feet of future development, but is not proposed for development as part of this project. However, this potential extent of development and associated evacuation traffic generation was factored into the analysis for the near term analysis provided in Table 3.17-4 and 3.17-6. Subsequent development of North Site Remainder Area access road connections and the internal access roads would be subject to state and El Dorado Hills Fire Department fire access requirements.

Conclusions

As detailed above, the Costco project and future development within the North Site Remainder Area impact to overall roadway capacity and evacuation travel times would be minimal under both wildfire scenarios and are not expected to impair implementation of or physically interfere with evacuation efforts and associated implementation of the El Dorado County Emergency Operations Plan or the county hazard mitigation plans. The project would be consistent with General Plan policy provisions Objective 6.11.2 and Policies 6.11.2.1, 6.11.2.2, and 6.11.2.4. This impact would be **less than significant.**

Mitigation Measures

No mitigation is required for this impact.

Impact 3.17-2: Expose People or Structures, Either Directly or Indirectly, to a Significant Risk of Loss, Injury or Death Involving Wildland Fires, or Exacerbate Wildfire Risks due to Slope, Prevailing Winds, and Other Factors, and Thereby Expose Project Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire

The project site is located entirely within a CAL FIRE-designated Moderate Fire Hazard Severity Zone. During operation, the project would incorporated requirements set forth under the CBC and CFC, which includes defensible space requirements, noncombustible building materials, and interior sprinklers. The Costco project FSP evaluates potential impacts resulting from wildland fire hazards and identifies measures to address these hazards. However, wildfire hazards could occur, especially under construction activities. This impact would be **significant**.

As described above, the project site is currently located entirely within a CAL FIRE-designated Moderate Fire Hazard Severity Zone. The project site and the surrounding areas contain fuels (annual grasslands and woodlands) and terrain (southwest facing hillsides) that can sustain the spread of a wildfire when weather conditions permit fire growth (May to October) and there is a suitable ignition source. Wildfires have happened historically in the area, due a variety of ignition sources including equipment use and electrical equipment.

As described in Chapter 2, "Project Description, " the project proposes annexation of the North Site and South Site to the El Dorado Hills Fire Department service area to obtain fire protection services that would be approved by the El Dorado Local Agency Formation Commission.

Costco Project

As described above, North Site and South Site contain grasslands that extend onto adjacent properties and are only interrupted by the roads that border the project boundaries (e.g., Tong Road, Clarksville Road). Fuel heights in these grasslands are between two and three feet. Annual grasslands provide the most substantial fuel within the project site. In the absence of strong winds, a terrain-driven wildfire would likely move upslope following the general terrain. The drainages in the project area are not deep enough to create or funnel winds that would be substantially different from the prevailing wind conditions expected across the rest of the project site. There are no terrain features present on the project site that would substantially affect fire intensity or rate of spread (Dudek 2025).

The Costco warehouse retail building and the fueling facility would incorporate CFC-required fire detection, notification, and protection systems. The Costco warehouse retail building contains a bakery and food preparation area, a tire center, and a floor shopping area. To meet CFC and local fire code requirements and protect occupants, the Costco warehouse retail building would have the following fire protection systems installed.

- An automatic fire sprinkler system would be installed to provide coverage throughout the occupiable portions of the structure. Pipe layout, size, and composition, as well as the type and number of sprinkler heads, would comply with the requirements of the 2022 El Dorado Hills Fire Code, the 2022 California Fire Code, and NFPA 13. Sprinkler head K-factor and activation temperatures would be customized to match the use or materials stored throughout the building. The building's fire flow is 3,000 gallons per minute for two hours.
- A Fire Alarm System would be installed that meets the requirements of the 2022 El Dorado Hills Fire Code and the 2022 California Fire Code, as well as the provisions in the National Fire Protection Association 72 standard. The fire alarm system would be connected directly through and monitored by a central station service, which gives audible and visual signals at a constantly attended location.
- A Type 1 Commercial Cooking Exhaust Hood that meets the requirements of the 2022 California Fire Code, California Mechanical Code, and the provisions of Underwriters Laboratories 610 standard. The commercial cooking exhaust hood would contain the required ventilation and fire suppression systems.
- The layout of the Tire Center would meet Fire Protection requirements in CFC Chapter 32, 34, and NFPA 13. Adequate water supply to meet these requirements would be provided by the building's fire sprinkler system and on-site fire hydrants.

The fire sprinkler riser(s) and the Fire Alarm Control Panel would be located in a fire control room that is accessible from the exterior of the building and used only for fire protection systems. The room would be clearly labeled on the door "FIRE CONTROL ROOM."

The Costco fueling facility would include the following fire protection features to meet CFC Chapter 23 and local fire code requirements and protect occupants.

- Vehicle impact protection for the fuel dispensing devices for each of the four fueling bays.
- An emergency disconnect switch within 20 feet of the fuel pumps.
- Portable fire extinguishers meeting CFC Section 906 requirements and having a minimum rating of 2-A:20- B: C would be provided so that one fire extinguisher is within 75 feet of any pumps, dispensers, or storage tank fill pipe opening.
- The underground fuel storage tank for the fueling facility would comply with CFC Chapter 57.
- Dispenser equipment, including pumps, hoses, and nozzles, would meet standards set forth by Underwriters Laboratories.

Both the Costco warehouse retail building and the fuel facility would incorporate CFC-compliant fire and life safety features that minimize the risk of explosion, fire, and accidental spill of flammable liquids. While these features are intended to protect occupants and minimize the risk of a structure fire, they also address the project's wildfire risk by reducing the likelihood of a fire occurring on the property that can spread onto the adjacent wildlands and by reducing the risk that the project structures would ignite during a wildfire.

Upon completion, the project site would be converted to a mix of non-combustible surfaces, ignition resistant buildings, and maintained landscaping. Project structures, infrastructure, and landscaping would comply with the requirements in the CBC for ignition resistant construction, and the CFC and Title 14 Minimum Fire Safe Regulations for access, water supply, and vegetation management. Structural hardening requirements address roofs, eaves, exterior walls, vents, appendages, windows, and doors and result in hardened structures that have been proven to perform at high levels (resist ignition) during the typically short duration of exposure to burning vegetation from wildfires.

Generally, there are two primary concerns for structure ignition: 1) radiant and/or convective heat and 2) burning embers (Dudek 2025). However, structural hardening consistent with CBC and CFC requirements render development resistant to ignition from burning embers and radiant and convective heat. Additionally, project structures would be required to maintain a defensible area around the entire structure and be consistent with state and local level 100-foot defensible space standards (California Public Resources Code Section 4291, EDH #W002). The required 100-foot defensible space area around structures at both sites through a combination of non-combustible surfaces, fire smart landscaping, and maintenance of the adjacent annual grasslands. Furthermore, the project includes water distribution facilities that meet fire flow requirements of the El Dorado Hills Fire Department and automatic fire sprinklers, which would aid in fire extinguishing if an ignition occurs.

Costco project construction would remove combustible vegetation in the development areas of the North Site and South Site that would reduce vegetative fuel sources. However, construction equipment and vehicles could become sources of fire ignition due to sparks and heated exhausts. This could be of specific concern to the North Site because approximately 13.79 acres (North Site Remainder Area) would not be cleared of vegetation. Hot work, defined in the CFC as operations involving cutting, welding, thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, or other similar operations would be included as part of project construction. Hot work must comply with CFC, Chapter 35, Welding and other Hot Work. CFC, Chapter 35 contains requirements for issuance of a hot work permit, qualifications for individual in charge of performing hot work, as well as fire safety requirements that address the potential for accidental ignition. Thus, construction activities could result in a **significant** impact for wildfire hazards.

North Site Remainder Area

As described above and in Chapter 2, "Project Description," the Costco project does not propose to develop the North Site Remainder Area but it is assumed that the area would include future commercial development of approximately 138,000 square feet. Future development of the North Site Remainder Area construction activities

would be required to comply with current Fire Code provisions required by the El Dorado Hills Fire Department and CAL FIRE (e.g., CCR Title 24 – Part 9 [California Fire Code]). These provisions address handling of flammable and combustible liquids, portable generators, fire reporting, access for emergency vehicles, water supply for fire protection, and portable fire extinguishers.

While it is not currently known what type of commercial development may occur on the North Site Remainder Area, it would subject to CBC and CFC requirements described above. Additionally, project structures would be required to maintain a defensible area around the entire structure and be consistent with state and local level 100-foot defensible space standards (California Public Resources Code Section 4291, EDH #W002). Water distribution facilities would be required to meet fire flow requirements of the El Dorado Hills Fire Department, which would aid in fire extinguishing if an ignition occurs.

However, the eastern boundary of the North Site Remainder Area is largely undeveloped and consists of grassland areas that could be ignited from construction equipment and vehicles. Thus, construction activities could result in a **significant** impact for wildfire hazards.

Conclusions

Based on the discussion above, implementation of the project could exacerbate wildfire risk during construction of both the Costco project and future development of the North Site Remainder Area. This impact is **significant**.

Mitigation Measures

Mitigation Measure 3.17-2: Implement Fire Prevention Measures for Construction of the Costco Project, Off-Site Roadway Improvements, and North Site Remainder Area

The following requirements shall be a requirement during construction and will be identified on building, grading, and construction plans for the Costco project, off-site roadway improvements, and the North Site Remainder Area. These requirement will be incorporated into future fire safe plans prepared for future development of the North Site Remainder Area.

Smoking

- Smoking shall be prohibited except in approved areas. A designated smoking area where smoking is permitted will be signed.

Combustible Debris, Rubbish, and Waste

- Combustible debris shall not be left in structures.
- Combustible Debris, Rubbish, and Waste shall be removed from buildings at the end of each work shift.
- Rubbish containers shall be constructed of noncombustible materials or materials that meet a peak rate of heat release not exceeding 300 kW/m2 when tested in accordance with ASTM E1354.
- Combustible Debris, Rubbish, and Waste shall not be disposed of by burning on the site.

Electrical

- Temporary wiring for electrical power and lighting shall comply with the California Electrical Code.

Storage of Flammable and Combustible Liquids and Gases

- Storage of flammable and combustible liquids and gases shall be in accordance with CFC Section 5704 and Chapter 58.
- Flammable and combustible liquids and materials storage areas shall be maintained clear of combustible vegetation and waste materials.
- Sources of ignition and smoking shall be prohibited in flammable and combustible liquid and gas storage areas.

Vehicles and Equipment

- When not in use, project vehicles and equipment shall be parked in a designated parking or storage area with at least 30 feet of separation between the parking area and any unmanaged flammable vegetation.
- Vehicle and equipment fueling shall be conducted in designated locations and at least 10 feet from combustible debris or building material storage areas.
- Vehicle and equipment fueling and servicing areas shall be located at least 30 feet from any hot work areas.

Access for Firefighting

- Fire Apparatus access for firefighting shall be provided to all construction and demolition sites.
- Fire Apparatus access for firefighting shall be provided within 100 feet of temporary or permanent fire department connections, including fire hydrants.
- Fire Apparatus access must be maintained until fire apparatus access roads are available.
- Fire Apparatus access roads shall be at least 15 feet wide and have a vertical clearance of 13 feet 6 inches.
- Fire Apparatus access roads shall be of an all-weather surface capable of supporting a minimum of 75,000 lbs. gross vehicle weight (minimum of 3 inches of AC over 8 inches of Compacted AB rock).
- Fire Apparatus access roads shall be designed to meet turning radius requirements of forty (40) feet inside and fifty-six (56) feet outside.
- Any dead-end roadway in excess of 150 feet in length shall be provided with not less than a fifty-six (56) foot outside turning radius.
- Key boxes would be provided as required by CFC Chapter 5.
- As soon as construction begins, Fire Department access roads shall be provided for both the North and South sites.

Water Supply

- An approved water supply, either temporary or permanent, shall be available for firefighting as soon as combustible building materials arrive on-site. The water supply during the project construction shall provide a minimum flow rate of 500 gallons per minute. The fire hydrant that provides this fire flow shall be within 500 feet of the combustible materials and adjacent to a fire apparatus access road.

Red Flag Warning Protocol

- The National Weather Service issues Red Flag Warnings, indicating that conditions are such that wildfire ignitions and spread may occur (e.g., low humidity, high winds). The Red Flag Warning protocol is intended to raise on-site construction crews' awareness of the fire danger and limit activities that pose a high risk of igniting a wildfire. During Red Flag Warning or Watch periods, no hot work or open flames shall be performed unless the El Dorado Hills Fire Department has been consulted to discuss the type of hot work activity and what precautions would be provided. Other construction, operation, maintenance, and decommissioning activities may proceed during these periods under heightened awareness conditions.
- To ensure compliance with Red Flag Warning restrictions, the National Weather Service website shall be monitored daily during normal conditions or 2 to 3 times a day during Red Flag Warnings at the project site during construction and decommissioning.

Off-Site Roadway Improvements

- Construction activities associated with off-site transportation improvements identified in Chapter 2, "Project Description," shall be required to comply with current Fire Code provisions required by the El Dorado Hills Fire Department and CAL FIRE (e.g., CCR Title 24 – Part 9 [California Fire Code]). These provisions address handling of flammable and combustible liquids, portable generators, fire reporting, access for emergency vehicles, water supply for fire protection, and portable fire extinguishers.

Significance after Mitigation

Implementation of existing fire regulations and Mitigation Measure 3.17-2 would ensure that the project would not substantially increase the likelihood that project occupants and area residents to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire through ignition avoidance and fuel source reduction measures. The required fuel reduction and operational features of the project would present an improvement over current conditions, since the wildfire risks associated with the site's existing conditions would be reduced. Implementation of the Costco project FSP and Mitigation Measure 3.17-2 would also be consistent with General Plan Objective 6.2.1 and associated Policies 6.2.1.1 through 6.2.1.5, Objective 6.2.2. and associated Policies 6.2.2.1 and 6.2.2.2, and Objective 6.2.3 and associated Policies 6.2.3.1 through 6.2.3.7. Accordingly, the impact would be **less than significant**.

Impact 3.17-3: Require the Installation or Maintenance of Associated Infrastructure that May Exacerbate Fire Risk or the May Result in Temporary or On-Going Impacts to the Environment

Defensible space would be established around the structures for the Costco project and future development of the North Site Remainder Area, consistent with California Public Resources Code 4291 and El Dorado Hills Fire Department standards (#W-001 and # W—002). The Costco project Fire Safe Plan includes biological survey recommendations prior to vegetation management activities. Construction of off-site roadway improvements would be required to comply with current Fire Code provisions required by the El Dorado Hills Fire Department and CAL FIRE. However, wildfire hazards could occur, especially under construction activities of infrastructure and off-site roadway improvements. This impact would be **significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

As discussed above under Impact 3,17-2, defensible space would be established around the structures at both the North and South sites, consistent with California Public Resources Code 4291 and El Dorado Hills Fire Department standards (#W-001 and # W—002), given its location within the CAL FIRE designated Moderate Fire Hazard Severity Zone. The FSP Section 6.3.6 recommends that biological survey recommendations prior to vegetation management activities. This would be consistent with preconstruction mitigation measures identified in Section 3.3, "Biological Resources."

The project structures and infrastructure would comply with the CBC and CFC requirements for development in an SRA Fire Hazard Severity, including adequate fire department road access and suitable water supply, given the structure's construction and size. Water supply would be obtained through frontage improvements to connect to the 18-inch water pipeline under Silva Valley Parkway. Construction activities associated with off-site transportation improvements identified in Chapter 2, "Project Description," are addressed in the technical sections of this Draft EIR. construction activities could result in a **significant** impact for wildfire hazards.

Mitigation Measures

Mitigation Measure 3.17-2: Implement Fire Prevention Measures for Construction of the Costco Project, Off-Site Roadway Improvements, and North Site Remainder Area

Significance after Mitigation

As identified in Impact 3.17-2, implementation of existing fire regulations and Mitigation Measure 3.17-1 would ensure that the project infrastructure would not substantially increase the likelihood of a wildfire through ignition avoidance and fuel source reduction measures. Accordingly, the impact would be **less than significant**.

Impact 3.17-4: Risk of Post-Fire Downslope or Downstream Flooding as a Result of Run-Off, Slope Instability, or Drainage Changes

As discussed in Impact 3.17-2, implementation of the project could exacerbate wildfire risk during construction. Project operation would improve conditions related to on-site wildfire risk through vegetation fuel modification and compliance with state and local fire protection standards. A wildfire from construction activities could create a post-fire condition of the project site that could create site instability that would expose people or structures to significant risks of loss, injury, or death due to wildland fire or to risks related to downslope, flooding, or landslides. This impact would be **significant**.

The following analysis applies to both the Costco project and the North Site Remainder Area.

As discussed in Impact 3.17-2 above, implementation of the project at operation would result in an improvement over current conditions, since the wildfire risks associated with the site's existing conditions would be reduced.

However, construction activities could trigger a wildfire that could create site instability. Thus, construction activities could result in a **significant** impact.

Mitigation Measures

Mitigation Measure 3.17-2: Implement Fire Prevention Measures for Construction of the Costco Project, Off-Site Roadway Improvements, and North Site Remainder Area

Significance after Mitigation

As identified in Impact 3.17-2, implementation of existing fire regulations and Mitigation Measure 3.17-1 would ensure that the project infrastructure would not substantially increase the likelihood of a wildfire through ignition avoidance and fuel source reduction measures. Will would avoid site instability from post wildfire conditions. Accordingly, the impact would be **less than significant**.

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4 CUMULATIVE IMPACTS

4.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

This draft environmental impact report (Draft EIR) provides an analysis of cumulative impacts of the proposed EDH Costco Project (project) taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the incremental contribution to any such cumulatively significant impacts by the project would be "cumulatively considerable" (and thus significant). (See State CEQA Guidelines Sections 15130[a]–[b], Section 15355[b], and Section 15064[h]; and Communities for a Better Environment v. California Resources Agency [2002] 103 Cal. App. 4th 98, 120.) In other words, the required analysis intends first to create a broad context in which to assess cumulative impacts, viewed on a geographic scale beyond the project site itself, and then to determine whether the project's incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., "cumulatively considerable").

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact occurs from "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" (State CEQA Guidelines Section 15355[b]).

4.2 CUMULATIVE IMPACT ANALYSIS METHODOLOGY

Consistent with State CEQA Guidelines Section 15130, the discussion of cumulative impacts in this Draft EIR focuses on significant and potentially significant cumulative impacts. Section 15130(b) of the State CEQA Guidelines provides, in part, the following:

> [t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

A proposed project is considered to have a significant cumulative effect if the cumulative effects of development with the project are significant and the project's makes a considerable contribution to that significant impact.

The State CEQA Guidelines (Section 15130[b][1]) identify two basic methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. This analysis uses a combination of the list and planning document approach, as described further below. As identified in Table 4-2, this includes consideration of projects that involve amendments to the General Plan.

4.3 CUMULATIVE SETTING

4.3.1 Geographic Scope

The geographic area that could be affected by the project and is appropriate for a cumulative impact analysis varies depending on the environmental resource topic, as presented in Table 4-1.

Table 4-1 Geographic Scope of Cumulative Impacts

Resource Topic	Geographic Area
Aesthetics	Project site and surrounding public viewshed
Air Quality	Region (pollutant emissions that affect the Mountain Counties Air Basin) and immediate project vicinity (pollutant emissions and odors that are highly localized)
Archaeological and Historical Cultural Resources	Region
Biological Resources	Project vicinity and western El Dorado County
Energy	Pacific Gas & Electric service area and state
Geology and Soils	Project site and region
Greenhouse Gas Emissions and Climate Change	Statewide/Global
Hazards and Hazardous Materials	Project site and immediate project vicinity
Hydrology and Water Quality	Carson Creek Watershed
Land Use and Planning	Project site and surrounding area
Noise and Vibration	Project site and immediate project vicinity
Population and Housing	El Dorado County and El Dorado Hills community
Public Services and Recreation	El Dorado County
Transportation	Project site and region
Tribal Cultural Resources	Region
Utilities and Service Systems	Local service areas (e.g., El Dorado Irrigation District)
Wildfire and Evacuation	Project site and region

Source: Compiled by Ascent in 2025.

4.3.2 Regional Planning Environment

EL DORADO COUNTY GENERAL PLAN

The El Dorado County General Plan was adopted in 2004 and has been subsequently amended through 2022 (including the El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update, adopted in 2015). It provides a broad framework for planning the future of the unincorporated area of the County. It is the official policy statement of the County and is used to guide the private and public development in the unincorporated area.

As discussed in El Dorado County's 2021–2029 Housing Element Update, El Dorado County's population could grow by an additional 16,846 persons by 2030 from 2020. It is expected that the El Dorado County population will increase by 8.8 percent between 2020 and 2030, with an average annual growth rate of 0.9 percent per year. It is projected that the County will grow to approximately 225,419 residents by 2040, an increase of approximately 36,413 new residents compared to the current population of 189,006 residents (El Dorado County 2022).

The General Plan and the environmental impact analysis provided in its EIR was based on future land use forecast of 25,323 jobs in the El Dorado Hills area (EPS 2002). It is projected that 1,389 new jobs will be created in the El Dorado Hills Community Region by 2045 (BAE 2025).

SACRAMENTO AREA COUNCIL OF GOVERNMENTS

The Sacramento Area Council of Governments (SACOG) provides regional housing, land use planning, and transportation planning for its six-county region, which encompasses El Dorado County, as well as Placer, Sacramento, Sutter, Yolo, and Yuba Counties. In developing the 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), SACOG prepared a land use forecast required to accommodate the regional growth forecast of population, employment, and housing demand. The 2020 MTP/SCS includes a forecast of the amount of growth that will occur in SACOG's plan area over a 20-year planning period (2020–2040). The regional growth forecast is based on economic and demographic projections through 2040, adopted and pending land use plans and policies, market and economic considerations, and other state and federal policies and regulations that can affect the locations and pace of growth. The number of new residents in the SACOG area is estimated to increase by approximately 620,000 between 2016 and 2040 (SACOG 2019).

4.3.3 Related Projects

A list of probable future projects is provided below. Probable future projects are those in the project vicinity that have the possibility of interacting with the project to generate a cumulative impact (based on proximity and construction schedule). These projects:

- are partially occupied or under construction,
- have received final discretionary approvals,
- have applications accepted as complete by local agencies and are undergoing environmental review, or
- are proposed projects that have been discussed publicly by an applicant or that otherwise have become known to a local agency and for which information is sufficient to allow at least a general analysis of environmental impacts.

Past and present projects in the vicinity are also considered as part of the cumulative analysis because they contribute to the existing conditions upon which the project's and probable future projects' environmental effects are considered.

Table 4-2 briefly summarizes reasonably foreseeable large-scale projects in the project area that includes some projects that propose amendments to the General Plan.

Table 4-2 Cumulative Projects List

Project Name	Location	Project Summary	Project Status
Bass Lake Hills Specific Plan	3 miles east of the Sacramento/El Dorado County line, adjacent to the west end of Cameron Park, and north of US 50	Development framework for 1,196 acres. Provides for development of residences in a range of densities, from one dwelling unit per 5 acres to four dwelling units per acre (approximately 1,458 dwelling units).	Approved; under development
Carson Creek Specific Plan	East of the Sacramento/El Dorado County line, south of White Rock Road	Framework for mixed-use development on 710 acres for a total of 1,925 dwelling units.	Specific plan adopted; under development
Promontory Specific Plan	East of the Sacramento/El Dorado County line and north of US 50	Framework for mixed-use development on 1,000 acres. Includes eight residential villages, a village center, a community park, and open space. 1,100 residential units entitled.	Specific plan adopted; under development
Valley View Specific Plan (Blackstone)	South of US 50 and east of Latrobe Road	Framework for mixed-use development on 2,037 acres that allows up to 2,840 residential units.	Specific plan adopted; under development

Project Name	Location	Project Summary	Project Status
The Village of Marble Valley Specific Plan	East of Marble Valley Road, south of US 50	Framework for mixed-use development on 2,341 acres that would involve amendments to the General Plan Land Use Diagram. Includes a variety of residential housing types, commercial and public facilities uses (475,000 square feet of nonresident uses), and parks and natural open spaces. Would allow up to 3,236 dwelling units.	Under review
Lime Rock Valley Specific Plan	West of Shingle Lime Mine Road, south of Cameron Estates, and east of the Marble Valley Specific Plan area	Framework for a residential development on 740 acres that would involve amendments to the General Plan Land Use Diagram. Would allow up to 800 dwelling units.	Under review
Montano De El Dorado Phase I and II Master Plan	Southeast corner of Latrobe Road and White Rock Road intersection	Expansion of the existing Montano de El Dorado retail center (Phase I) to include additional retail space, an office building, hotel, and a small amphitheater. Phase II would consist of a total of 10 buildings for a total floor area of approximately 75,400 square feet and 143,900 square feet of commercial and office uses. The project would also include the provision of outdoor special events within existing Phase I and within the proposed amphitheater and parking lots within Phase II	Approved
Saratoga Estates	Within the El Dorado Hills Community north of US 50 adjacent to the western El Dorado County boundary with the City of Folsom	Residential development project on 121 acres consisting of the development of 317 dwelling units.	Approved and under development
Ridgeview Village	East of El Dorado Hills Boulevard	444 acres with 527 large and small residential lots, three parks, and open space.	Approved and under development
Serrano Village Green Mixed-Use Development Amendment	Northeast corner of the intersection of Serrano Parkway and Silva Valley Parkway	Policy-level change to the existing planning entitlements for the 10.7-acre Village Green commercial area. The project consists of amendments to both the El Dorado Hills Specific Plan text and the existing Planned Development approval (PD95-13) in order to allow mixed-use development on the Village Green parcels. Under the current Specific Plan and PD, the Village Green parcels are limited to commercial, office, and civic uses. The proposed amendment would expand the allowed uses to include residential uses in a mixed-use configuration. No specific mixed-use project is proposed under this application.	Project is on hold
Generations at Green Valley	South of Green Valley Road	Amendment to the General Plan land use designations to High Density Residential (HDR), Low Density Residential (LDR), and Public Facilities (PF). The project would rezone the site to Residential, Single-Unit (R1 [6,000-square foot minimum]), Open Space (OS), Recreational Facilities, High Intensity (RF-H), and Residential Estate, Five-Acre (RE-5). The project also proposes a tentative subdivision map for 379 residential lots, open space, and park facilities. The proposed development area of the project would be within the General Plan designated El Dorado Hills Community Region boundary	Project is on hold
Cameron Meadows	In the Cameron Park Community east of the Cameron Park Airport between the Cameron Woods and Cameron Valley subdivisions	Residential development project consisting of 161 residential lots and 16 accessory dwelling units.	Project is on hold

Project Name	Location	Project Summary	Project Status
Dorado Oaks	Located on the west side of Faith Lane, approximately 500 feet south of the intersection with Pleasant Valley Road/State Route 49 in the El Dorado and Diamond Springs Community Region	Residential development project located on 142.3 acres. Project proposes 156 single family lots ranging in size from 6,000 square feet to approximately 24,000 square feet, 225 multi-family lots ranging in size from approximately 2,000 square feet to 7,170 square feet; one single-family lot of approximately 6.4 acres; seven roadway lots; and 18 open space/landscape lots open space/landscape lots.	Under review
The Town & Country Village El Dorado	North of US 50, east of Bass Lake Road in the El Dorado Hills Community	Mixed-use development project on 60.5 acres consisting of 814 residential units; 300 hotel rooms; and 271,000 sf of commercial uses that would involve amendments to the General Plan Land Use Diagram.	Under review
Gateway El Dorado Specific Plan	Central portion of the El Dorado Hills Business Park	Mixed use development project that proposes 613,391 square feet to 774,127 square feet of commercial and research and development uses and 140 to 495 residential dwelling units that would involve amendments to the General Plan Land Use Diagram.	Under review
Creekside Village Specific Plan	South of US 50, west of Latrobe Road and south of Investment Boulevard in the El Dorado Hills community	208-acre site for the proposed development of a new 918-unit residential community that would involve amendments to the General Plan Land Use Diagram.	Under review
City of Folsom 2035 General Plan Amendments for Increased Residential Densities	City of Folsom	Amendments to the 2035 General Plan and Folsom Plan Area Specific Plan to increase residential development potential in compliance with the City 2021–2029 Housing Element Update and allow for an additional 6,046 residential dwelling units in the city.	Approved

Note: The El Dorado Hills Specific Plan development is not included on this list because it is largely constructed and is, therefore, generally incorporated into the existing condition.

Source: Compiled by Ascent 2025.

In addition to the above development projects, the cumulative setting includes the future extension of Country Club Drive (County Capital Improvement Project No. 36105008), when constructed by the County, would occupy a portion of the North Site near its northern edge.

4.4 ANALYSIS OF CUMULATIVE IMPACTS

The following sections contain a discussion of the cumulative effects anticipated from implementation of the project, together with related projects and planned development in the region, for each of the environmental issue areas evaluated in this Draft EIR. The analysis conforms with Section 15130(b) of the State CEQA Guidelines, which specifies that the "discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

When considered in relation to other reasonable foreseeable projects, cumulative impacts to some resources would be significant and more severe than those caused by the proposed project alone.

This cumulative analysis assumes that all mitigation measures identified in the environmental resource sections of Chapter 3 to mitigate project impacts are adopted and implemented, and all elements of the design build performance criteria that would minimize environmental effects are implemented. The analysis herein analyzes whether, after implementation of project-specific mitigation and performance criteria that minimize environmental effects, the residual impacts of the project would cause a cumulatively significant impact or would contribute

considerably to existing/anticipated (without the project) cumulatively significant effects. Where the project would so contribute, additional mitigation is recommended where feasible.

4.4.1 Aesthetics

Aesthetic and visual resource impacts are project specific and highly localized. The geographic extent for considering cumulative impacts on aesthetics encompasses the viewshed (i.e., area visible from the viewer's location) in which the project would be located. As described in Section 3.1, "Aesthetics," public viewsheds of the proposed project are limited to the Silva Valley Parkway corridor from Oak Meadow Elementary School to US 50, public trail facilities west of the project site, and the US 50 corridor approximately 0.50 miles east and west of the Silva Valley Parkway/US 50 interchange.

The El Dorado County General Plan EIR identified significant and unavoidable visual character impacts associated with future development from implementation of the General Plan under project and cumulative conditions (El Dorado County 2004). The El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR also identified significant and unavoidable impacts related to scenic vistas, resources in a scenic highway, degradation of existing visual character, and lighting and glare under project and cumulative conditions (El Dorado County 2015b).

IMPACT 4-1: CONTRIBUTE TO CUMULATIVE VISUAL CHARACTER AND LIGHTING/GLARE IMPACTS

As described above, public viewsheds of the proposed project are limited to the Silva Valley Parkway corridor from Oak Meadow Elementary School to US 50, public trail facilities west of the project site, and the US 50 corridor approximately 0.50 miles east and west of the Silva Valley Parkway/US 50 interchange. The project within the developed urban and suburban area of the El Dorado Hills community. As such, the change would be visually consistent with the urban and suburban setting of the El Dorado Hills community. In addition, existing commercial and residential development is located along the US 50 corridor from the Sacramento/El Dorado County boundary to the Silva Valley Parkway/US 50 interchange that includes large-scale commercial development visible along the US 50 corridor such as the Town Center and the Raley's shopping center. Commercial development of the project site would be consistent with the visual character of the surrounding area and would not contribute to the alteration of the visual character of western portion of the county as viewed from US 50.

The project site is currently devoid of existing light and glare sources. However, the adjacent residential areas, roadways, and commercial areas located in proximity to the project site include interior and exterior lighting around buildings, facilities, and surface parking lots, which comprise the existing lighting and glare conditions of the El Dorado Hills community and the western portion of the county. Development of the proposed project would add new nighttime lighting, which would increase nighttime illumination on the site where none currently exists. The Costco project is designed to comply with Title 130, Chapter 130.34 (Outdoor Lighting) of County Code, which requires that outdoor lighting be located, shielded, and directed such that no direct light falls outside the property line or into the public right-of-way. Additionally, the project would use non-reflective materials and low-glare finishes, such as ribbed metal panels in muted colors, split-face CMU, and natural concrete, to eliminate glare. As shown in Figure 3.1-12, these features would prevent the introduction of substantial light or glare that could adversely affect adjacent land uses and would not result in a substantial contribution to cumulative light and glare impacts. Future development of the North Site Remainder Area would also be subject to these lighting standards that would offset its lighting and glare impacts.

Therefore, the project's contribution to substantial changes to visual character, lighting, and glare impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.2 Air Quality

The cumulative setting for air quality is the Mountain Counties Air Basin (MCAB). El Dorado County and the MCAB are within the jurisdiction of the El Dorado County Air Quality Management District (EDCAQMD). El Dorado County is currently designated as nonattainment with respect to the national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) for ozone and with respect to the NAAQS for respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM_{10}) and fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$). Emissions of criteria air pollutants and precursors from industrial sources, area sources, and mobile sources in the basin have contributed to exceedances of the NAAQS for ozone and fine particulate matter and the CAAQS for ozone, respirable particulate matter, and fine particulate matter. Projects identified in Table 4-2 would increase emissions of these criteria air pollutants. Odor and toxic air contaminants (TACs) exposure are localized impacts, and the cumulative context is considered to be within 1,000 feet from the project site and associated off-site roadway improvements during construction.

The El Dorado County General Plan EIR identified significant and unavoidable air quality impacts related to construction-related emissions, long-term operational emissions, odors, and TAC emissions associated with future development from implementation of the General Plan under project and cumulative conditions (El Dorado County 2004). The El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR also identified significant and unavoidable air quality impacts related to construction-related emissions, long-term operational emissions, odors, and TAC emissions under project and cumulative conditions (El Dorado County 2015b).

IMPACT 4-2: CONTRIBUTE TO CUMULATIVE AIR QUALITY IMPACTS

As described for Impact 3.2-1, project is a retail use that is consistent with the General Plan definition of Commercial and the project site is designated as Commercial under the General Plan, the project would not require rezoning or an amendment to the General Plan. Implementation of the project would not result in construction– or operations-related emissions that would exceed EDCAQMD's project-level thresholds for criteria pollutants and precursors. The project would also comply with all applicable EDCAQMD Rules, as described in Section 3.2.1, "Regulatory Setting," above. The project would result in a less than significant impact related to cancer risk from TAC emissions and NOA exposure from construction as addressed in Impact 3.2-4. The project would include project design features which would support the ozone reduction goals of the 2023 Ozone Plan. The project would not conflict with or obstruct the goals of the 2023 Ozone Plan to reduce mobile-source emissions. Additionally, because the project would not result in significant impacts related to $PM_{2.5}$ emissions and would implement particulate matter control strategies, the project would not conflict with the goal of the $PM_{2.5}$ Implementation/Maintenance Plan and Redesignation Request for Sacramento $PM_{2.5}$ Nonattainment Area to maintain the NAAQS for $PM_{2.5}$. For these reasons, the project (Costco project and North Site Remainder Area) would not contribute to any conflicts with applicable air quality plans.

Construction activities in the region would emit additional particulate matter and ozone precursors that may conflict with attainment efforts in the County. Because the region is in nonattainment, the existing cumulative condition is adverse, and any additional emissions would exacerbate that condition. However, EDCAQMD has established construction emission thresholds for individual construction projects that determine whether that particular project's emissions would be cumulatively considerable. As addressed in the discussion of Impact 3.2-2, Implementation of Mitigation Measure 3.2-2, ROG emissions from construction would be reduced by requiring that development within the North Site Remainder Area limit the VOC content of architectural coatings to 100 grams per liter during construction. Additionally, implementation of Mitigation Measure 3.2-4a would reduce particulate matter emissions from construction equipment exhaust by requiring the use of Tier 4 engines in equipment over 50 hp. The incorporation of these reduction measures would address and offset the project's (Costco project and North Site Remainder Area future development) contribution to construction air quality impacts.

As discussed for Impact 3.2-3, operational emissions of the Costco project and North Site Remainder Area future development would not exceed EDCAQMD thresholds, operational emissions would not conflict with air quality planning efforts in the region and would not result in a cumulatively considerable net increase in ozone, for which the

region has been designated as nonattainment for the NAAQS and CAAQS. Because the NAAQS and CAAQS were established to be protective of public health, adverse health impacts to receptors are not likely to occur.

Potential health impacts from the exposure to substantial air pollutant emissions tend to have a localized impact and not cumulative in nature. However, combined sources of toxic air contaminants (TACs) can result in cumulative impacts. While the project (Costco project and North Site Remainder Area future development) could result in TACs emissions during construction activities that could result in public health impacts, implementation of Mitigation Measure 3.2-4a would require the use of reduced emission construction equipment (Tier 4 or equivalent emission control) to reduce the maximum incremental cancer risk to 4.13 in one million, which is below EDCAQMD's recommended threshold of 10 in one million. Additionally, Mitigation Measure 3.2-4b would require the applicant to submit an Asbestos Dust Mitigation Plan in accordance with Rule 223-2 and to the satisfaction of the EDCAQMD Air Pollution Control Officer that would offset potential public health impacts from potential NOA exposure during construction.

Odor impacts are site-specific, localized and are not cumulative in nature. As discussed for Impact 3.2-5, construction, and operation of land uses under the project (Costco project and North Site Remainder Area future development) would not result in the development of new odor sources atypical of developed urban areas, odor-generating construction activity would be temporary, and thus no contribution to potential cumulative odor impacts would occur.

Therefore, the project's contribution to cumulative air quality impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.3 Biological Resources

The effects of the project and potential cumulative impacts of related projects are limited to the greater project area vicinity, including adjacent migration and movement corridors in western El Dorado County. The project site is surrounded by residential development, roads and highways, and open space. Past development in the region, including conversion of natural land to suburban uses, has resulted in a substantial loss of native habitat. The overall effect of this land conversion on native plants, animals, and habitat has been decidedly negative. Therefore, the cumulative condition for special-status species and sensitive habitats in the vicinity of the project site is already adverse.

The El Dorado County General Plan EIR identified significant and unavoidable biological resource impacts associated with loss and fragmentation of wildlife habitat and significant and unavoidable impacts on special-status species, wildlife movement, and sensitive habitats under project and cumulative conditions (El Dorado County 2004). The El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR also identified significant and unavoidable biological resource impacts associated with loss and fragmentation of wildlife habitat and significant and unavoidable impacts on special-status species, wildlife movement, and sensitive habitats under project and cumulative conditions (El Dorado County 2015b). The approved and proposed development in the project area identified in Table 4-2 would further contribute to identified cumulative biological resource impacts anticipated under the General Plan and Targeted General Plan Amendment/Zoning Ordinance Update.

As described in Section 3.3, "Biological Resources," the El Dorado County Board of Supervisors certified the Final EIR and adopted the Biological Resources Policy Update and the Oak Resources Management Plan (ORMP) in October 2017. The Biological Resources Policy Update included revisions to the General Plan objectives, policies, and implementation measures to establish a comprehensive Biological Resource Mitigation Program. The objective of this program is to conserve special-status species habitat, aquatic habitat, wetland and riparian habitat, habitat for migratory deer herds, and large expanses of native vegetation. The ORMP updated and revised the existing Oak Woodland Management Plan and defines mitigation requirements for impacts on oak woodlands, individual native oak trees, and heritage trees. The Final EIR determined that the implementation of the Biological Resources Policy Update and ORMP would result in significant and unavoidable impacts related to the loss of sensitive habitats associated with the loss of valley oak trees and valley oak woodlands (El Dorado County 2017).

IMPACT 4-3: CONTRIBUTE TO CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES

As described in Section 3.3, "Biological Resources," project implementation (Costco project and North Site Remainder Area future development) could result in significant impacts on special-status plants, coast horned lizard, western spadefoot, northwestern pond turtle, burrowing owl, California black rail, grasshopper sparrow, loggerhead shrike, northern harrier, Swainson's hawk, tricolored blackbird, white-tailed kite, yellow warbler, yellow-breasted chat, native nesting birds protected under Section 3503 of the California Fish and Game Code and Migratory Bird Treaty Act, Crotch's bumble bee, monarch, American badger, pallid bat, western red bat, valley foothill riparian habitat, purple needlegrass grassland, state and federally protected wetlands, and wildlife movement. Implementation of Mitigation Measures 3.3-1, 3.3-2a through 3.3-2i, 3.3-3a, 3.3-3b, and 3.3-4 would offset the project's contribution to cumulative biological resource impacts by avoiding impacts on these species and habitats or compensating for habitat and species impacts. Oak woodlands on the project site to be removed is limited to 0.35 acres and would be offset through implementation of the ORMP. Further, cumulative development would be required to implement similar mitigation to avoid or reduce impacts on biological resources.

Therefore, the project's contribution to cumulative biological resource impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.4 Cultural Resources

The cumulative context for the cultural resources analysis considers a broad regional system that includes the resources. The Gold Rush of the 1850s, the economic and agricultural development of El Dorado County, and commerce and trade in the historic communities associated with Green Valley have affected these lands. In addition, both the Sacramento-Coloma Road and the Sacramento and Placerville Wagon Road, developed from a circuitous trail used by emigrants and miners between 1848 and 1850, affected Nisenan lands. These activities have resulted in an existing significant adverse effect on cultural resources. Cumulative development, including projects described in Table 4-2, continues to contribute to the disturbance of cultural resources.

Because all significant cultural resources are unique and nonrenewable members of finite classes (meaning there are a limited number of significant cultural resources), all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

Although the El Dorado County General Plan EIR did not identify any significant and unavoidable cultural resource impacts, the El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR identified significant and unavoidable impacts on historic and archaeological resources under project and cumulative conditions (El Dorado County 2015b).

IMPACT 4-4: CONTRIBUTE TO CUMULATIVE IMPACTS ON CULTURAL RESOURCES

As identified in Section 3.4, "Cultural Resources," no known historical resources (built-environment resources) are located within the boundaries of the project site. However, implementing the project, in combination with other development in the region, could contribute to ongoing substantial adverse changes in the significance of unique archaeological resources resulting from urban development and conversion of natural lands. Cumulative development could result in potentially significant archaeological resource impacts. Implementation of Mitigation Measures 3.4-1a and 3.4-1b would offset the project's contribution to cumulatively significant archaeological resource impacts by providing training to construction personnel; requiring the performance of professionally accepted and legally compliant procedures in the event of a discovery, as well as the protection of any previously undocumented

significant archaeological resources. Further, cumulative development would be required to implement similar mitigation to avoid or reduce impacts on cultural resources. Compliance with California Health and Safety Code Section 7050.5 and Public Resource Code Section 5097 would ensure that treatment and disposition of the remains occur in a manner consistent with state guidelines and California Native American Heritage Commission guidance.

Therefore, the project's contribution to any significant cumulative impact related to cultural resources **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.5 Energy

The cumulative context for energy is existing and projected energy use in the Pacific Gas and Electric Company service area and in the state. Cumulative development in the County would increase regional energy demand. This would include approved and proposed projects identified in Table 4-2.

No significant and unavoidable energy use impacts were identified in the El Dorado County General Plan EIR or the El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR.

IMPACT 4-5: CONTRIBUTE TO CUMULATIVE ENERGY IMPACTS

As discussed for Impact 3.5-1 and 3.5-2, implementing the project (Costco project and North Site Remainder Area future development) would increase energy demand during temporary construction activities for new buildings and facilities; however, construction activities would not increase long-term, ongoing demand for energy or fuel, because project construction would be temporary. Regarding operation, the project would comply with the energy efficiency requirements of the 2025 California Energy Code and voluntary Tier 1 requirements for EV chargers in the 2025 CALGreen Code. Each of these codes is updated regularly with increasingly stringent standards for energy conservation and efficiency. Additionally, the Costco project would include multiple design features to improve energy efficiency and prevent the wasteful or inefficient use of energy for operations that include energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, because Costco has a Clean Energy Contract with PG&E, all electricity consumed by the project would be 100 percent renewable electrical power. The Costco project also includes onsite electric vehicle (EV) DC charging facilities meeting the Tier 1 requirements of the CalGreen Code that would be supplied by 100 percent renewable electricity and trip reduction strategies that would apply to both the Costco project and the North Site Remainder Area future development to reduce reliance on vehicle use consistent with the energy goals of CARB's 2022 Scoping Plan.

Therefore, the project's contribution to cumulative energy impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.6 Geology, Soils, and Paleontological Resources

Impacts related to geology and soils are not cumulative in nature. For example, impacts related to seismic shaking, erosion and loss of topsoil, geologic stability, expansive soils, and on-site wastewater disposal system operation relate only to project structures or the individual project site. However, paleontological resources can be thought of as areawide resources, and their loss at multiple sites may result in a cumulative impact.

The El Dorado County General Plan EIR identified significant and unavoidable mineral resource impacts under project and cumulative conditions (El Dorado County 2004). No significant and unavoidable geology, soil, or paleontological impacts were identified in the El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR.

The approved and proposed development in the project area identified in Table 4-2 would further contribute to identified cumulative impacts anticipated under the General Plan. The project site is not designated as an important mineral resource area under the El Dorado County General Plan (Figure CO-1), nor is it designated for mineral extraction uses by the County. Thus, project site development would not contribute to the cumulative loss of availability of a known mineral resource of value to the region or the state or the loss of availability of a locally important mineral resource recovery site.

IMPACT 4-6: CONTRIBUTE TO CUMULATIVE IMPACTS ON PALEONTOLOGICAL RESOURCES

El Dorado County's geologic formations are predominantly igneous in nature, and the types of sedimentary deposits where paleontological resources occur are virtually nonexistent in the County. Nevertheless, no comprehensive paleontological studies have been conducted in the County, and as a result, no information regarding the sensitivity of certain areas is available. Therefore, although it is unlikely that paleontological resources exist in the County, inadvertent discovery could still occur. Implementation of Mitigation Measure 3.6-4 would require, if any paleontological resources are encountered, that proper measures are in place to halt construction work until a qualified paleontologist evaluates the find. Mitigation Measure 3.6-4 also identifies recommendations regarding treatment. Because the presence or absence of paleontological resources is highly localized to a project site, the other projects considered in this cumulative analysis would be assessed on a project-specific, case-by-case basis and would be required to implement mitigation measures, as applicable. Implementation of these mitigation measures would ensure that the project's (Costco project and North Site Remainder Area future development) contribution to a cumulative geology and soils impact regarding paleontological resources would not be cumulatively considerable.

Therefore, the project's contribution to cumulative impacts on paleontological resources **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.7 Greenhouse Gas Emissions and Climate Change

Prominent greenhouses gases (GHGs) contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. Climate change is a global problem caused by global pollutants and is inherently cumulative. Therefore, the cumulative setting for climate change is global, and the earth is experiencing an adverse cumulative condition. This includes consideration of planned development under the El Dorado County General Plan and pending development projects identified in Table 4-2.

No significant and unavoidable GHG and climate change impacts were identified in the El Dorado County General Plan EIR or the El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR.

IMPACT 4-7: CONTRIBUTE TO CUMULATIVE GREENHOUSE GAS IMPACTS

As stated above, the issue of global climate change is inherently cumulative because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Therefore, the project's impact on climate change is addressed only as a cumulative impact. Impact 3.7-1 and 3.7-2 conclude that implementing of the project (Costco project and North Site Remainder Area future development) would result in a less-than-significant GHG emission impacts and would not conflict with local, regional, or state efforts to reduce GHG emissions. Therefore, the project's contribution to cumulative GHG and climate change impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.8 Hazardous Materials and Public Health

The cumulative context for hazards and hazardous materials is considered to be project-specific and limited to within approximately 1,000 feet of the project site. Although some hazardous material releases can cover a large area and interact with other releases (e.g., atmospheric contamination, contamination of groundwater aquifers), incidents of hazardous material contamination typically are isolated to a small area, such as leaking underground storage tank sites or the area affected by a release at individual businesses. For this reason, isolated areas of contamination typically do not interact in a cumulative manner with other sites of hazardous material contamination. However, if implementing the project would create a new site of contamination or contribute substantially to an existing hazardous condition in the vicinity of the project site, then it could contribute to a cumulative impact.

The El Dorado County General Plan EIR identified significant and unavoidable impacts associated with illegal disposal of household hazardous waste and accidental release of hazardous materials under project and cumulative conditions (El Dorado County 2004). No significant and unavoidable hazard impacts were identified in the El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR. The approved and proposed development in the project area identified in Table 4-2 would further contribute to identified cumulative impacts anticipated under the General Plan.

IMPACT 4-8: CONTRIBUTE TO CUMULATIVE HAZARD AND HAZARDOUS MATERIAL IMPACTS

As addressed in the discussion of Impact 3.8-1, project construction activities that involve the use of hazardous materials on the project site would be required to comply with established safety regulations mandated by federal, state, and County laws and regulations governing the storage, use, and transport of hazardous materials. Implementation of Mitigation Measure 3.8-1 would address project-specific hazards if discovered during construction. Construction of cumulative projects and associated activities located in the vicinity of the project site would also be required to comply with these mandated federal, state, and County laws and safety regulations regarding the transport, use, and disposal of hazardous materials.

As identified in Section 3.8, "Hazards and Hazardous Materials," all hazardous materials transport, storage, and dispensing during project (Costco project and North Site Remainder Area future development) operations would be subject to standard regulations. For instance, the routine transportation of fuels to the site must comply with USDOT and CHP hazardous materials transport regulations (Title 49 CFR and Title 13 CCR) regarding proper vehicle placarding, driver training, and spill prevention. On-site storage of hazardous materials (fuel in USTs, etc.) must comply with California CUPA regulations and Cal/OSHA worker safety requirements. The dispensing of gasoline and diesel at the fuel facility must adhere to safety standards such as: Cal/OSHA Title 8 CCR, Chapter 4 (Sections 3319 and 2540.7) governing fueling operations and service station safety; Title 13 CCR, Chapter 5 standards for motor vehicle fuels; and 29 CFR 1917.156 for fuel handling and storage. For example, fuel dispensers would be equipped with automatic shutoff valves and other safety devices, and all USTs would be double walled with leak detection systems and spill/overfill prevention in accordance with Title 23 CCR Section 2635(b). The fuel storage tanks would include appropriate design, secondary containment, monitoring equipment, and signage to protect public health and safety in the event of a leak, fire, or spill. An operational SWPPP would also be in place (as required by the NPDES Construction General Permit and County requirements) to ensure that any project-generated pollutants (including potential fuel or oil spills) are prevented from entering stormwater runoff.

With continued regulatory compliance, the project, when combined with past, present, and reasonably foreseeable future projects, would not contribute to a significant cumulative hazard and hazardous material impact associated with the routine transport, use, or disposal of hazardous materials. Further, cumulative development would also be required to comply with federal, state, and local regulations related to the storage, use, and transportation of hazardous materials.

Therefore, the project's contribution to cumulative hazard and hazardous material impacts would not be cumulatively considerable.

Mitigation Measures

No mitigation is required for this impact.

4.4.9 Hydrology and Water Quality

The project site is located in the Carson Creek watershed. The western slope of El Dorado County does not contain groundwater basins. Groundwater conditions in the foothills are highly variable spatially and temporally based on geology and fractured bedrock conditions. Surface water and groundwater quality in the region is influenced by land use and development conditions in the area.

The El Dorado County General Plan EIR identified significant and unavoidable hydrology and water quality impacts associated with increased groundwater demand and water quality impacts from wastewater treatment plant discharges under project and cumulative conditions (El Dorado County 2004). The El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR also identified significant and unavoidable hydrology and water quality impacts associated with groundwater use under project and cumulative conditions (El Dorado County 2015b). The approved and proposed development in the project area identified in Table 4-2 would further contribute to identified cumulative impacts anticipated under the General Plan and the Targeted General Plan Amendment/Zoning Ordinance Update.

As identified in Section 3.9, "Hydrology and Water Quality," the project would have no project impacts and make no contribution to cumulative impacts related to inundation by floods, tsunamis, or seiches, because the project site is not located in an area vulnerable to floods, tsunamis, or seiches. In addition, because it would not require the use of groundwater or substantially inhibit recharge, the project would not decrease groundwater supplies or interfere with groundwater recharge, or conflict with a sustainable groundwater management plan. Thus, the project would not contribute to these cumulative impacts.

IMPACT 4-9: CONTRIBUTE TO CUMULATIVE WATER RESOURCE IMPACTS

A cumulative impact would occur if the project, together with the cumulative projects identified in Table 4-2, would result in a result in a regional impairment of water quality. As described in the discussion of Impact 3.9-1, project construction would be subject to coverage under the State Water Resources Control Board National Pollutant Discharge Elimination System Construction General Permit (Order WQ 2022-0057-DWQ), which requires that a stormwater pollution prevention plan (SWPPP) be prepared and implemented. The SWPPP would include specific construction best management practices that include temporary erosion control measures (e.g., installation of straw wattle, silt fence, and erosion control blanket) to reduce sedimentation and turbidity of surface runoff from disturbed areas on the project site, as well as leak and spill protection for heavy equipment and hazardous material use. The project would also be required to comply with the County's Stormwater Management Plan and Stormwater Quality Ordinance (Ordinance No. 5022), which include requirements for construction water quality control. Construction of the cumulative projects identified in Table 4-2 would be required to comply with the same regulations and requirements related to water quality protection.

The Costco project involves construction and operation of multiple detention basins that would capture and treat runoff consistent with water quality standards in accordance with the El Dorado County West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements. The project site design (Costco project and North Site Remainder Area future development) would also incorporate low-impact development (LID) measures to control the quality of stormwater runoff from the site before discharge to the surrounding waters, as required by the El Dorado County West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements. Typical measures could include the use of biofiltration planters, biofiltration basins, infiltration areas, permeable paving, localized rainwater harvesting, where feasible, and other treatment measures as

approved by the County. Similar to the project, cumulative projects would be required to comply with the El Dorado County West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements to ensure that operation of the projects would not result in significant water quality impacts.

Compliance with existing regulations and provision of drainage facilities would ensure that the project, in combination with the cumulative projects, would not result in an incremental effect that would result in a significant cumulative impact related to water quality.

As addressed in the discussion of Impact 3.9-3, a storm drainage evaluation was conducted based on the Costco project proposed storm drainage facilities, as required by the County's Drainage Manual. The evaluation concluded that the proposed detention basins would direct flows to existing channels at rates below those of pre-development stormwater peak flows and would therefore reduce the existing rate of surface water flow from the project site. Therefore, with compliance with existing regulations, implementation of the project would not result in altered drainage patterns that could result in on-site or off-site flooding or impeded or redirected flood flows. The project site is located in areas of minimal flood hazards and not within a 100-year flood zone. Implementation of the cumulative projects (including future development of the North Site Remainder Area) would be subject to the County's Drainage Manual and the existing regulations and policies identified in Section 3.9.1 of the Draft EIR to prevent flood hazards and maintain natural drainage features. Specifically, the County's Drainage Manual requires preparation of hydrologic and hydraulic analysis of proposed drainage facilities to ensure appropriate runoff design and controls are in place.

Compliance with existing regulations and provision of drainage facilities would ensure that the project, in combination with the cumulative projects, would not result in an incremental effect that would result in a significant cumulative impact related to water quality due to drainage change or flooding.

Therefore, the project's contribution to cumulative water resource impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.10 Land Use and Planning

The cumulative setting for these resource areas consists of planned land uses and development under the El Dorado County General Plan for the western slope of the County, as well as reasonably foreseeable projects identified in Table 4-2.

The El Dorado County General Plan EIR identified significant and unavoidable land use and agricultural impacts associated with the loss of Important Farmland and Williamson Act contract lands and land use compatibility impacts on new and expanded solid waste, hazardous material, energy, and school facilities under project and cumulative conditions (El Dorado County 2004). The El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR also identified significant and unavoidable land use impacts associated with land use compatibility impacts project and cumulative conditions (El Dorado County 2015b). The project would not result in the loss of Important Farmland or Williamson Act contract lands, or result in land use conflict impacts.

IMPACT 4-10: CONTRIBUTE TO CUMULATIVE LAND USE AND PLANNING IMPACTS

As identified in Impact 3.10-1, the project site (Costco site and North Site Remainder Area future development) is designated Commercial under the General Plan and is consistent with the General Plan's Plan Strategies and Plan Concepts as well as Objective 2.1.1 and associated Policy 2.1.1.2 regarding the placement of urban-type development within the El Dorado Hills Community Region. The project is included in SACOG's 2020 MTP/SCS as an Established Community type and has therefore been accounted for in its growth pattern estimation for the region (SACOG 2019: 4). The 2020 MTP/SCS forecasts 7,690 new jobs added to the Established Communities in El Dorado County and 3,870 new jobs in El Dorado Hills between 2016 and 2040. SACOG describes Established Communities as areas

typically adjacent to or surrounding Center and Corridor communities and that are also known as mature suburban communities. These communities typically include commercial strip centers, which is consistent with the proposed project; therefore, the project is consistent with the land use assumptions for the Established Community Type in the 2020 MTP/SCS. Additionally, the El Dorado County LAFCO Commission policies encourage orderly growth and development of vacant or underdeveloped land within the existing boundaries of a city. The project site is considered underdeveloped land within the county and is adjacent to existing and planned development.

Therefore, the project's contribution to cumulative land use and planning impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.11 Noise and Vibration

Noise and vibration impacts associated with future development under the project are analyzed in Section 3.11, "Noise and Vibration." Noise and vibration impacts arise from and reflect project-specific characteristics and conditions, including distance to noise sources, barriers between land uses and noise sources, and other factors. Noise impacts are typically site specific and combine with other noise impacts only when cumulative development occurs close by or when traffic-related noise from a project contributes to traffic volumes on roadways in the project area. For this reason, the geographic scope of the cumulative impact analysis for noise and vibration is the project vicinity.

Both the El Dorado County General Plan EIR and Targeted General Plan Amendment/Zoning Ordinance Update EIR identified significant and unavoidable noise impacts associated with construction noise, traffic noise, exposure of sensitive noise receptors to stationary noise sources, and aircraft noise under project and cumulative conditions (El Dorado County 2004, 2015b). The approved and proposed development in the project area identified in Table 4-2 would further contribute to identified cumulative impacts anticipated under the General Plan and the Targeted General Plan Amendment/Zoning Ordinance Update.

Implementing the project would not result in development of any major sources of ground vibration, such as a commercial railway or passenger rail transit line. No existing or planned land uses in the project area would be sources of substantial and permanent ground vibration. Therefore, development facilitated by the project would not result in long-term operational activities associated with permanent or substantial levels of ground vibration. Thus, the project would not contribute to or create cumulative operational vibration impacts. . Cameron Park Airport, located approximately 3.8 miles northeast of the project site, is the closest airport and the project site is not located within any of the airport noise contours (EDCTC 2012). Therefore, the project would not result in noise impacts related to the exposure of people residing or working in the project area to excessive aircraft-related noise levels under project and cumulative conditions.

IMPACT 4-11: CONTRIBUTE TO CUMULATIVE NOISE AND VIBRATION IMPACTS

Construction-related noise and vibration are typically considered localized impacts that affect only receptors close to construction activities. The future extension of Country Club Drive (County Capital Improvement Project No. 36105008) is currently planned to start construction in July 2027 that could overlap with the construction of development of the North Site Remainder Area. Construction of the Costo project is anticipated to be completed in by May 2027. Implementation of Mitigation Measure 3.11-1a would provide substantial reductions and offset temporary North Site Remainder Area construction noise exposure at noise-sensitive receptors by ensuring proper equipment use, locating equipment away from sensitive land uses, and requiring the use of enclosures.

Table 4-3 shows project (Costco project and North Site Remainder Area) traffic noise impacts under cumulative conditions. In accordance with the County standards the following thresholds were used to evaluate cumulative traffic noise impacts:

- Where existing or projected future traffic noise levels are less than 60 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 5 dBA Ldn caused by a new transportation noise source will be considered significant.
- Where existing or projected future traffic noise levels range between 60 and 65 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 3 dBA Ldn caused by a new transportation noise source will be considered significant.
- Where existing or projected future traffic noise levels are greater than 65 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA Ldn caused by a new transportation noise will be considered significant.

Table 4-3 Modeled Cumulative Traffic Noise Levels under No Project and Plus-Project Conditions

Roadway Segment Number	Roadway	Roadway Segment	Cumulative Conditions Noise Levels (dBA L_{dn})	Cumulative + Project Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
Weekday							
1	El Dorado Hills Blvd/Latrobe Road	US 50 WB Ramps to US 50 EB Ramps	71.0	71.0	0.0	1.5	No
2	Latrobe Road	From US 50 EB Ramps to White Rock Road	70.6	70.6	0.0	1.5	No
3	White Rock Road	From Latrobe Road to Post Street	68.1	68.2	0.1	1.5	No
4	White Rock Road	From Post Street to Valley View Parkway	67.6	67.8	0.2	1.5	No
5	White Rock Road	From Valley View Parkway to Clarksville Crossing	67.0	67.1	0.1	1.5	No
6	White Rock Road	Clarksville Crossing to US 50 EB Ramps	68.2	68.3	0.1	1.5	No
7	White Rock Road/Silva Valley Parkway	From US 50 EB Ramps to US 50 WB Ramps	67.2	68.0	0.9	1.5	No
8	Silva Valley Parkway	From Harvard Way to Golden Eagle Lane	60.0	60.1	0.1	3.0	No
9	Silva Valley Parkway	From Golden Eagle Lane to Serrano Parkway	66.5	66.7	0.2	1.5	No
10	Silva Valley Parkway	From Serrano Parkway to Entrada Drive	67.8	68.3	0.5	1.5	No
11	Silva Valley Parkway	Entrada Drive to Oak Meadow Elementary School	61.5	62.0	0.5	3.0	No

Roadway Segment Number	Roadway	Roadway Segment	Cumulative Conditions Noise Levels (dBA L_{dn})	Cumulative + Project Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
12	Silva Valley Parkway	From Oak Meadow Elementary School Driveway to Clarksville Crossing	61.4	61.9	0.5	3.0	No
13	Silva Valley Parkway	From Clarksville Crossing to North/South Site Access	66.8	67.4	0.5	1.5	No
14	Silva Valley Parkway	From North/South Site Access to Tong Road	66.8	68.4	1.5	1.5	No
15	Silva Valley Parkway	From Tong Road to US 50 WB Ramps	66.7	68.3	1.6	1.5	Yes
16	Clarksville Crossing	From Silva Valley Parkway to South Site North Access	60.9	61.2	0.3	3.0	No
17	Clarksville Crossing	From South Site North Access to South Site Center Access	60.9	61.1	0.2	3.0	No
18	Clarksville Crossing	From South Site Center Access to South Site South Access	60.9	61.1	0.2	3.0	No
19	Clarksville Crossing	From South Site South Access to White Rock Road	60.8	61.4	0.5	3.0	No
20	Serrano Parkway	From Silva Valley Parkway to Bass Lake Road	66.3	66.5	0.2	1.5	No
21	Bass Lake Road	From Serrano Parkway to Country Club Drive	66.4	66.5	0.1	1.5	No
22	Bass Lake Road	From Country Club Drive to US 50 WB Ramps	69.5	69.6	0.1	1.5	No
23	Bass Lake Road	From US 50 WB Ramps to US 50 EB ramps	67.1	67.2	0.1	1.5	No
24	US 50 Westbound	From Silva Valley Parkway to El Dorado Hills Boulevard	58.5	61.2	2.7	5.0	No
25	US 50 Westbound	East of Silva Valley Parkway Interchange	61.2	62.1	0.9	3.0	No

Roadway Segment Number	Roadway	Roadway Segment	Cumulative Conditions Noise Levels (dBA L_{dn})	Cumulative + Project Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
26	US 50 Eastbound	From El Dorado Hills Boulevard to Silva Valley Parkway	62.6	62.9	0.3	3.0	No
27	US 50 Eastbound	East of Silva Valley Parkway Interchange	57.7	58.5	0.8	5.0	No
Weekend							
1	El Dorado Hills Blvd/Latrobe Road	US 50 WB Ramps to US 50 EB Ramps	-	-	-	N/A	No
2	Latrobe Road	From US 50 EB Ramps to White Rock Road	-	-	-	N/A	No
3	White Rock Road	From Latrobe Road to Post Street	-	-	-	N/A	No
4	White Rock Road	From Post Street to Valley View Parkway	-	-	-	N/A	No
5	White Rock Road	From Valley View Parkway to Clarksville Crossing	64.7	64.8	0.1	3.0	No
6	White Rock Road	Clarksville Crossing to US 50 EB Ramps	66.8	66.9	0.1	1.5	No
7	White Rock Road/Silva Valley Parkway	From US 50 EB Ramps to US 50 WB Ramps	67.2	67.5	0.3	1.5	No
8	Silva Valley Parkway	From Harvard Way to Golden Eagle Lane	-	-	-	N/A	No
9	Silva Valley Parkway	From Golden Eagle Lane to Serrano Parkway	62.1	62.3	0.2	3.0	No
10	Silva Valley Parkway	From Serrano Parkway to Entrada Drive	66.9	67.1	0.2	1.5	No
11	Silva Valley Parkway	Entrada Drive to Oak Meadow Elementary School	61.1	61.3	0.2	3.0	No
12	Silva Valley Parkway	From Oak Meadow Elementary School Driveway to Clarksville Crossing	61.0	61.2	0.2	3.0	No
13	Silva Valley Parkway	From Clarksville Crossing to North/South Site Access	66.3	66.4	0.1	1.5	No

Roadway Segment Number	Roadway	Roadway Segment	Cumulative Conditions Noise Levels (dBA L_{dn})	Cumulative + Project Noise Levels (dBA L_{dn})[1]	Modeled Change (dBA)	Applicable Increase Threshold (dBA)	Exceeds Applicable Threshold?
14	Silva Valley Parkway	From North/South Site Access to Tong Road	67.4	67.8	0.4	1.5	No
15	Silva Valley Parkway	From Tong Road to US 50 WB Ramps	67.3	67.7	0.4	1.5	No
16	Clarksville Crossing	From Silva Valley Parkway to South Site North Access	60.4	60.4	0.0	3.0	No
17	Clarksville Crossing	From South Site North Access to South Site Center Access	60.1	60.1	0.0	3.0	No
18	Clarksville Crossing	From South Site Center Access to South Site South Access	60.1	60.1	0.0	3.0	No
19	Clarksville Crossing	From South Site South Access to White Rock Road	60.9	60.9	0.0	3.0	No
20	Serrano Parkway	From Silva Valley Parkway to Bass Lake Road	62.4	62.6	0.2	3.0	No
21	Bass Lake Road	From Serrano Parkway to Country Club Drive	-	-	-	N/A	N/A
22	Bass Lake Road	From Country Club Drive to US 50 WB Ramps	-	-	-	N/A	N/A
23	Bass Lake Road	From US 50 WB Ramps to US 50 EB ramps	-	-	-	N/A	N/A
24	US 50 Westbound	From Silva Valley Parkway to El Dorado Hills Boulevard	61.1	61.0	-0.1	3.0	No
25	US 50 Westbound	East of Silva Valley Parkway Interchange	61.4	62.0	0.6	3.0	No
26	US 50 Eastbound	From El Dorado Hills Boulevard to Silva Valley Parkway	62.6	62.6	0.0	3.0	No
27	US 50 Eastbound	East of Silva Valley Parkway Interchange	57.7	57.7	0.0	5.0	No

Notes: dBA = A-weighted decibel; L_{dn} = day-to-night noise level; Project = Costco project and North Site Remainder Area development. N/A = Not Applicable; - = No Data.

[1] The traffic noise levels are modeled 50 feet from the centerline. Refer to Appendix E for detailed traffic noise modeling input data and modeling results.

Source: Data provided by Kittelson 2025; Modeled by Ascent 2025.

As shown in Table 4-3, cumulative noise levels without the project would range from approximately 58 dB L_{dn} to 71 dB L_{dn}. Implementation of the project (Costco project and North Site Remainder Area) would result in traffic noise increases of approximately 3 dB L_{dn} or less along affected roadway segments. One roadway segment (i.e., Roadway Segment 15 during weekdays) would experience an increase in noise that exceeds the applicable threshold of 1.5 dBA. However, there are no existing sensitive receptors on this roadway segment (project site frontage) and thus this increase would not affect any sensitive receptors. In addition, in typical noisy environments, changes in noise of 3 dBA or less are barely perceptible. Therefore, although the noise increase along Roadway Segment 15 would exceed the applicable threshold of 1.5 dBA, the increase would not affect any sensitive receptors or result in a perceptible increase in noise. Therefore, the noise increase along this roadway segment that would result from implementation of the project would not be considered a cumulative contribution to cumulative traffic noise conditions.

As discussed in Impact 3.11-3, the project's operational activity would involve various non-transportation noise sources including mechanical equipment, loading dock activity, and truck deliveries. Building mechanical equipment, trash compactors, emergency generator, loading dock activity, tire center, and heavy vehicle delivery would not exceed the County daytime (i.e., 55 dBA L_{eq}), evening (i.e., 50 dBA L_{eq}), and nighttime (i.e., 45 dBA L_{eq}) noise standards for sensitive land uses or result in a substantial (i.e., 3+ dBA) increase in noise levels to adjoining land areas. Future development within the North Site Remainder Area would be required to prepare an acoustical analysis to demonstrate compliance with County noise standards and implement design measures to ensure compliance with County noise standards. There are no future development projects proposed or planned adjacent to the project that would contribute to cumulative stationary noise conditions.

Therefore, the project's contribution to cumulative noise and vibration impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.12 Population and Housing

For population and housing, the cumulative setting encompasses El Dorado County and the El Dorado Hills Community. Table 3.12-1 in Section 3.12, "Population and Housing," presents the regional growth forecast prepared by SACOG as part of the 2020 MTP/SCS. According to SACOG's calculations, approximately 93,742 new residents are expected in the six-county region by 2040.

The El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR identified a significant and unavoidable impact associated with the inducement of substantial population growth under project and cumulative conditions (El Dorado County 2015b). The El Dorado County General Plan EIR identified no significant and unavoidable population and housing impacts. The approved and proposed development in the project area identified in Table 4-2 would further contribute to identified cumulative impacts anticipated under the General Plan.

IMPACT 4-12: CONTRIBUTE TO CUMULATIVE POPULATION AND HOUSING IMPACTS

As identified in Section 3.12, "Population and Housing," no residential units would be permanently removed by the project, nor does the project propose or involve any actions that would displace substantial numbers of people. Thus, the project would not contribute to or create cumulative displacement impacts.

Construction activities associated with the proposed Costco project and future development of the North Site Remainder Area would be temporary and intermittent, with construction of the Costco project complete in 2027. Therefore, construction activities would not result in long-term increases in employment. In addition, construction workers would be supplied from nearby population centers (e.g., Cities of Folsom, Rancho Cordova, Elk Grove, and Sacramento) and would not create a need for housing.

Operation of both the Costco project and future commercial uses of the North Site Remainder Area are estimated to generate approximately 616 new jobs in the El Dorado Hills Community Plan area. This extent of employment growth has been anticipated based on the project site General Plan land use designations and zoning, as well as projected within the 1,389 new jobs expected to be created in the El Dorado Hills Community Region by 2045. The General Plan and the environmental impact analysis provided in its EIR was based on future land use forecast of 25,323 jobs in the El Dorado Hills area. This rate of job growth would not induce new population or housing growth that is not anticipated by the County.

Therefore, the project's contribution to population and housing impacts **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.13 Public Services and Recreation

The cumulative setting associated with fire protection, law enforcement, public schools, and park/recreation services consists of the El Dorado Hills Fire Department (EDHFD) service area, El Dorado County Sheriff's Office West Slope patrol service area, Rescue Union School District and El Dorado Union High School District service areas, and El Dorado Hills Community Services District service area, respectively. Increases for these public services that would occur under cumulative conditions would occur as growth planned under the El Dorado County General Plan, as well as foreseeable projects located within the service area boundaries of the projects identified in Table 4-2.

The El Dorado County General Plan EIR identified significant and unavoidable impacts associated with fire incidents and fire hazards under project and cumulative conditions (El Dorado County 2004). No significant and unavoidable public service impacts were identified in the El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR. The approved and proposed development in the project area identified in Table 4-2 would further contribute to identified cumulative impacts anticipated under the General Plan.

IMPACT 4-13: CUMULATIVE PUBLIC SERVICES AND RECREATION IMPACTS

As identified in Section 3.13, "Public Services and Recreation," the project would involve the development of a Costco project and result in annexation actions that could support the future development of the North Site Remainder Area. The project does not include any residential development and, therefore, would not introduce new permanent residents or student-generating population to the area. While the project would generate approximately 616 jobs (Costo project and North Site Remainder Area), the new employees are expected to be drawn primarily from the existing local and regional labor force. The additional employees would not result in population growth that would substantially increase demand for public amenities such as schools, recreation facilities, and libraries. For these reasons, the project would not have significant impacts associated with provision of new or physically altered governmental facilities and these issues are not discussed further in this Draft EIR.

Neither the Costco project nor future commercial uses in the North Site remainder area would create a need for new or physically altered fire protection or law enforcement facilities or substantially contribute to cumulative impacts and needs for such facilities. Site development would comply with County, State, and El Dorado Hills Fire Department requirements, payment of impact fees, site plan review, and adherence to applicable fire codes.

Thus, the project's contribution to cumulative impacts on public services impact **would not be cumulatively considerable**.

Mitigation Measures

No additional mitigation is required.

4.4.14 Transportation

The geographic context for cumulative impacts related to transportation is the unincorporated area of the County. In 2018, the Governor's Office of Planning and Research (OPR) published its Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory), which provides guidance for vehicle miles traveled (VMT) analysis. The Office of Administrative Law approved the updated State CEQA Guidelines and, as of July 1, 2020, implementation of Section 15064.3 of the updated State CEQA Guidelines applies statewide.

While VMT had not yet been adopted as the metric by which to analyze traffic at the time of certification of the El Dorado County General Plan EIR and Targeted General Plan Amendment/Zoning Ordinance Update EIR, those EIRs generally evaluated VMT. The General Plan EIR concluded that, under all alternatives and scenarios analyzed, implementation of the General Plan would result in an increase in countywide VMT per capita from about 27 miles to approximately 32 miles in 2025 (El Dorado County 2003). The Targeted General Plan Amendment/Zoning Ordinance Update EIR identified that changes in regional travel demand that are projected to occur for each study scenario include an increase in daily vehicle trips, VMT, and vehicle hours (El Dorado County 2015a).

IMPACT 4-14: CONTRIBUTE TO CUMULATIVE IMPACTS ON TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES, VEHICLE MILES TRAVELED, SAFETY, AND EMERGENCY ACCESS

Future development within the county would increase demand for transit service and facilities, bicycle facilities, and pedestrian facilities. However, each project developed within the county would be subject to County plans, policies, and ordinances which regulate the County circulation system. Therefore, cumulative effects related to conflicts with a program, plan, ordinance, or policy addressing the circulation system are not considerable. The Costco project and future development within the North Site Remainder Area would be designed and constructed in accordance with applicable County policies and standards. Construction activities within the public right-of-way could temporarily and intermittently reduce, disrupt, or limit access to the existing Class II bicycle facilities along Silva Valley Parkway. However, pursuant to Section 12.08.080 of the County Code, an encroachment permit would be required for any work that would occur within the public right-of-way. In accordance with the standard permit conditions, a traffic control plan would be prepared and implemented to provide for the safe movement of vehicles, bicyclists, and pedestrians during construction. All new and modified roadways would be designed and constructed in accordance with County design guidelines and standards thus ensuring that implementation of the project and future development of the North Site Remainder Area would not adversely affect an existing or planned roadway, or transit, bicycle, or pedestrian facility; and would not conflict with any adopted state, regional, or County plans, policies, or standards related to such facilities. In addition, the Costco project site and North Site Remainder Area are located near existing residential units and therefore could provide new employment opportunities in existing suburban communities consistent with the 2020 MTP/SCS which relies on and supports efforts to foster a balance of jobs and housing (SACOG 2019: 69).

A significant cumulative impact related to VMT would occur if cumulative projects, in combination with the Costco project and future development of the North Site Remainder Area, would cumulatively increase VMT within the region above applicable thresholds. All development projects within the county are subject to the adopted VMT thresholds established in County Resolution 141-2020. As identified in Section 3.14, "Transportation," the project would result in an increase of daily VMT of 32,586 (Costco project: 21,123 daily VMT and North Site Remainder Area future development: 11,463 daily VMT). This would exceed County VMT thresholds and would contribute to cumulative VMT impacts in the county. Implementation of Mitigation Measures 3.14-2a through 3.14-2bc would reduce employee trips by requiring Costco to share information about travel choices with employees, develop and implement a ridesharing program, provide pedestrian facilities and end-of-trip bicycle facilities for employee use, and create a transportation demand management program to reduce VMT for the future development of the North Site Remainder Area. However, these mitigation measures would not offset the project's net increase in VMT under project and cumulative conditions.

In general, transportation hazards are site-specific and not cumulative in nature. Each cumulative project within the county would be subject to industry safety standards and regulations as well as County standards such as the County Interim Design Standards and Guidelines (IDSG), which set forth requirements for roadway design (e.g., roadway width, adequate sight distance) to ensure transportation hazards are minimized. Compliance with applicable standards and regulations would ensure that cumulative projects minimize hazardous roadway features, such as sharp turns, limited sight lines for ingress and egress, and dangerous intersections. Compliance with the County development standards and roadway requirements would be enforced as part of the design review and permitting process. The Costco project and future development in the North Site Remainder Area would be subject to and comply with County design and safety regulations that are intended to reduce transportation hazards during construction and operations. Project applicants would be required to prepare and submit a traffic control plan to ensure transportation hazards are minimized during construction. In addition, all new and modified roadways would be designed and constructed in accordance with County design standards, which allow for the safe movement of roadway users. All project plans would be subject to review by County staff to ensure compliance with design standards and specifications. For these reasons, the Costco project and future development within the North Site Remainder Area would not substantially increase hazards due to a design feature or incompatible use.

A significant cumulative impact related to inadequate emergency access would occur if cumulative projects, in combination with the project, would interfere or obstruct emergency access within the county based on project design features. All cumulative projects within the county would be required to comply with the 2022 CFC as well as other applicable federal, State, and local regulations related to emergency access. In addition, all cumulative projects within the county would be designed in accordance with County design standards to ensure emergency access during construction and operation. The Costco project and future development within the North Site Remainder Area would adhere to local and state requirements that ensure emergency access is provided during construction and operations. Project site plans would be subject to review by the El Dorado Hills Fire Department and County Staff, thus ensuring that the project and future development would be designed to meet applicable emergency access standards.

The project's contribution to cumulative transportation impacts associated with VMT **would cumulatively considerable and significant and unavoidable**.

Mitigation Measures

No additional feasible mitigation measures are available to address this cumulative impact.

4.4.15 Tribal Cultural Resources

The geographic scope for the analysis of cumulative impacts to archaeological resources, tribal cultural resources, and human remains is the historic lands of the Nisenan or Southern Maidu people. The Nisenan territory extended to the Bear River and south of the South or Middle Fork of the Cosumnes River. The historic lands of the Nisenan people have been affected by development since the arrival of the first Spanish settlers in the late 1770s. The Gold Rush of the 1850s, the economic and agricultural development of El Dorado County, and commerce and trade within the historic communities associated with Green Valley has also impacted these lands. In addition, both the Sacramento-Coloma Road and the Sacramento and Placerville Wagon Road developed from a circuitous trail used by emigrants and miners between 1848 and 1850 impacted Nisenan lands. These activities have resulted in an existing significant adverse effect on tribal cultural resources.

Assembly Bill 52 was not in effect at the time of the preparation of the El Dorado County General Plan EIR and Targeted General Plan Amendment/Zoning Ordinance Update EIR. However, both EIRs did evaluate potential impacts to archaeological resources that could include tribal cultural resources. Although the El Dorado County General Plan EIR did not identify any significant and unavoidable archeological resource impacts, the El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR identified significant and unavoidable impacts on archaeological resources under project and cumulative conditions (El Dorado County 2015b).

The approved and proposed development in the project area identified in Table 4-2 would further contribute to identified cumulative impacts to archaeological resources (as well as tribal cultural resources) anticipated under the General Plan Amendment/Zoning Ordinance Update.

IMPACT 4-15: CONTRIBUTE TO CUMULATIVE TRIBAL CULTURAL RESOURCE IMPACTS

As identified in Section 3.15, "Tribal Cultural Resources," no known tribal cultural resources have been identified within the boundaries of the proposed project site. However, project-related earth-disturbing activities could damage undiscovered tribal cultural resources. The project, in combination with other developments in the region (Table 4-2), could contribute to ongoing substantial adverse changes in the significance of tribal cultural resources resulting from urban development and conversion of natural lands. Cumulative development could result in potentially significant tribal cultural resource impacts. Implementation of Mitigation Measure 3.15-1a through 3.15-1c would ensure that the proposed project's contribution to cumulatively significant tribal cultural resources impacts would not be considerable by level by requiring construction training for awareness and sensitivity for tribal cultural resources, tribal monitoring of ground disturbance, and protection of any previously undocumented significant tribal cultural resources.

Therefore, the project's contribution to cumulative impacts on tribal cultural resources **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

4.4.16 Utilities and Service Systems

The cumulative setting for utility and service impacts consists of the El Dorado Irrigation District's (EID's) service area for water and wastewater service and the County for solid waste management. Environmental impacts associated with infrastructure improvements are project- and site-specific impacts that are addressed as part of the project's impacts addressed in this chapter, as well as in Sections 3.1 through 3.17.

The El Dorado County General Plan EIR identified significant and unavoidable impacts associated with water supply and wastewater flows and related infrastructure under project and cumulative conditions (El Dorado County 2004). The El Dorado County Targeted General Plan Amendment/Zoning Ordinance Update EIR also identified significant and unavoidable water supply impacts under project and cumulative conditions (El Dorado County 2015b).

IMPACT 4-16: CONTRIBUTE TO CUMULATIVE UTILITY SERVICE IMPACTS

As discussed for Impact 3.16-2, the project water demand from El Dorado Irrigation District (EID) would be approximately 107 EDUs (Costco project: 20.7 EDUs and North Site Remainder Area future development: 86.3 EDUs). EID's most recent Water Supply and Demand Report states that approximately 16,910 EDUs of water supply were available in the El Dorado Hills water supply region in 2022. EID determined in its 2020 UWMP that its water supply portfolio is capable of meeting water demand in its service area in normal, single dry, and consecutive dry years from 2020 through 2045. Additional water supply above existing and anticipated water demands would be available to accommodate the project and additional growth in EID's service area through 2045:

- In a normal year, water supply is projected to exceed demand by amounts ranging from 31,030 to 37,380 acre-feet per year (afy).
- In a single dry year, water supply is projected to exceed demand by amounts ranging from 21,610 to 24,130 afy.
- During multiple dry years, water supply is projected to exceed demand by amounts ranging from 11,110 to 22,470 afy (EID 2021).

Future water demands projected in EID's UWMP consider new commercial connections in the El Dorado Hills water supply region. The UWMP conservatively projects that 375 new non-residential connections would be needed to support population growth within the El Dorado Hills region, mostly within the commercial and landscape classifications. The parcels that encompass the project area were considered in the water demand projections for the UWMP (EID 2021: Figure 2-7). Therefore, EID would have sufficient water supplies to serve the project under cumulative conditions. Further, the water supply projections in EID's UWMP do not consider other water supplies that could be pursued by the district in the future, which include securing an additional 7,500 afy through the Fazio Central Valley Project supply and 30,000 afy through an El Dorado-Sacramento Municipal Utility District Cooperation Agreement (EID 2021). In addition, EID implements voluntary and mandatory measures to manage water supply during drought conditions of varying severity (EID 2021).

As discussed for Impact 3.16-3, the project sewer service demand would be approximately 96.1 EDUs (Costco project: 12.7 EDUs and North Site Remainder Area future development: 83.4 EDUs). Wastewater generated from the project would be conveyed to the EDHWWTP. As discussed in Section 3.16.2, "Environmental Setting," the EDHWWTP is expected to approach capacity in approximately 2026. EID's Wastewater Facilities Mater Plan recommends expansion of the EDHWWTP to a buildout capacity of 5.45 mgd to accommodate future growth in the collection system (EID 2013). EID is currently evaluating upgrades to existing wastewater treatment infrastructure; however, modifications to the existing EDHWWTP are not required to accommodate the project. The constituents in the wastewater flows from the project to the EDHWWTP would be typical of commercial uses and similar to flows from other commercial development in the El Dorado Hills; wastewater flows would not contain constituents that would cause permitted effluent limitations to be exceeded.

Impact 3.16-4 identified that the project would generate approximately 2.7 tons per day of solid waste (Costco project: 1.2 tons and North Site Remainder Area future development: 1.5 tons). This solid waste would represent approximately 0.8 percent of the maximum daily throughput and permitted capacity of existing solid waste disposal facilities. Transferred materials would be disposed of at Kieffer Landfill, Forward Landfill, Potrero Hills Landfill, or another Class III permitted Landfill. These landfills are anticipated to operate through 2036, 2048, and 2080, and have a combined maximum permitted throughput of 23,813 tons per day and a combined remaining capacity of 140,892,669 cubic yards (refer to Table 3.16-7). This small increase in solid waste would not consume a substantial proportion of the available permitted capacity and would not trigger the need to expand the Potrero Hills Landfill under either project or cumulative conditions. These facilities would be expanded should future growth require expansion. The overall project would adhere to all State requirements and County ordinances that govern waste management, including requirements for construction and demolition debris recycling, solid waste diversion, mandatory commercial recycling and organic waste disposal, and hazardous materials disposal. The project would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure; impair the attainment of solid waste reduction goals; or conflict with federal, State, and local management and reduction statutes and regulations related to solid waste.

Therefore, the project's contribution to cumulative impacts on utility services would not be cumulatively considerable.

Mitigation Measures

No mitigation is required for this impact.

4.4.17 Wildfire and Evacuation

As identified in Section 3.17, Wildfire and Evacuation," wildland fires affect grass, forest, and brush lands, as well as any structures located within them. Where there is human access to wildland areas, such as the Sierra Nevada and foothills areas, the risk of fire increases due to a greater chance for human carelessness and historical fire management practices. Within El Dorado County, the area starting in the foothills just east of El Dorado Hills and extending east, as well as north and south to the County lines is most vulnerable and prone to wildfire due to the climate, topography, and vegetation. Wildfires may occur in areas of El Dorado County, including the most populated areas of El Dorado Hills, Cameron Park/Shingle Springs, Placerville, Camino/Pollock Pines, and South Lake Tahoe.

As identified in the El Dorado County Local Hazard Mitigation Plan, El Dorado County and the incorporated cities have a variety of systems and procedures for warnings and evacuation activities. Specific warning and evacuation systems and procedures include Code Red alter system, dam protocols, evacuation recommendations, and shelter in place.

IMPACT 4-17: CONTRIBUTE TO CUMULATIVE WILDFIRE AND EVACUATION IMPACTS

Impact 3.17-1 identifies that the Costco project and future development within the North Site Remainder Area impact to overall roadway capacity and evacuation travel times would be minimal (0.1 to 1.2 minutes) under both wildfire scenarios and existing and 2034 conditions are not expected to impair implementation of or physically interfere with evacuation efforts and associated implementation of the El Dorado County Emergency Operations Plan or the county hazard mitigation plans. Thus, the project would not substantially contribute to cumulative evacuation impacts. The proposed development in the project area identified in Table 4-2 would also be require to address their impact to evacuation efforts in conformance with County General Plan policy provisions Objective 6.11.2 and Policies 6.11.2.1, 6.11.2.2, and 6.11.2.4.

As identified in Impact 3.17-2 through 3.17-4, implementation of existing fire regulations and Mitigation Measure 3.17-2 would ensure that the project would not substantially increase the likelihood that project occupants and area residents to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire through ignition avoidance and fuel source reduction measures. The required fuel reduction and operational features of the project would present an improvement over current conditions, since the wildfire risks associated with the site's existing conditions would be reduced. This would offset project contributions to cumulative wildfire hazards.

Therefore, the project's contribution to cumulative impacts on wildfire hazards and evacuation **would not be cumulatively considerable**.

Mitigation Measures

No mitigation is required for this impact.

5 ALTERNATIVES

5.1 INTRODUCTION

State CEQA Guidelines Section 15126.6(a) requires EIRs 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. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible... There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states that the purpose of the alternatives analysis is as follows:

> 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.

The State CEQA Guidelines require that the EIR include information about each alternative sufficient to allow meaningful evaluation, analysis, and comparison with the proposed project. 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 must be discussed, but in less detail than the significant effects of the project as proposed (Section 15126.6[d]).

The State CEQA Guidelines further require that the "no project" alternative be considered (Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "shall also identify an environmentally superior alternative among the other alternatives" (Section 15126[e][2]).

In defining "feasibility," State CEQA Guidelines Section 15126.6(f)(1) states, in part:

> 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). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body—here, El Dorado County. (See CEQA Sections 21081.5, 21081[a][3].)

5.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

5.2.1 Attainment of Project Objectives

The following project objectives have been identified by the applicant:

- Develop a high-quality commercial development on currently vacant and underutilized land adjacent to US 50 that is adequately served by existing infrastructure including roadways and utilities.
- Promote economic growth, new employment, and retail/service opportunities for County residents.
- Increase the number of employees in the El Dorado Hills area and contribute to the local jobs/housing balance.
- Construct and operate a new Costco warehouse retail building that serves the local community with goods and services from both nationally known businesses and also more regional and local businesses.
- Reduce energy consumption by incorporating sustainable design features and systems with enhanced energy efficiencies meeting State and federal code requirements.
- Provide a Costco warehouse retail building in a location that is convenient for its members, the community, and employees to travel to shop and work.
- Provide a state-of-the-art Costco warehouse retail building to better serve the membership in the greater El Dorado Hills area.
- Enhance the area with a warehouse retail building that is architecturally appealing, responsive to the El Dorado Hills area design context, sensitive to the adjacent community and future development(s), and compatible with the need for a new Costco in this market area.
- Continue and increase contribution to the County's tax base by Costco.
- Expand the space available for integrated retail sales of goods and services in the El Dorado Hills market.
- Minimize circulation conflicts between automobiles and pedestrians.
- Develop a Costco warehouse retail building that is large enough to accommodate all of the uses and services Costco provides to its members elsewhere.
- Meet member demand for high-quality gasoline at a fair price via a new Fuel Facility developed in conjunction with the proposed warehouse retail building.

5.2.2 Environmental Impacts of the Project

Sections 3.1 through 3.17 of this Draft EIR address the environmental impacts of implementation of the proposed project. Potentially feasible alternatives were developed with consideration of avoiding or lessening the significant, and potentially significant, adverse impacts of the project, as identified in the environmental resource sections of Chapter 3 of this Draft EIR and summarized below. If an environmental issue area analyzed in this Draft EIR is not addressed below, it is because no significant impacts were identified for that issue area.

AIR QUALITY

- The combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of reactive organic gases (ROG) exceeding EDCAQMD thresholds. Mitigation (Mitigation Measures 3.2-2 and 3.2-4a) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.2-2 and 4-2).

- Project toxic air contaminant (TAC) emissions could result in an adverse public health impacts. Mitigation (Mitigation Measure 3.2-4a) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.2-4 and 4-2).
- Construction activities on the project site could result in naturally occurring asbestos (NOA) exposure that results in an adverse public health impact. Mitigation (Mitigation Measure 3.2-4b) have been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.2-4 and 4-2).

BIOLOGICAL RESOURCES

- Development of the project site could result in direct removal, or damage that results in eventual death or loss of special-status plants, if present on the project site. Mitigation (Mitigation Measure 3.3-1) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.3-1 and 4-3).
- Project implementation would include land use conversion and development activities that could result in disturbance, injury, or mortality of several special-status wildlife species if present, reduced breeding productivity of these species, and loss of species habitat. Mitigation (Mitigation Measures 3.3-2a through 3.3-2i) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.3-2 and 4-3).
- Project implementation would include activities resulting in ground disturbance, vegetation removal, and land development, which would result in removal of riparian habitat and sensitive natural communities. Mitigation (Mitigation Measures 3.3-3a and 3.3-3b) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.3-3 and 4-3).
- Project implementation would include activities resulting in ground disturbance that would result in removal (fill) of wetlands. Mitigation (Mitigation Measure 3.3-4) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.3-4 and 4-3).
- Bird nesting colonies and bat roosts that may be considered wildlife nurseries may be present on the project site. Mitigation (Mitigation Measures 3.3-2e and 3.3-2i) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.3-5 and 4-3).

CULTURAL RESOURCES

- Project-related ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources pursuant to Section 15064.5. Mitigation (Mitigation Measures 3.4-1a and 3.4-1b) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.4-1 and 4-4).

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

- Although it is anticipated that the project does not contain unique paleontological resources, the potential to discover paleontological resources onsite still exists. Mitigation (Mitigation Measures 3.4-1a and 3.6-4) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.6-4 and 4-6).

HAZARDS AND HAZARDOUS MATERIALS

- The Phase 1 ESA identified multiple concrete structures (including a pit and trough) where potential for dumping of hazardous materials may have occurred. In addition, construction of off-site roadway improvements may encounter unknown hazardous materials. Mitigation (Mitigation Measure 3.8-1) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.8-1 and 4-8).

NOISE AND VIBRATION

- Short-term construction-generated noise levels associated with the would expose nearby noise-sensitive receptors to excessive noise levels. Mitigation (Mitigation Measure 3.11-1a and 3.11-1b) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.8-1 and 4-8).
- Construction activity associated with the future development of the North Site Remainder Area would generate short-term increases in vibration near existing sensitive receptors. Mitigation (Mitigation Measure 3.11-4) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.11-4 and 4-11).

TRANSPORTATION

- The Costco project would result in a net increase of 21,123 daily vehicle miles traveled (VMT) when compared to existing conditions, and development of the North Site Remainder Area would result in 11,462 VMT. Thus, implementation of the Costco project and future development of the North Site Remainder Area would exceed the threshold of no net increase in regional VMT. Although mitigation (Mitigation Measures 3.14-2a through 3.14-2c) have been identified to address this impact, the project would result in a **significant and unavoidable impact** under project and cumulative conditions (see Impacts 3.14-2 and 4-14).

TRIBAL CULTURAL RESOURCES

- Although consultation did not result in the identification of any tribal cultural resources, ground-disturbing activities could damage or destroy previously unknown tribal cultural resources. Mitigation (Mitigation Measures 3.15-1a through 3.15-1c) have been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.15-1 and 4-15).

WILDFIRE AND EVACUATION

- Wildfire hazards could occur under project construction activities. Mitigation (Mitigation Measure 3.17-2) has been identified to reduce this impact to **less than significant** under project and cumulative conditions (see Impacts 3.17-2 through 3.17-4 and 4-17).

5.3 ALTERNATIVES CONSIDERED BUT NOT EVALUATED FURTHER

As described above, State CEQA Guidelines Section 15126.6(c) provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR. (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165-1167.)

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision-maker(s). (See Pub. Resources Code, § 21081(a)(3).) At the time of action on the project, the decision-maker(s) may consider evidence beyond that found in this EIR in addressing such determinations. The decision-maker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that basis provided that the decision-maker(s) adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence. (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 998.)

The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination.

The following alternatives were considered but are not evaluated further in this Draft EIR.

5.3.1 Reduced or No Fuel Facility Alternative

This alternative was suggested in comments in response to the Notice of Preparation. It would consist of retaining the proposed Costco warehouse retail building and associated improvements as proposed, but would either reduce the size of the fuel facility or eliminate the fuel facility from the project. This alternative was suggested due to health and safety concerns regarding the proposed fuel facility on the North Site. As identified in the impact analyses in Section 3.2, "Air Quality," 3.8, "Hazards and Hazardous Materials," 3.11, "Noise and Vibration," 3.14, "Transportation," and 3.17, "Wildfire and Evacuation," no significant health or safety impacts would occur from the operation of the fuel facility. The North Site would still retain zoning that would allow commercial uses to be developed. This alternative would not meet project objectives of providing a fuel facility in conjunction with the proposed warehouse retail building. Given that this alternative would not provide environmental benefit over the proposed Costco project, it was not evaluated further.

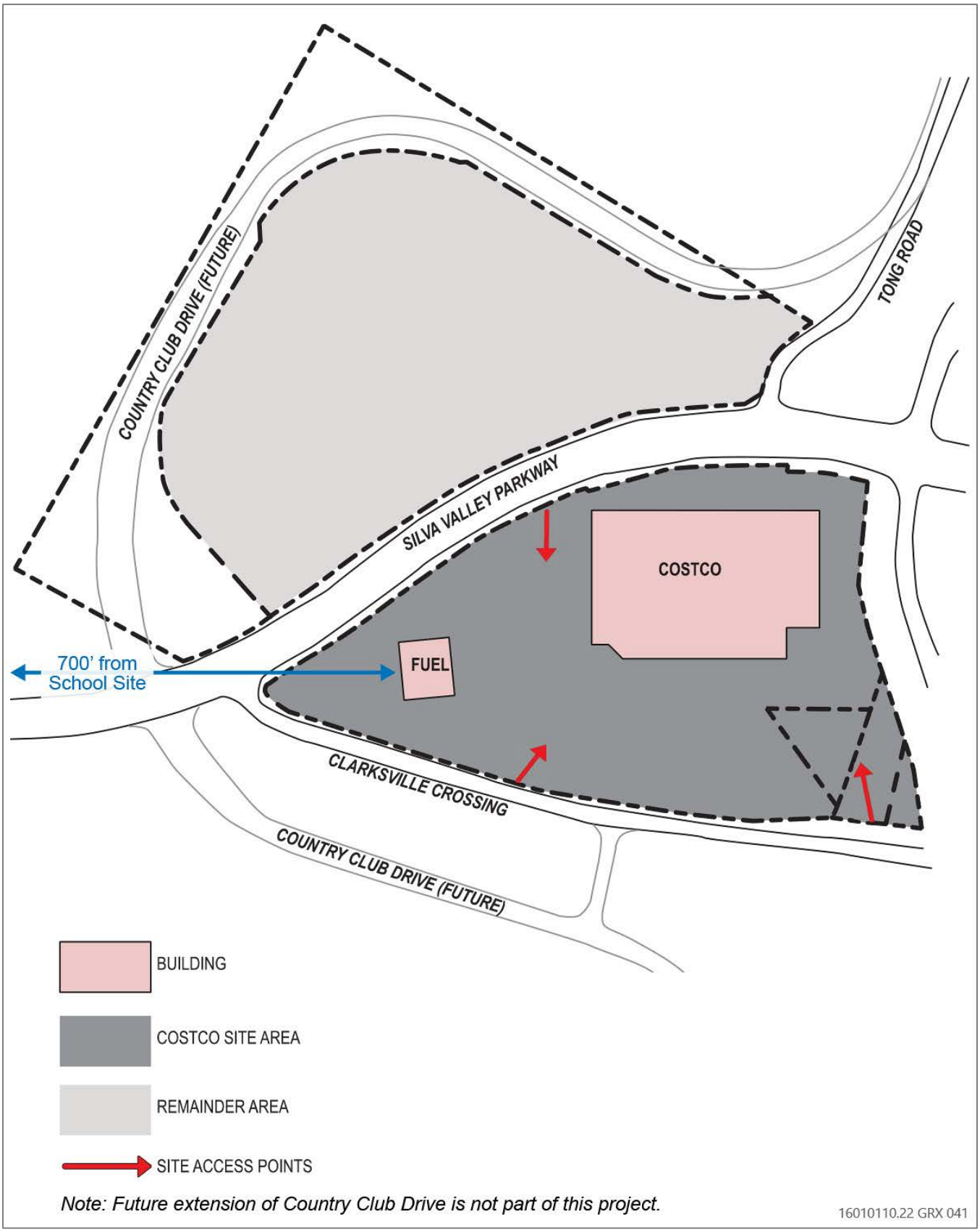
5.3.2 Costco Project on South Site Alternative

This alternative would involve placement of the Costco warehouse retail building and fuel facility on the South Site and would not develop the North Site as shown in Figure 5-1. In order to accommodate both facilities, the fuel facility would need to be placed at the northern portion of the South Site near the intersection of Silva Valley Parkway and Country Club Drive in order to provide adequate turn radius for fuel trucks, while the remaining portion of the site would include surface and structured parking that would involve using the roof of the Costco warehouse retail building for parking in order to meet the project's parking needs. The North Site would remain its current zoning that could allow approximately 171,080 square feet gross floor area of commercial uses. This alternative would not avoid any of the significant impacts identified for the proposed project and would place the fuel facility in closer proximity to Oak Meadow Elementary School (approximately 700 feet) as compared to the proposed project (737 feet). This alternative would also result in visual character and lighting impacts from the placement of parking on the Costco warehouse retail building roof that would be an alteration of the existing visual character from public views as this form of development (roof top parking) does not currently exist in the El Dorado Hills community. Given these issues, this alternative was not evaluated further.

5.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

The following alternatives evaluated in this Draft EIR.

- Alternative 1: No Project–No Development Alternative assumes no development of the North Site and South Site, and these sites remain undeveloped.
- Alternative 2: No Project – Development Consistent with General Plan and Zoning: The proposed Costco project and its associated fuel facility would not be developed under this alternative. However, the North Site and South Site would develop consistent with the existing zoning of Commercial Regional–Planned Development (CR-PD), Commercial Limited (CL) and Transportation Corridor (TC). Commercial development potential on the North Site would be approximately 171,080 square feet of gross floor area (GFA), while the South Site commercial development potential would be approximately 170,818 square feet of GFA. In addition, this alternative could include residential up to 70 percent of GFA consistent provided in County Code of Ordinances Section 130.40.180.
- Alternative 3: Flipped Costco Project Site Plan Alternative: This alternative would involve the reduction of the Costco warehouse retail building to approximately 152,000 square feet and relocated to the North Site. The proposed fuel facility would remain the same size (3.29 acres consisting of steel canopy structure of approximately 13,000 square feet, covering four fueling bays with four two-sided dispensers each [32 fueling positions total]) but would be located in the southeastern corner of the South Site. The South Site Remainder Area (reserved for future development similar to the North Site under the proposed Costco project) would consist of approximately 138,000 square feet of potential commercial uses and approximately 316 employees.



Source: Image produced and provided by Urban Planning Partners Inc. in 2025; adapted by Ascent in 2025.

Figure 5-1 Costco Project on South Site Alternative

- **Alternative 4: Relocation of Fuel Facility Alternative:** Under Alternative 4, the proposed Costco warehouse retail building and associated site plan for the South Site would remain the same as proposed. However, the proposed fuel facility design would remain as proposed, but would be sited further to the southeast on the North Site. The North Site Remainder Area (reserved for future development similar to the Costco project) would consist of approximately 138,000 square feet of potential commercial uses like the proposed project.
- **Alternative 5**: **Offsite Alternative**: This alternative would relocate the proposed Costco warehouse retail building and fuel facility to the northern portion of the El Dorado Hill Business Park on approximately 25 acres.
- **Alternative 6: Costco Project on North Site Alternative:** This alternative would involve the relocation of the Costco warehouse retail building and fuel facility to the North Site. The Costco warehouse retail building would be reduced to approximately 152,000 square feet and would involve the construction of structured parking for a total of 646 parking spaces. The South Site would be reserved for future development similar to the project and its commercial development potential would be approximately 170,818 square feet of GFA.

For purposes of comparing impacts of the project to those of each alternative, conclusions for each technical area are characterized as "impacts" that are greater, similar, or less to describe conditions that are worse than, similar to, or less than those of the proposed project. The analysis below is based on the impact analysis provided in this Draft EIR.

5.4.1 Alternative 1: No Project–No Development Alternative

Under Alternative 1, the No Project–No Development Alternative, no actions would be taken by El Dorado County, and the project site would remain unchanged from current conditions. The project site would remain vacant and in its current condition. The No Project–No Development Alternative would not meet any of the project objectives. However, as identified in State CEQA Guidelines Section 15126.6(e)(1), the analysis of 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.

AESTHETICS

As identified in Section 3.1, "Aesthetics," the project would not result in significant aesthetic impacts associated with scenic vistas, scenic highways, visual character, or light and glare. Under this alternative, there would be no alteration of the visual character or quality of the project site. Views of the project site from the Silva Valley Parkway corridor from Oak Meadow Elementary School to US 50, public trail facilities west of the project site, and the US 50 corridor approximately 0.50 miles east and west of the Silva Valley Parkway/US 50 interchange would not change, and no new sources of light and glare would be created, as would occur with the proposed project. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

AIR QUALITY

As identified above, the significant but mitigable impacts from combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of ROG exceeding EDCAQMD thresholds. Project construction and operational-related emissions of TACs could result in significant but mitigable public health impacts. Project construction activities could also result in significant but mitigable impacts from NOA exposure. Because the No Project–No Development Alternative would involve no construction disturbance and no new vehicular trip generation, this alternative would not generate construction- or operation-related air emissions, TACs, or exposure to NOA. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

BIOLOGICAL RESOURCES

The project would result in significant but mitigable biological resource impacts associated with special-status plant species, special-status wildlife species, loss of riparian and sensitive habitat communities, wildlife movement, and

wetlands. The No Project–No Development Alternative would not result in any new ground disturbance. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

CULTURAL RESOURCES

As identified above, the project would result in significant but mitigable archaeological resource impacts and no impacts to human remains. The No Project–No Development Alternative would not involve any earthmoving activities, thereby avoiding impacts related to the disturbance, destruction, or alteration of any known or as-yet-undiscovered/unrecorded archaeological resources or human remains. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

ENERGY

As identified in Section 3.5, "Energy," the project would result in less than significant energy use impacts. Under the No Project–No Development Alternative, construction and operational activities would not occur, and no new sources of energy use would be developed. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

As identified above, the project would result in significant but mitigable impacts associated with paleontological resources. Under this alternative, no ground disturbance or earthmoving activities would occur; therefore, no impacts to previously undiscovered paleontological resources would occur. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As identified in Section 3.7, "Greenhouse Gas Emission and Climate Change," the project would result in less than significant GHG impacts. Under the No Project–No Development Alternative, the project site would remain in its current condition. Project construction- and operation-related emissions of GHGs would not occur. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

HAZARDS AND HAZARDOUS MATERIALS

The project would result in significant but mitigable hazard impacts related to identified multiple concrete structures (including a pit and trough) where potential dumping of hazardous materials may have occurred. In addition, construction of off-site roadway improvements may encounter unknown hazardous materials. Under this alternative, no construction or demolition activities that could release contamination would occur. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

HYDROLOGY AND WATER QUALITY

As identified in Section 3.9, "Hydrology and Water Quality," the project would result in less-than-significant hydrology impacts to water quality, drainage, and flooding. Under the No Project–No Development Alternative, there would be no potential for construction-related or operational releases of sediment and contaminants into surface waters; no changes in current groundwater conditions; and no changes in stormwater generation, drainage patterns, or flood conditions. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

LAND USE AND PLANNING

As identified in Section 3.10, "Land Use and Planning," the project would not result in significant impacts that result in the physical division of an established community, or conflict with land use policy provisions that address environmental effects. This alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect. Because the No Project–No Development Alternative would not require any General Plan amendments or rezoning, impacts under this alternative would be less than would occur under the Project. (*Less*)

NOISE AND VIBRATION

As described in section 3.11, "Noise and Vibration," the project would result in significant but mitigable noise impacts associated with construction-generated noise. Future development of the North Site Remainder Area would generate short-term increases in vibration near existing sensitive receptors during construction. No significant traffic noise impacts were identified for the project. Under this alternative, no project-related construction activities would take place, and there would be no increases in short-term construction-related noise or vibrations. No increase in project traffic noise, or new noise sources and new noise-generating activities, would occur. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

POPULATION AND HOUSING

As identified in Section 3.12, "Population and Housing," the project would not result in significant impacts associated with the displacement of substantial numbers of people or housing or induce substantial unplanned growth. The No Project–No Development Alternative would also not result in the displacement of substantial numbers of people or housing or induce substantial unplanned growth. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

PUBLIC SERVICES AND RECREATION

As identified in Section 3.13, "Public Services and Recreation," the project would not result in significant impacts associated with fire protection services, law enforcement services, public schools, or park and recreation services that would trigger the need for new or altered facilities that would create impacts on the physical environment. The No Project–No Development Alternative would result in no site development and would not create any new public service demand. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

TRANSPORTATION

As identified above, the project would result in significant and unavoidable VMT impacts. Implementing the No Project–No Development Alternative would not result in an increase in vehicular trips or result in a change in existing VMT conditions. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

TRIBAL CULTURAL RESOURCES

The project would result in significant but mitigable impacts associated with the accidental discovery of tribal cultural resources. The No Project–No Development Alternative would not involve any earthmoving activities, thereby avoiding impacts related to the disturbance, destruction, or alteration of tribal cultural resources. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

UTILITIES AND SERVICE SYSTEMS

As identified in Section 3.16, "Utilities and Service Systems," the project would result in less-than-significant impacts associated with water supply service, wastewater service, and solid waste service. The No Project–No Development Alternative would not result in any new demand for water, wastewater treatment, or solid waste service. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

WILDFIRE AND EVACUATION

The project would result in significant but mitigable wildfire hazard impacts that could occur under project construction activities. The No Project–No Development Alternative would not involve site development and therefore would not create additional wildfire hazards or affect evacuation during emergencies. Thus, impacts under the No Project–No Development Alternative would be less than those that would occur with the project. (*Less*)

5.4.2 Alternative 2: No Project – Development Consistent with General Plan and Zoning Alternative

Under Alternative 2, the proposed Costco project and its associated fuel facility would not be developed. However, the North Site and South Site would develop consistent with the existing zoning of Commercial Regional–Planned Development (CR-PD), Commercial Limited (CL) and Transportation Corridor (TC). Commercial development potential on the North Site would be approximately 171,080 square feet of GFA, while the South Site commercial development potential would be approximately 170,818 square feet of GFA (total of 341,898 square feet). This total extent of commercial development could generate up to 783 employees. In addition, this alternative could include multi-family residential up to 70 percent of GFA consistent with County Code of Ordinances Section 130.40.180. The No Project–Development Consistent with General Plan and Zoning Alternative would not meet any of the project objectives.

AESTHETICS

As identified in Section 3.1, "Aesthetics," the project would not result in significant aesthetic impacts associated with scenic vistas, scenic highways, visual character, or light and glare. Under this alternative, the visual character of the site as viewed from the Silva Valley Parkway corridor from Oak Meadow Elementary School to US 50, public trail facilities west of the project site, and the US 50 corridor would be generally similar to that under the project (proposed Costco project and future development of the North Site Remainder Area) because the alternative would consist of commercial buildings and parking lots. Potential residential development could be included under this alternative and would have similar building massing as it would be multi-family units within single large buildings. The No Project – Development Consistent with General Plan and Zoning Alternative would also have similar light sources as compared to the project and would be subject to Title 130, Chapter 130.34 (Outdoor Lighting) of County Code, which requires that outdoor lighting be located, shielded, and directed such that no direct light falls outside the property line or into the public right-of-way. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

AIR QUALITY

As identified above, the significant but mitigable impacts from combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of ROG exceeding EDCAQMD thresholds. Project construction and operational-related emissions of TACs could result in significant but mitigable public health impacts. Project construction activities could also result in significant but mitigable impacts from NOA exposure. The No Project – Development Consistent with General Plan and Zoning Alternative is anticipated to result in greater construction air pollutant emissions as the entire project site (North Site and South Site) could be under construction at the same time, which would not occur under the project. Operational air pollutant emissions

and TAC emissions for this alternative would be less as it would not have the operational emissions from the proposed fuel facility (even if a stand-alone fuel facility were developed under this alternative it would not have the same throughput of vehicles as a Costco fuel facility), and would have lower VMT because it would generate substantially fewer daily vehicle trips than the proposed project. For example, a general commercial development of the same size as the Costco project would be expected to generate less than half the number of daily trips as compared to the Costco project (Kittelson & Associates 2025). The daily traffic for a mixed-use development with some commercial and some residential development would be expected to also be less as the residential component would generate fewer trips than commercial uses. Construction air quality impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be greater than those that would occur with the project, while operational air quality and TAC impacts would be less than those that would occur with the project and would remain significant but mitigable. Thus, overall air quality impacts under this alternative would be less than those that would occur with the project and would remain significant but mitigable. (*Less*)

BIOLOGICAL RESOURCES

The project would result in significant but mitigable biological resource impacts associated with special-status plant species, special-status wildlife species, loss of riparian and sensitive habitat communities, wildlife movement, and wetlands. The No Project – Development Consistent with General Plan and Zoning Alternative is anticipated to result in comparable biological resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

CULTURAL RESOURCES

As identified above, the project would result in significant but mitigable archaeological resource impacts and no impacts to human remains. The No Project – Development Consistent with General Plan and Zoning Alternative is anticipated to result in comparable cultural resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

ENERGY

As identified in Section 3.5, "Energy," the project would result in less than significant energy use impacts. The No Project – Development Consistent with General Plan and Zoning Alternative could result in more development potential (approximately 341,898 square feet of commercial uses) than the proposed project (approximately 303,000 square feet of retail and commercial uses for the Costco project and future development of the North Site Remainder Area) and additional employees (783 employees as compared to 616 employees). This increase in development potential could result in some increase in energy use over energy demands of the project, with the exception of transportation energy use associated with VMT as this alternative is anticipated to generate lower VMT as identified above in the analysis of air quality (Kittelson & Associates 2025). This alternative would be required to comply with the energy efficiency requirements of both the current versions of the CalGreen Code and the California Energy Code at the time of development. However, this alternative would not include Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 electric vehicle (EV) direct current (DC) fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, and therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. Impacts under the No Project – Development Consistent

with General Plan and Zoning Alternative would be less than those that would occur with the project associated with reduced VMT and would remain less than significant. (*Less)*

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

As identified above, the project would result in significant but mitigable impacts associated with paleontological resources. The No Project – Development Consistent with General Plan and Zoning Alternative is anticipated to result in comparable ground disturbance impacts due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As identified in Section 3.7, "Greenhouse Gas Emission and Climate Change," the project would result in less than significant GHG impacts. The No Project – Development Consistent with General Plan and Zoning Alternative could result in more development potential (approximately 341,898 square feet of commercial uses) than the proposed project (approximately 303,000 square feet of retail and commercial uses for the Costco project and future development of the North Site Remainder Area) and additional employees (783 employees as compared to 616 employees). This increase in development potential could generate some increase in stationary greenhouse gas (GHG) emissions of the project. However, GHG emissions from mobile sources would be reduced as the VMT associated with this alternative is anticipated to be lower than the project as addressed in the air quality analysis above (Kittelson & Associates 2025). Additionally, this alternative would not include Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, and therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. Ultimately, this alternative is anticipated to have similar GHG efficiency (GHG emissions per 1,000 square feet of development) to the project. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar)*

HAZARDS AND HAZARDOUS MATERIALS

The project would result in significant but mitigable hazard impacts related to identified multiple concrete structures (including a pit and trough) where potential dumping of hazardous materials may have occurred. In addition, construction of off-site roadway improvements may encounter unknown hazardous materials. The No Project – Development Consistent with General Plan and Zoning Alternative is anticipated to result in comparable ground disturbance impacts and the need to address unknown hazardous materials due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

HYDROLOGY AND WATER QUALITY

As identified in Section 3.9, "Hydrology and Water Quality," the project would result in less-than-significant hydrology impacts to water quality, drainage, and flooding. Under the No Project – Development Consistent with General Plan and Zoning Alternative, there would be a similar potential for construction-related or operational releases of sediment and contaminants into surface waters and associated changes in drainage conditions and flooding as compared to the

project. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

LAND USE AND PLANNING

As identified in Section 3.10, "Land Use and Planning," the project would not result in significant impacts that result in the physical division of an established community, or conflict with land use policy provisions that address environmental effects. This alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

NOISE AND VIBRATION

As described in Section 3.11, the project would result in significant but mitigable noise impacts associated with construction-generated noise. Future development of the North Site Remainder Area would generate short-term increases in vibration near existing sensitive receptors during construction. No significant traffic noise impacts were identified for the project. The No Project – Development Consistent with General Plan and Zoning Alternative could result in greater construction noise as the entire project site (North Site and South Site) could be under construction at the same time, which would not occur under the project. Operation-related noise and vibration impacts would be comparable to the project due to the similar extent of site development. This alternative is anticipated to generate fewer daily trips than the project that would further reduce the potential for traffic noise as addressed in the air quality analysis above (Kittelson & Associates 2025). However, no significant traffic noise impacts were identified for the project. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be greater than those that would occur with the project. (*Greater*)

POPULATION AND HOUSING

As identified in Section 3.12, "Population and Housing," the project would not result in significant impacts associated with the displacement of substantial numbers of people or housing or induce substantial unplanned growth. The No Project – Development Consistent with General Plan and Zoning Alternative would also not result in the displacement of substantial numbers of people or housing or induce substantial unplanned growth. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

PUBLIC SERVICES AND RECREATION

As identified in Section 3.13, "Public Services and Recreation," the project would not result in significant impacts associated with fire protection services, law enforcement services, public schools, or park and recreation services that would trigger the need for new or altered facilities that would create impacts on the physical environment. The No Project – Development Consistent with General Plan and Zoning Alternative would have an increased level of fire protection and law enforcement service demand compared to the project given the increase in overall development, but not result in significant impacts that would trigger the need for new facilities that would create impacts on the physical environment. If this alternative included a mixed-use development with some commercial and some residential development, it could further increase public service needs that would include public schools and recreation services associated with residential service demands. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be greater than those that would occur with the project and would remain less than significant. (*Greater*)

TRANSPORTATION

As identified above, the project would result in significant and unavoidable VMT impacts. While the No Project – Development Consistent with General Plan and Zoning Alternative could result in more development potential (approximately 341,898 square feet of commercial uses) than the proposed project (approximately 303,000 square feet of retail and commercial uses), but would be expected to generate substantially fewer daily vehicle trips than the proposed project. For example, a general commercial development of the same size as the Costco project would be expected to generate less than half the number of daily trips as compared to the Costco project (Kittelson & Associates 2025). The daily traffic for a mixed-use development with some commercial and some residential development would be expected to also be less as the residential component would generate fewer trips than commercial uses. While travel patterns and travel distances associated with home-based trips for a residential development and general commercial trips differ from travel patterns associated with the project land use, the substantially lower daily trip generation would be expected to contribute less VMT to the region than the project (Kittelson & Associates 2025). Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be less than those that would occur with the project, but would remain significant and unavoidable. (*Less*)

TRIBAL CULTURAL RESOURCES

The project would result in significant but mitigable impacts associated with the accidental discovery of tribal cultural resources. The No Project – Development Consistent with General Plan and Zoning Alternative is anticipated to result in comparable tribal cultural resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

UTILITIES AND SERVICE SYSTEMS

As identified in Section 3.16, "Utilities and Service Systems," the project would result in less-than-significant impacts associated with water supply service, wastewater service, and solid waste service. The No Project – Development Consistent with General Plan and Zoning Alternative could result in more development potential (approximately 341,898 square feet of commercial uses) than the proposed project (approximately 298,000 square feet of retail and commercial uses for the Costco project and future development of the North Site Remainder Area) and additional employees (788 employees as compared to 616 employees). This increase in commercial development potential could increase utility service demands over the project by approximately 107 EDUs for water service, approximately 119 EDUs for wastewater service, and 3.7 tons per day of solid waste service. If this alternative included a mixed-use development with some commercial and some residential development, it would further increase water, wastewater, and solid waste service needs due to the demand factors for residential uses. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be greater than those that would occur with the project, but would remain less than significant. (*Greater*)

WILDFIRE AND EVACUATION

The project would result in significant but mitigable wildfire hazard impacts that could occur under project construction activities. The No Project – Development Consistent with General Plan and Zoning Alternative would have similar level of construction related wildfire hazard as the project and could be mitigated similar to the project. Thus, impacts under the No Project – Development Consistent with General Plan and Zoning Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

5.4.3 Alternative 3: Flipped Costco Project Site Plan Alternative

As shown in Figure 5-2, this alternative would involve the reduction of the Costco warehouse retail building to approximately 152,000 square feet and relocation to the North Site.

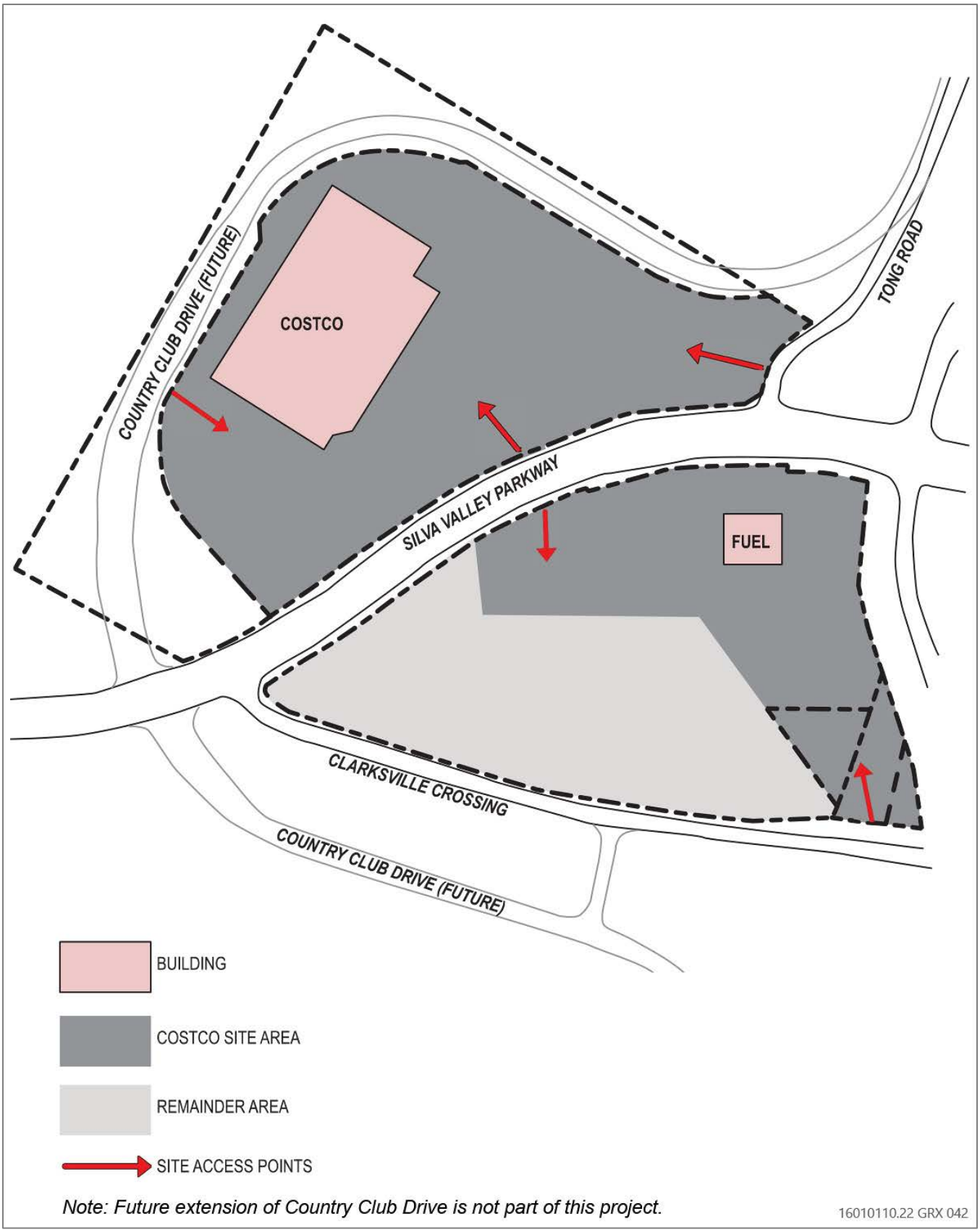
The proposed fuel facility would remain the same size (3.29 acres consisting of steel canopy structure of approximately 13,000 square feet, covering four fueling bays with four two-sided dispensers each [32 fueling positions total]) but would be located in the southeastern corner of the South Site. The South Site Remainder Area (reserved for future development similar to the Costco project) would consist of approximately 138,000 square feet of potential commercial uses and 316 employees similar to the project. Grading activities for this alternative are estimated to require the movement of approximately 391,000 cubic yards of materials for the Costco and approximately 160,000 cubic yards for the South Site Remainder Area for a total of 551,000 cubic yards (Costco project and North Site Remainder Area would result in the movement of approximately 320,000 cubic yards of materials). As shown in Figure 5-2, access to the North Site and South Site would include the project proposed signalized intersection on Silva Valley Parkway, but would include a new access from Tong Road for the North Site that is not part of the proposed project. All other aspects of the proposed project and its operations would be included in this alternative. This alternative would appear to meet the basic project objectives.

AESTHETICS

As described in Section 3.1, "Aesthetics," the project would not result in significant aesthetic impacts associated with scenic vistas, scenic highways, visual character, or light and glare. Based on comparison of Figure 5-2 to the proposed Costco project visual simulations shown in Figures 3.1-7 through 3.1-11, the Flipped Costco Project Site Plan Alternative would result in the Costco warehouse retail building becoming more visually prominent feature than the proposed project site design from public views from the public trail west of the site, views along Silva Valley Parkway, and from Oak Meadow Elementary School. This is due to the difference in topography and surrounding vegetation of the North Site as compared to the South Site. The South Site Remainder Area would also have future development that would alter the character of the area. The overall visual character of the site under this alternative would be similar to the existing urban and suburban areas of the El Dorado Hills community located along the US 50 corridor from the Sacramento/El Dorado County boundary to the Silva Valley Parkway/US 50 interchange that includes large-scale commercial development visible along the US 50 corridor such as the Town Center and the Raley's shopping center. The Flipped Costco Project Site Plan Alternative would also have similar light sources as compared to the project and would be subject to Title 130, Chapter 130.34 (Outdoor Lighting) of County Code, which requires that outdoor lighting be located, shielded, and directed such that no direct light falls outside the property line or into the public right-of-way. Impacts under the Flipped Costco Project Site Plan Alternative would be greater than those that would occur with the project associated with public views from public trail west of the site, views along Silva Valley Parkway, and from Oak Meadow Elementary School, but would remain less than significant. (*Greater*)

AIR QUALITY

As identified above, the significant but mitigable impacts from combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of ROG exceeding EDCAQMD thresholds. Project construction and operational-related emissions of TACs could result in significant but mitigable public health impacts. Project construction activities could also result in significant but mitigable impacts from NOA exposure. The Flipped Costco Project Site Plan Alternative is anticipated to result in similar construction activities, but would result in higher air pollutant emissions associated with construction truck haul traffic movement of approximately 551,000 cubic yards of materials for both the Costco and South Site Remainder Area (the air quality impact analysis assumes that the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic).



Source: Image produced and provided by Urban Planning Partners, Inc. in 2025; adapted by Ascent in 2025.

Figure 5-2 Alternative 3: Flipped Costco Project Site Plan Alternative

The overlap of Costco operational emissions and South Site Remainder Area construction emissions is anticipated to create a significant air quality impact for this alternative. Alternative operations and related air emissions, TACs, and exposure to NOAs would be similar due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. The fuel facility under this alternative would be located approximately over 1,000 feet from residences, Oak Meadow Elementary School, and the Capital Korean Presbyterian Church, which is further than the fuel facility location for the proposed project. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be greater than those that would occur with the project from construction emissions associated with hauling of materials, and would be significant but mitigable. (*Greater*)

BIOLOGICAL RESOURCES

The project would result in significant but mitigable biological resource impacts associated with special-status plant species, special-status wildlife species, loss of riparian and sensitive habitat communities, wildlife movement, and wetlands. The Flipped Costco Project Site Plan Alternative is anticipated to result in comparable biological resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

CULTURAL RESOURCES

As identified above, the project would result in significant but mitigable archaeological resource impacts and no impacts to human remains. The Flipped Costco Project Site Plan Alternative is anticipated to result in comparable cultural resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

ENERGY

As identified in Section 3.5, "Energy," the project would result in less than significant energy use impacts. The Flipped Costco Project Site Plan Alternative would result in slightly less development potential than the proposed Costco project associated with the reduced warehouse retail building size (152,000 square feet as compared to 165,000 square feet). This change would not substantially change energy use over energy demands of the project. Under this alternative, construction activities associated with the Costco and South Site Remainder Area could involve the movement of approximately 551,000 cubic yards of materials during grading and would increase mobile energy use from construction truck traffic as compared to the proposed project (the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic).This alternative comprises the same land uses of the similar intensity and future development of the remainder area as the project, with similar though adjusted site accesses, and with land uses in a different configuration. Although travel patterns in the vicinity of the Flipped Costco Project Site Plan Alternative would differ from those of the project due to the similar but adjusted site accesses and different land use configuration, the regional travel patterns for people traveling to and from the development would be similar to those of the project. Therefore, this alternative would be expected to contribute an approximately equivalent amount of VMT and associated transportation energy use as the project. (Kittelson & Associates 2025). This alternative would include the proposed Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, and therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be greater than those that would occur with the project due to construction energy use, but would remain less than significant. (*Greater)*

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

As identified above, the project would result in significant but mitigable impacts associated with paleontological resources. The Flipped Costco Project Site Plan Alternative is anticipated to result in comparable ground disturbance impacts due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As identified in Section 3.7, "Greenhouse Gas Emission and Climate Change," the project would result in less than significant GHG impacts. The Flipped Costco Project Site Plan Alternative would result in slightly less development potential than the proposed Costco project associated with the reduced warehouse retail building size (152,000 square feet as compared to 165,000 square feet). This change would not substantially change energy use or energy demands of the project and associated GHG emissions. Under this alternative construction activities associated with the Costco and South Site Remainder Area could involve the movement of approximately 551,000 cubic yards of materials during grading and would increase GHG emissions from construction truck traffic as compared to the proposed project (the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic). This alternative comprises the same land uses of a similar intensity and future development of the remainder area as the project, with similar though adjusted site accesses, and with land uses in a different configuration. Although travel patterns in the vicinity of the Flipped Costco Project Site Plan Alternative would differ from those of the project due to the similar but adjusted site accesses and different land use configuration, the regional travel patterns for people traveling to and from the development would be similar to those of the project. Therefore, this alternative would be expected to contribute an approximately equivalent amount of VMT and associated mobile GHG emissions as the project (Kittelson & Associates 2025). This alternative would include the proposed Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, and therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. Ultimately, this alternative is anticipated to have a similar GHG efficiency (GHG emissions per 1,000 square feet of development) as compared to the project. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be greater than those that would occur with the project due to construction GHG emissions, but would remain less than significant. (*Greater)*

HAZARDS AND HAZARDOUS MATERIALS

The project would result in significant but mitigable hazard impacts related to identified multiple concrete structures (including a pit and trough) where potential dumping of hazardous materials may have occurred. In addition, construction of off-site roadway improvements may encounter unknown hazardous materials. The Flipped Costco Project Site Plan Alternative is anticipated to result in comparable ground disturbance impacts and the need to address unknown hazardous materials due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

HYDROLOGY AND WATER QUALITY

As identified in Section 3.9, "Hydrology and Water Quality," the project would result in less-than-significant hydrology impacts to water quality, drainage, and flooding. Under the Flipped Costco Project Site Plan Alternative, there would be a similar potential for construction-related or operational releases of sediment and contaminants into surface

waters and associated changes in drainage conditions and flooding as compared to the project. This alternative would need to include water quality and drainage control facilities in compliance with County water quality and drainage standards identified in Section 3.9, "Hydrology and Water Quality." Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

LAND USE AND PLANNING

As identified in Section 3.10, "Land Use and Planning," the project would not result in significant impacts that result in the physical division of an established community, or conflict with land use policy provisions that address environmental effects. This alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

NOISE AND VIBRATION

As described in Section 3.11, "Noise and Vibration," the project would result in significant but mitigable noise impacts associated with construction-generated noise. Future development of the North Site Remainder Area would generate short-term increases in vibration near existing sensitive receptors during construction. No significant traffic noise impacts were identified for the project. The Flipped Costco Project Site Plan Alternative would place construction of the Costco warehouse retail building closer to sensitive receptors and the Oak Meadow Elementary School located adjacent to the North Site than the proposed project. This would likely result in greater construction noise (and potentially vibration) impacts during the daytime and nighttime (i.e., concrete pour) than would occur under the proposed project. This alternative would also place projected operational noise sources from the Costco warehouse retail building (see Figure 3.11-2 and 3.11-3) approximately within 140 feet of sensitive receptors and the Oak Meadow Elementary School located adjacent to the North Site than the proposed project. Based on the stationary noise impact analysis under Impact 3.11-3, this could result in a 3 to 6 dB increase in existing noise conditions that would be noticeable to these receptors and exceed County noise standards resulting in a significant impact and would require noise mitigation (anticipated to be noise barriers). This alternative is anticipated to generate a similar amount of daily trips and associated traffic noise as the proposed project (Kittelson & Associates 2025). Thus, impacts under the Flipped Costco Project Site Plan Alternative would be greater than those that would occur with the project, but would be significant but mitigable. (*Greater*)

POPULATION AND HOUSING

As identified in Section 3.12, "Population and Housing," the project would not result in significant impacts associated with the displacement of substantial numbers of people or housing or induce substantial unplanned growth. The Flipped Costco Project Site Plan Alternative would also not result in the displacement of substantial numbers of people or housing or induce substantial unplanned growth. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

PUBLIC SERVICES AND RECREATION

As identified in Section 3.13, "Public Services and Recreation," the project would not result in significant impacts associated with fire protection services, law enforcement services, public schools, or park and recreation services that would trigger the need for new or altered facilities that would create impacts on the physical environment. The Flipped Costco Project Site Plan Alternative would have similar level of fire protection and law enforcement service demand as the Costco project and future development of the North Site Remainder Area and would also not result in significant impacts that would trigger the need for new facilities that would create impacts on the physical environment. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar than those that would occur with the project and would remain less than significant. (*Similar*)

TRANSPORTATION

As identified above, the project would result in significant and unavoidable VMT impacts. This alternative comprises the same land uses of the similar intensity and future development of the remainder area as the project, with similar though adjusted site accesses, and with land uses in a different configuration. Although travel patterns in the vicinity of the Flipped Costco Project Site Plan Alternative would differ from those of the project due to the similar but adjusted site accesses and different land use configuration, the regional travel patterns for people traveling to and from the development would be similar to those of the project. Therefore, this alternative would be expected to contribute an approximately equivalent amount of VMT as the project. (Kittelson & Associates 2025). The project and this alternative would also be subject to Mitigation Measures 3.14-2a through 3.14-2c which further address VMT by employees by developing and implementing measures such as a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain significant and unavoidable. (*Similar)*

TRIBAL CULTURAL RESOURCES

The project would result in significant but mitigable impacts associated with the accidental discovery of tribal cultural resources. The Flipped Costco Project Site Plan Alternative is anticipated to result in comparable tribal cultural resource impacts due to the similar extent of site development and land as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

UTILITIES AND SERVICE SYSTEMS

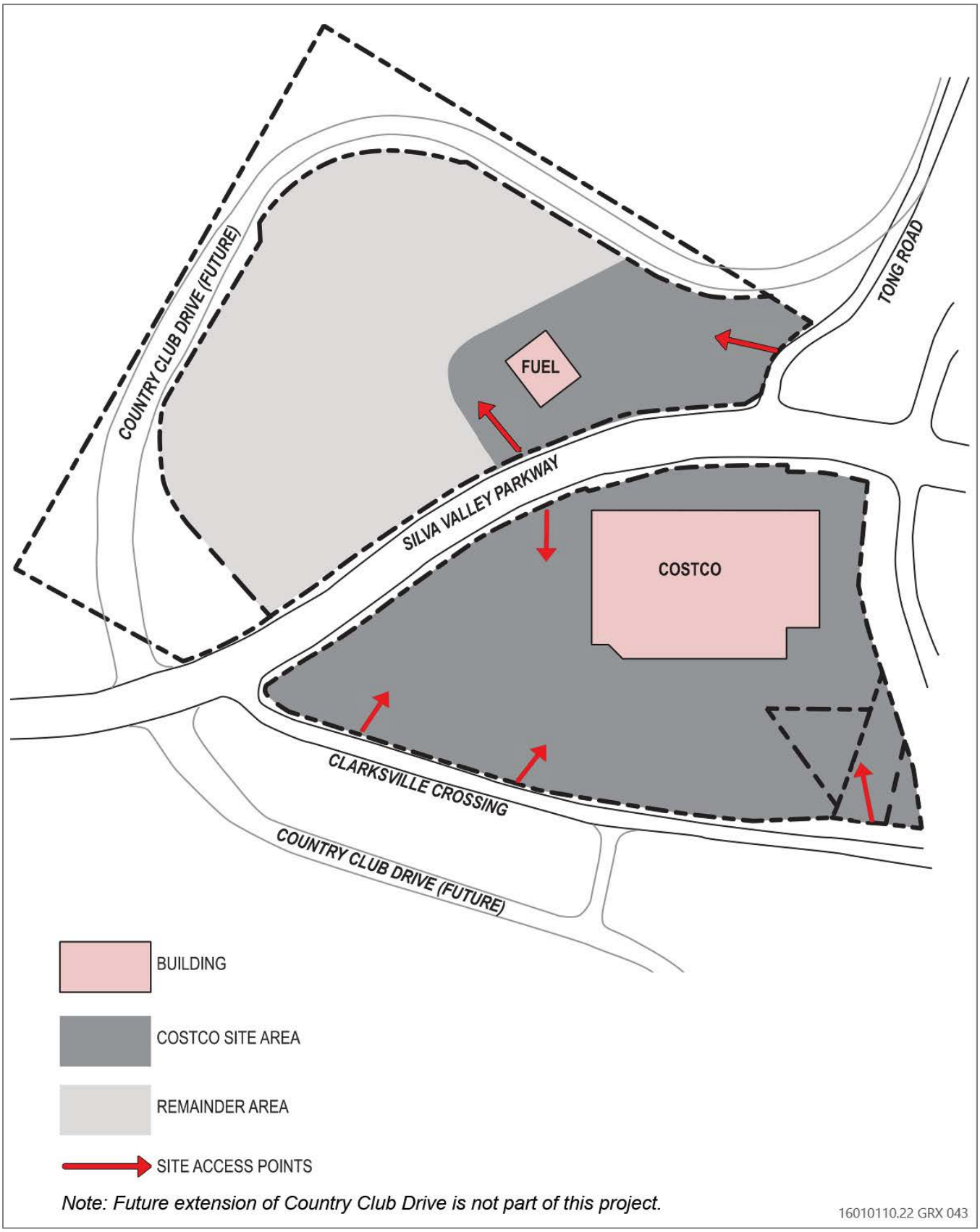
As identified in Section 3.16, "Utilities and Service Systems," the project would result in less-than-significant impacts associated with water supply service, wastewater service, and solid waste service. This alternative comprises the same land uses of the similar intensity and future development of the remainder area as the project. The Flipped Costco Project Site Plan Alternative would have similar level of utility and service demand as the Costco project and future development of the North Site Remainder Area and would also not result in significant impacts. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar)*

WILDFIRE AND EVACUATION

The project would result in significant but mitigable wildfire hazard impacts that could occur under project construction activities. The Flipped Costco Project Site Plan Alternative would have similar level of construction related wildfire hazard as the project and could be mitigated similar to the project. Thus, impacts under the Flipped Costco Project Site Plan Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

5.4.4 Alternative 4: Relocation of Fuel Facility Alternative

Under Alternative 4, the proposed Costco warehouse retail building and associated site plan for the South Site would remain the same as with the proposed project. However, the proposed fuel facility design would remain as proposed, but would be sited further south on the North Site. Development on the North Site Remainder Area (not proposed for development under the Costco project) would consist of approximately 138,000 square feet of potential commercial uses and 316 employees like the proposed project. As shown in Figure 5-3, access to the North Site and South Site would include the project proposed signalized intersection on Silva Valley Parkway and other access points for the South Site, but would include a new access from Tong Road for the North Site that is not part of the proposed project.



Source: Image produced and provided by Urban Planning Partners, Inc. in 2025; adapted by Ascent in 2025.

Figure 5-3 Alternative 4: Relocation of the Fuel Facility Alternative

Grading activities for this alternative are estimated to require the movement of approximately 269,000 cubic yards of materials for the Costco and approximately 160,000 cubic yards for the North Site Remainder Area for a total of 429,000 cubic yards (Costco project and North Site Remainder Area would result in the movement of approximately 320,000 cubic yards of materials). All other aspects of the proposed project and its operations would be included in this alternative. This alternative would appear to meet the basic project objectives.

AESTHETICS

As identified in Section 3.1, "Aesthetics," the project would not result in significant aesthetic impacts associated with scenic vistas, scenic highways, visual character, or light and glare. Under this alternative, the visual character of the site as viewed from the Silva Valley Parkway corridor from Oak Meadow Elementary School to US 50, public trail facilities west of the project site, and the US 50 corridor would be nearly identical to that under the project because the Costco warehouse retail building and associated improvements on the South Site would be same and the fuel facility site on the North Site would be adjacent to the fuel facility location proposed by the project. The Relocation of the Fuel Facility Alternative would also have same light sources as compared to the project and a similar extent of illumination as shown in Figure 3.1-12. Thus, aesthetic impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

AIR QUALITY

As identified above, the significant but mitigable impacts from combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of ROG exceeding EDCAQMD thresholds. Project construction and operational-related emissions of TACs could result in significant but mitigable public health impacts. Project construction activities could also result in significant but mitigable impacts from NOA exposure. The Relocation of the Fuel Facility Alternative is anticipated to result in similar construction activities, but would result in higher air pollutant emissions associated with construction truck haul traffic movement of approximately 429,000 cubic yards of materials for both the Costco and South Site Remainder Area (the air quality impact analysis assumes that the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic). The overlap of Costco operational emissions and South Site Remainder Area construction emissions is anticipated to create a significant air quality impact for this alternative. Alternative operations and related air emissions, TACs, and exposure to NOAs would be generally similar due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. The fuel facility under this alternative would be located approximately over 600 feet from residences (closer to residents northeast of the North Site as compared to the project), and approximately 1,000 feet from Oak Meadow Elementary School and the Capital Korean Presbyterian Church, which is further than the fuel facility location for the proposed project from the school (737 feet). Thus, air quality impacts under the Relocation of the Fuel Facility Alternative would be greater than those that would occur with the project from construction emissions associated with hauling of materials, and would remain significant but mitigable. (*Greater*)

BIOLOGICAL RESOURCES

The project would result in significant but mitigable biological resource impacts associated with special-status plant species, special-status wildlife species, loss of riparian and sensitive habitat communities, wildlife movement, and wetlands. The Relocation of the Fuel Facility Alternative is anticipated to result in comparable biological resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

CULTURAL RESOURCES

As identified above, the project would result in significant but mitigable archaeological resource impacts and no impacts to human remains. The Relocation of the Fuel Facility Alternative is anticipated to result in comparable cultural resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

ENERGY

As identified in Section 3.5, "Energy," the project would result in less than significant energy use impacts. The Relocation of the Fuel Facility Alternative would consist of the same land uses and would have the same operational energy demands as the proposed project. Under this alternative, construction could involve the movement of approximately 429,000 cubic yards of materials during grading and thus would increase mobile energy use from construction truck traffic as compared to the proposed project (the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic). The Relocation of the Fuel Facility Alternative comprises the same land uses of the same intensity, the same remainder parcel area, and the same site accesses as the project with a different configuration of the fuel facility development and remainder area on the North Site. Travel patterns in the vicinity of the site as well as regional travel patterns for people traveling to and from the development would be similar to if not the same as those of the project. Therefore, this alternative would be expected to contribute an approximately equivalent amount of VMT and associated transportation energy use as the project (Kittelson & Associates 2025). This alternative would include the proposed Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, and therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. Thus, impacts under the Relocation of the Fuel Facility Alternative would be greater than those that would occur with the project due to construction energy use from materials hauling, but would remain less than significant. (*Greater)*

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

As identified above, the project would result in significant but mitigable impacts associated with paleontological resources. The Relocation of the Fuel Facility Alternative is anticipated to result in comparable ground disturbance impacts due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As identified in Section 3.7, "Greenhouse Gas Emission and Climate Change," the project would result in less than significant GHG impacts. The Relocation of the Fuel Facility Alternative would consist of the same land uses and would have the same operational GHG emissions as the proposed project. Under this alternative, construction could involve the movement of approximately 429,000 cubic yards of materials during grading and would increase GHG emissions from construction truck traffic as compared to the proposed project (the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic). The Relocation of the Fuel Facility Alternative comprises the same land uses of the same intensity, the same remainder parcel area, and the same site accesses as the Project with a different configuration of the fuel facility development and remainder area on the North Site. Travel patterns in the vicinity of the site as well as regional travel patterns for people traveling to and from the development would be similar to if not the same as

those of the project. Therefore, this alternative would be expected to contribute an approximately equivalent amount of VMT and associated mobile GHG emissions as the project (Kittelson & Associates 2025). This alternative would include the proposed Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, and therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. The project and this alternative would also be subject to Mitigation Measures 3.14-2a through 3.14-2c which further address VMT by employees by developing and implementing measures such as a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. Ultimately, this alternative is anticipated to have a similar GHG efficiency (GHG emissions per 1,000 square feet of development) as compared to the project. Thus, impacts under the Relocation of the Fuel Facility Alternative would be greater than those that would occur with the project from construction GHG emissions, but would remain less than significant. (*Greater)*

HAZARDS AND HAZARDOUS MATERIALS

The project would result in significant but mitigable hazard impacts related to identified multiple concrete structures (including a pit and trough) where potential dumping of hazardous materials may have occurred. In addition, construction of off-site roadway improvements may encounter unknown hazardous materials. The Relocation of the Fuel Facility Alternative is anticipated to result in comparable ground disturbance impacts and the need to address unknown hazardous materials due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

HYDROLOGY AND WATER QUALITY

As identified in Section 3.9, "Hydrology and Water Quality," the project would result in less-than-significant hydrology impacts to water quality, drainage, and flooding. Under the Relocation of the Fuel Facility Alternative, there would be a similar potential for construction-related or operational releases of sediment and contaminants into surface waters and associated changes in drainage conditions and flooding as compared to the project. The project-proposed detention basins for the South Site would be included in this alternative and the relocated fuel facility would include similar features in compliance with County water quality and drainage standards identified in Section 3.9, "Hydrology and Water Quality." Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project would remain less than significant. (*Similar*)

LAND USE AND PLANNING

As identified in Section 3.10, "Land Use and Planning," the project would not result in significant impacts that result in the physical division of an established community, or conflict with land use policy provisions that address environmental effects. This alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

NOISE AND VIBRATION

As described in Section 3.11, "Noise and Vibration," the project would result in significant but mitigable noise impacts associated with construction-generated noise. Future development of the North Site Remainder Area would generate short-term increases in vibration near existing sensitive receptors during construction. No significant traffic noise impacts were identified for the project. The Relocation of the Fuel Facility Alternative would have the same

construction and operational noise and vibration impacts as the proposed project due to the similar site layout, design, and uses. This alternative would also place projected operational noise sources from the fuel facility (see Figure 3.11-2 ad 3.11-3) further from residential receptors and the Oak Meadow Elementary School located adjacent to the North Site compared to the proposed project. This alternative is anticipated to generate a similar amount of daily trips and associated traffic noise as the proposed project (Kittelson & Associates 2025). Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would significant but mitigable. (*Similar*)

POPULATION AND HOUSING

As identified in Section 3.12, "Population and Housing," the project would not result in significant impacts associated with the displacement of substantial numbers of people or housing or induce substantial unplanned growth. The Flipped Costco Project Site Plan Alternative would also not result in the displacement of substantial numbers of people or housing or induce substantial unplanned growth. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

PUBLIC SERVICES AND RECREATION

As identified in Section 3.13, "Public Services and Recreation," the project would not result in significant impacts associated with fire protection services, law enforcement services, public schools, or park and recreation services that would trigger the need for new or altered facilities that would create impacts on the physical environment. The Relocation of the Fuel Facility Alternative would have the same level of fire protection and law enforcement service demand as the Costco project and future development of the North Site Remainder Area and would also not result in significant impacts that would trigger the need for new facilities that would create impacts on the physical environment. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar than those that would occur with the project and would remain less than significant. (*Similar*)

TRANSPORTATION

As identified above, the project would result in significant and unavoidable VMT impacts. This alternative comprises the same land uses of the similar intensity and future development of the remainder area as the project, with similar though adjusted site accesses, and with land uses in a slightly different configuration. The Relocation of the Fuel Facility Alternative comprises the same land uses of the same intensity, the same remainder parcel area, and the same site accesses as the Project with a different configuration of the fuel facility development and remainder area on the North Site. Travel patterns in the vicinity of the site as well as regional travel patterns for people traveling to and from the development would be similar to if not the same as those of the project. Therefore, this alternative would be expected to contribute an approximately equivalent amount of VMT as the project. (Kittelson & Associates 2025). The project and this alternative would also be subject to Mitigation Measures 3.14-2a through 3.14-2c which further address VMT by employees by developing and implementing measures such as a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain significant and unavoidable. (*Similar)*

TRIBAL CULTURAL RESOURCES

The project would result in significant but mitigable impacts associated with the accidental discovery of tribal cultural resources. The Relocation of the Fuel Facility Alternative is anticipated to result in comparable tribal cultural resource impacts due to the similar extent of site development and land as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would significant but mitigable. (*Similar*)

UTILITIES AND SERVICE SYSTEMS

As identified in Section 3.16, "Utilities and Service Systems," the project would result in less-than-significant impacts associated with water supply service, wastewater service, and solid waste service. This alternative comprises the same land uses of the similar intensity and future development of the remainder area as the project. The Relocation of the Fuel Facility Alternative would have the same level of utility and service demand as the Costco project and future development of the North Site Remainder Area and would also not result in significant impacts. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar)*

WILDFIRE AND EVACUATION

The project would result in significant but mitigable wildfire hazard impacts that could occur under project construction activities. The Relocation of the Fuel Facility Alternative would have similar level of construction related wildfire hazard as the project and could be mitigated similar to the project. Thus, impacts under the Relocation of the Fuel Facility Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

5.4.5 Alternative 5: Offsite Alternative

This alternative would relocate the proposed Costco warehouse retail building and fuel facility to the northern portion of the El Dorado Hill Business Park that is located in the El Dorado Hills community south of US 50 along Latrobe Road on approximately 25 acres consisting of Assessor Parcel Numbers 117-180-001, 117-180-002, and 117-180-026 that is not currently owned by Costco. This site is zoned Research and Development and would allow the proposed Costco warehouse retail building and fuel facility subject to the approval of a conditional use permit under County Code Section 130.23.020. As shown in Figure 5-4, the Offsite Alternative would locate both the Costco warehouse retail building and fuel facility along the frontage of Latrobe Road. It would obtain access through modification of the approved signalized intersection associated with the approved Montano De El Dorado Phase I and II Master Plan, as well as from Golden Foothill Parkway to the south of the site and Windfield Way to the west of the site (El Dorado County 2020). This alternative would not include a remainder development area as compared to the North Site Remainder Area under the proposed project and would not require annexation to the El Dorado Irrigation District or El Dorado Hills Fire Department service areas. All other aspects of the proposed project and its operations would be included in this alternative. This alternative would appear to meet the basic project objectives, but may be infeasible given that Costco does not own or control the site. Note that while this analysis focuses on the impacts of developing the Costco project elements at the off-site location, development of the project site may still take place, similar to the scenario explored under Alternative 2.

AIR QUALITY

As identified above, the significant but mitigable impacts from combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of ROG exceeding EDCAQMD thresholds. Project construction and operational-related emissions of TACs could result in significant but mitigable public health impacts. Project construction activities could also result in significant but mitigable impacts from NOA exposure. The Offsite Alternative would not include the construction of a remainder area and would avoid construction emissions identified for the project associated with the North Site Remainder Area. which anticipated to result in similar construction activities but would result in higher air pollutant emissions. This alternative would create extra travel distance for most trips and would be expected to increase the VMT contributed to the region as compared to the project and associated mobile air pollutant emissions (Kittelson & Associates 2025). The Offsite Alternative is anticipated to result in comparable TACs impacts due to the similar extent of site development as the project. The fuel facility under this alternative would be located approximately 700 feet from residences east of the site and approximately 3,000 feet from Golden Hills School south of the site.



Source: Image produced by Ascent in 2025.

Figure 5-4 Alternative 5: Offsite Alternative

The Offsite Alternative would be located outside of areas identified as likely having NOA and would avoid this project impact. Thus, overall impacts under the Offsite Alternative would be less than those that would occur with the project through the reduced construction emissions and avoidance of NOA exposure and would remain less than significant. (*Less*)

BIOLOGICAL RESOURCES

The project would result in significant but mitigable biological resource impacts associated with special-status plant species, special-status wildlife species, loss of riparian and sensitive habitat communities, wildlife movement, and wetlands. Based on review of the Montano De El Dorado Phase I and II Master Plan Draft EIR (this approved project site is east of the Offsite Alternative site along Latrobe Road), this alternative would also result in potential impacts to resources that occur in the area that include special-status plant species, special-status wildlife species, nesting bird species and raptors, loss of riparian and sensitive habitat communities, wildlife movement, and wetlands as surface water features exist on this site (El Dorado County 2020). Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

CULTURAL RESOURCES

As identified above, the project would result in significant but mitigable archaeological resource impacts and no impacts to human remains. The Offsite Alternative is anticipated to result in comparable cultural resource impacts to undiscovered resources due to the similar extent of land disturbance as the Costco project. Thus, impacts under Offsite Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

ENERGY

As identified in Section 3.5, "Energy," the project would result in less than significant energy use impacts. The Offsite Alternative would consist of the same land uses and would likely have similar construction and operational energy demands as the proposed Costco project, but would not include construction and operational energy use from future development of the North Site Remainder Area under the project. This alternative would create extra travel distance for most trips and would be expected to increase the VMT contributed to the region as compared to the project and associated transportation energy use (Kittelson & Associates 2025). This alternative would include the proposed Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. Thus, impacts under the Offsite Alternative would overall be greater than those that would occur with the project associated with transportation energy use and would remain less than significant. (*Greater)*

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

As identified above, the project would result in significant but mitigable impacts associated with paleontological resources. The Offsite Alternative is anticipated to result in comparable ground disturbance and paleontological resource impacts due to the similar extent of site development as the project. Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As identified in Section 3.7, "Greenhouse Gas Emission and Climate Change," the project would result in less than significant GHG impacts. The Offsite Alternative would consist of the same land uses and would likely have similar construction and operational GHG emissions as the proposed Costco project, but would not include construction and operational GHG emissions from future development of the North Site Remainder Area under the project. This alternative would create extra travel distance for most trips and would be expected to increase the VMT contributed to the region as compared to the project and associated mobile GHG emissions as the Costco element of the project (Kittelson & Associates 2025). This alternative would include the proposed Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. The project and this alternative would also be subject to Mitigation Measures 3.14-2a through 3.14-2c which further address VMT by employees by developing and implementing measures such as a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. Ultimately, this alternative is anticipated to have a worse GHG efficiency (GHG emissions per 1,000 square feet of development) as compared to the project and could result in a significant GHG impact that could be mitigated through additional design features or purchase of offsets. Thus, impacts under the Offsite Alternative would be greater than those that would occur with the project due to the increased GHG emissions from mobile sources. (*Greater)*

HAZARDS AND HAZARDOUS MATERIALS

The project would result in significant but mitigable hazard impacts related to identified multiple concrete structures (including a pit and trough) where potential for dumping of hazardous materials may have occurred. In addition, construction of off-site roadway improvements may encounter unknown hazardous materials. The Offsite Alternative is anticipated to result in comparable ground disturbance impacts and could discover unknown hazardous materials on the site to a similar extent as the Costco project. Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

HYDROLOGY AND WATER QUALITY

As identified in Section 3.9, "Hydrology and Water Quality," the project would result in less-than-significant hydrology and water quality impacts associated with groundwater resources, water quality, drainage, and flooding. Under the Offsite Alternative, there would be a similar potential for construction-related or operational releases of sediment and contaminants into surface waters and associated changes in drainage conditions and flooding as compared to the project. This alternative would be subject to County water quality and drainage standards identified in Section 3.9, "Hydrology and Water Quality." Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

LAND USE AND PLANNING

As identified in Section 3.10, "Land Use and Planning," the project would not result in significant impacts that result in the physical division of an established community, or conflict with land use policy provisions that address environmental effects. This alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

NOISE AND VIBRATION

As described in Section 3.11, "Noise and Vibration," the project would result in significant but mitigable noise impacts associated with construction-generated noise. No significant traffic noise impacts were identified for the project. The Offsite Alternative is anticipated to result in comparable construction- and operation-related noise impacts due to the similar extent of site development and operations as a Costco warehouse retail building and fuel facility and its location relative to residential uses to east (approximately 700 feet). Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

POPULATION AND HOUSING

As identified in Section 3.12, "Population and Housing," the project would not result in significant impacts associated with the displacement of substantial numbers of people or housing or induce substantial unplanned growth. The Offsite Alternative would also not result in the displacement of substantial numbers of people or housing or induce substantial unplanned growth. Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

PUBLIC SERVICES AND RECREATION

As identified in Section 3.13, "Public Services and Recreation," the project would not result in significant impacts associated with fire protection services, law enforcement services, public schools, or park and recreation services that would trigger the need for new or altered facilities that would create impacts on the physical environment. The Offsite Alternative would have similar level of fire protection and law enforcement service demands (like the project this alternative would receive services from El Dorado Hills Fire Department and El Dorado County Sheriff's Office) as the Costco project, as it would consist of the same land uses, and would also not result in significant impacts that would trigger the need for new facilities that would create impacts on the physical environment. However, this alternative would not include future development of a remainder area that would occur under the project that would also require public services. Thus, impacts under the Offsite Alternative would be less than those that would occur with the project and would remain less than significant. (*Less*)

TRANSPORTATION

As identified above, the project would result in significant and unavoidable VMT impacts. This alternative would create extra travel distance for most trips and would be expected to increase the VMT contributed to the region as compared to the project (Kittelson & Associates 2025). The project and this alternative would also be subject to Mitigation Measures 3.14-2a through 3.14-2c which further address VMT by employees by developing and implementing measures such as a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. Thus, impacts under the Offsite Alternative would be greater than those that would occur with the project and would remain significant and unavoidable. (*Greater*)

TRIBAL CULTURAL RESOURCES

The project would result in significant but mitigable impacts associated with the accidental discovery of tribal cultural resources. The Offsite Alternative is anticipated to result in comparable tribal cultural resource impacts due to the similar extent of site development and land disturbance as the Costco project. Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

UTILITIES AND SERVICE SYSTEMS

As identified in Section 3.16, "Utilities and Service Systems," the project would result in less-than-significant impacts associated with water supply service, wastewater service, and solid waste service. This alternative comprises the same land uses as the Costco project and would obtain services from El Dorado Irrigation District (water and wastewater services) and El Dorado Hills Community Services District (solid waste disposal). The Offsite Alternative would have the same level of utility and service demand as the Costco project and would also not result in significant impacts. However, this alternative would not include future development of a remainder area that would occur under the project that would also require utility services. Thus, impacts under the Offsite Alternative would be less than those that would occur with the project and would remain less than significant. (*Less)*

WILDFIRE AND EVACUATION

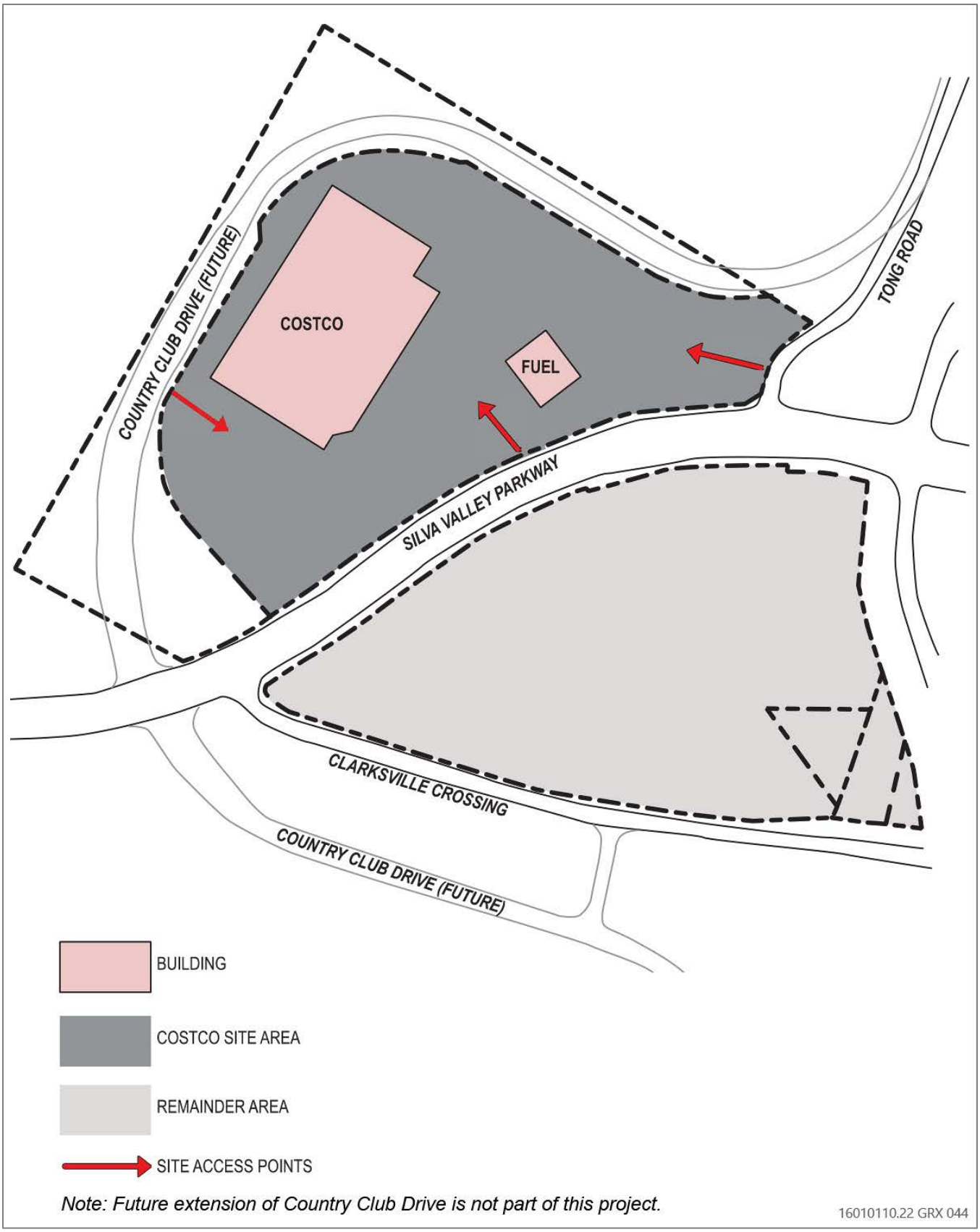
The project would result in significant but mitigable wildfire hazard impacts that could occur under project construction activities. The Offsite Alternative would have similar level of construction related wildfire hazard as the project and could be mitigated similar to the Costo project. Thus, impacts under the Offsite Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

5.4.6 Alternative 6: Costo Project on North Site Alternative

As shown in Figure 5-5, **t**his alternative would involve the relocation of the Costco warehouse retail building and fuel facility to the North Site. The Costco warehouse retail building would be reduced to approximately 152,000 square feet and would involve the construction of structured parking for a total of 646 parking spaces. The proposed fuel facility would remain the same size (3.29 acres consisting of steel canopy structure of approximately 13,000 square feet, covering four fueling bays with four two-sided bays with four two-sided dispensers each [32 fueling positions total]) but located in the southern portion of the North Site. Grading activities for this alternative would require the movement of approximately 414,000 cubic yards of materials for the Costco and approximately 160,000 cubic yards for the South Site Remainder Area for a total of 574,000 cubic yards (Costco project and North Site Remainder Area would result in the movement of approximately 320,000 cubic yards of materials). As shown in Figure 5-5, access to the North Site would be similar to the project, but would include a new access from Tong Road for the North Site that is not part of the proposed project. All other aspects of the proposed project and its operations would be included in this alternative. The South Site would not be developed under the Costco project and its future commercial development potential would be approximately 170,818 square feet of GFA. This alternative would appear to meet the basic project objectives.

AESTHETICS

As identified in Section 3.1, "Aesthetics," the project would not result in significant aesthetic impacts associated with scenic vistas, scenic highways, visual character, or light and glare. Based on comparison of Figure 5-5to the proposed Costco project visual simulations shown in Figures 3.1-7 through 3.1-11, the Costco Project on North Site Alternative would result in the Costco warehouse retail building as well as the fuel facility becoming more visually prominent feature than the proposed project site design specifically from public views from the public trail west of the site, views along Silva Valley Parkway, and from Oak Meadow Elementary School (views of the fuel facility would be largely blocked by the Costco warehouse retail building from this view). This is due to the difference in topography and surrounding vegetation of the North Site as compared to the South Site. The South Site would also have future development that would alter the character of the area.



Source: Image produced and provided by Urban Planning Partners, Inc. in 2025; adapted by Ascent in 2025.

Figure 5-5 Alternative 6: Costco Project on North Site Alternative

The overall visual character of the site under this alternative would be similar to the existing urban and suburban areas of the El Dorado Hills community located along the US 50 corridor from the Sacramento/El Dorado County boundary to the Silva Valley Parkway/US 50 interchange that includes large-scale commercial development visible along the US 50 corridor such as the Town Center and the Raley's shopping center. The Costco Project on North Site Alternative would also have similar light sources as compared to the project and would be subject to Title 130, Chapter 130.34 (Outdoor Lighting) of County Code, which requires that outdoor lighting be located, shielded, and directed such that no direct light falls outside the property line or into the public right-of-way. Impacts under the Costco Project on North Site Alternative would be greater than those that would occur with the project associated with public views from the public trail west of the site, views along Silva Valley Parkway, and from Oak Meadow Elementary School, but would remain less than significant. (*Greater*)

AIR QUALITY

As identified above, the significant but mitigable impacts from combined emissions related to construction of the North Site Remainder Area and the operation of the Costco project would result in levels of ROG exceeding EDCAQMD thresholds. Project construction and operational-related emissions of TACs could result in significant but mitigable public health impacts. Project construction activities could also result in significant but mitigable impacts from NOA exposure. The Costco Project on North Site Alternative is anticipated to result in similar construction activities, but would result in higher air pollutant emissions associated with construction truck haul traffic movement of approximately 574,000 cubic yards of materials for both the Costco and South Site Remainder Area (the air quality impact analysis assumes that the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic). The overlap of Costco operational emissions and South Site Remainder Area construction emissions is anticipated to create a significant air quality impact for this alternative. Alternative operations and related air emissions, TACs, and exposure to NOAs would be similar due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. The fuel facility under this alternative would be located approximately over 600 feet from residences, and approximately 1,000 feet from Oak Meadow Elementary School and the Capital Korean Presbyterian Church, which is further than the fuel facility location for the proposed project from the school (737 feet). However, this alternative would be expected to contribute more VMT to the region given this alternative's increase in development size compared to the project that would result in greater operational air emissions. Thus, air quality impacts under the Costco Project on North Site Alternative would be greater than those that would occur with the project due to construction emissions from materials hauling and operational VMT, but would remain significant but mitigable. (*Greater*)

BIOLOGICAL RESOURCES

The project would result in significant but mitigable biological resource impacts associated with special-status plant species, special-status wildlife species, loss of riparian and sensitive habitat communities, wildlife movement, and wetlands. The Costco Project on North Site Alternative is anticipated to result in comparable biological resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Costco Project on North Site Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

CULTURAL RESOURCES

As identified above, the project would result in significant but mitigable archaeological resource impacts and no impacts to human remains. The Costco Project on North Site Alternative is anticipated to result in comparable cultural resource impacts due to the similar extent of site development and land disturbance as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Costco Project on North Site Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

ENERGY

As identified in Section 3.5, "Energy," the project would result in less than significant energy use impacts. The Costco Project on North Site Alternative would result in slightly less development potential for the Costco component than the proposed Costco project associated with the reduced warehouse retail building size (152,000 square feet as compared to 165,000 square feet), but would have increased energy demands based on the future commercial development potential of the South Site Remainder Area (170,818 square feet of GFA). Under this alternative, construction activities associated with the Costco and South Site Remainder Area could involve the movement of approximately 574,000 cubic yards of materials during grading, which would increase mobile energy use from construction truck traffic as compared to the proposed project (the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic). The Costco Project on North Site Alternative would be expected to generate more daily vehicle trips than the proposed project since this alternative entails development of the same Costco project land uses and a larger future commercial development on the South Site Remainder Area. Travel patterns in the vicinity of the site and regional travel patterns for people traveling to and from the development would be similar to the project. However, with greater total trips generated by this alternative relative to the project, the Costco Project on North Site Alternative would be expected to contribute more VMT to the region than the project and associated transportation energy use as compared to the project. (Kittelson & Associates 2025). This alternative would include the proposed Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, and therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. Thus, impacts under the Costco Project on North Site Alternative would be greater than those that would occur with the project due to construction energy use from materials hauling and operational VMT, but would remain less than significant. (*Greater)*

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

As identified above, the project would result in significant but mitigable impacts associated with paleontological resources. The Costco Project on North Site Alternative is anticipated to result in comparable ground disturbance impacts due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Costco Project on North Site Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As identified in Section 3.7, "Greenhouse Gas Emission and Climate Change," the project would result in less than significant GHG impacts. The Costco Project on North Site Alternative would result in slightly less development potential for the Costco component than the proposed Costco project associated with the reduced warehouse retail building size (152,000 square feet as compared to 165,000 square feet), but would have increased energy demands based on the future commercial development potential of the South Site Remainder Area (170,818 square feet of GFA). Under this alternative, construction activities could involve the movement of approximately 574,000 cubic yards of materials during grading would increase GHG emissions from construction truck traffic as compared to the proposed project (the proposed Costco project and North Site Remainder Area would move approximately 320,000 cubic yards of material during construction that would involve construction truck traffic). The Costco Project on North Site Alternative would be expected to generate more daily vehicle trips than the proposed project since this alternative entails development of the same Costco project land uses and a larger future commercial development on the South Site Remainder Area. Travel patterns in the vicinity of the site and regional travel patterns for people traveling to and from the development would be similar to the project. However, with greater total trips generated by

this alternative relative to the project, the Costco Project on North Site Alternative would be expected to contribute more VMT to the region than the project and associated mobile source GHG emissions as the project (Kittelson & Associates 2025). This alternative would include the proposed Costco project's design features that address energy efficiency and prevent the wasteful or inefficient use of energy for building operations, including use of energy-efficient LED lighting, water-efficient landscaping, high-efficiency water fixtures, HVAC systems controlled by a computerized building management system to maximize efficiency, 10 EV DC fast chargers, and gas water heaters that would be direct-vent and 94 percent efficient or greater. Additionally, Costco has a Clean Energy Contract with PG&E, and therefore all electricity consumed by the Costco project including the EV chargers would be 100 percent renewable electrical power. The project and this alternative would also be subject to Mitigation Measures 3.14-2a through 3.14-2c which further address VMT by employees by developing and implementing measures such as a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. Ultimately, this alternative is anticipated to have a similar GHG efficiency (GHG emissions per 1,000 square feet of development) as compared to the project. Thus, impacts under the Costco Project on North Site Alternative would be greater than those that would occur with the project due to construction GHG emissions from materials hauling, but would remain less than significant. (*Greater)*

HAZARDS AND HAZARDOUS MATERIALS

The project would result in significant but mitigable hazard impacts related to identified multiple concrete structures (including a pit and trough) where potential for dumping of hazardous materials may have occurred. In addition, construction of off-site roadway improvements may encounter unknown hazardous materials. Costco Project on North Site Alternative is anticipated to result in comparable ground disturbance impacts and the need to address unknown hazardous materials due to the similar extent of site development as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Costco Project on North Site Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

HYDROLOGY AND WATER QUALITY

As identified in Section 3.9, "Hydrology and Water Quality," the project would result in less-than-significant hydrology impacts to water quality, drainage, and flooding. Under the Costco Project on North Site Alternative, there would be a similar potential for construction-related or operational releases of sediment and contaminants into surface waters and associated changes in drainage conditions and flooding as compared to the project. The detention basins would likely be included in this alternative in compliance with County water quality and drainage standards identified in Section 3.9, "Hydrology and Water Quality." Thus, hydrology and water quality impacts under the Costco Project on North Site Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

LAND USE AND PLANNING

As identified in Section 3.10, "Land Use and Planning," the project would not result in significant impacts that result in the physical division of an established community, or conflict with land use policy provisions that address environmental effects. This alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect. Thus, land use impacts under the Costco Project on North Site Alternative would be similar to those that would occur with the project and would remain less than significant. (*Similar*)

NOISE AND VIBRATION

As identified in section 3.11, the project would result in significant but mitigable noise impacts associated with construction-generated noise. Future development of the North Site Remainder Area would generate short-term increases in vibration near existing sensitive receptors during construction. No significant traffic noise impacts were

identified for the project. The Costco Project on North Site Alternative would place construction of the Costco warehouse retail building closer to sensitive receptors and the Oak Meadow Elementary School located adjacent to the North Site than the proposed project. This would likely result in greater construction noise impacts during the daytime and nighttime (i.e., concrete pour) than would occur under the proposed project. This alternative would also place projected operational noise sources from the Costco warehouse retail building (see Figure 3.11-2 and 3.11-3) approximately within 140 feet to residential receptors and the Oak Meadow Elementary School. Based on the stationary noise impact analysis under Impact 3.11-3, this could result in a 3 to 6 dB increase in existing noise conditions that would be noticeable to these receptors and exceed County noise standards resulting in a significant impact and would require noise mitigation (anticipated to be noise barriers). This alternative is anticipated to generate more daily trips and associated traffic noise as compared to the proposed project (Kittelson & Associates 2025). Thus, impacts under the Costco Project on North Site Alternative would be greater than those that would occur with the project, but would be significant but mitigable. (*Greater*)

POPULATION AND HOUSING

As identified in Section 3.12, "Population and Housing," the project would not result in significant impacts associated with the displacement of substantial numbers of people or housing or induce substantial unplanned growth. The Costco Project on North Site Alternative would also not result in the displacement of substantial numbers of people or housing or induce substantial unplanned growth. Thus, impacts under the Costco Project on North Site Alternative would be similar than those that would occur with the project and would remain less than significant. (*Similar*)

PUBLIC SERVICES AND RECREATION

As identified in Section 3.13, "Public Services and Recreation," the project would not result in significant impacts associated with fire protection services, law enforcement services, public schools, or park and recreation services that would trigger the need for new or altered facilities that would create impacts on the physical environment. This alternative would increase in commercial development potential that could increase public service demands over the project, but would not result in significant impacts that would trigger the need for new facilities that would create impacts on the physical environment. Thus, impacts under the Costco Project on North Site Alternative would be greater than those that would occur with the project and would remain less than significant. (*Greater*)

TRANSPORTATION

As identified above, the project would result in significant and unavoidable VMT impacts. The Costco Project on North Site Alternative would be expected to generate more daily vehicle trips than the proposed project since this alternative entails development of the same Costco project land uses and a larger future commercial development on the South Site Remainder Area. Travel patterns in the vicinity of the site and regional travel patterns for people traveling to and from the development would be similar to the project. However, with greater total trips generated by this alternative relative to the project, the Costco Project on North Site Alternative would be expected to contribute more VMT to the region than the project (Kittelson & Associates 2025). The project and this alternative would also be subject to Mitigation Measures 3.14-2a through 3.14-2c which further address VMT by employees by developing and implementing measures such as a ridesharing program for employees, on-site end-of-trip bicycle facilities, and pedestrian network improvements in the vicinity of the project site. Thus, impacts under the Costco Project on North Site Alternative would be greater than those that would occur with the project, and would remain significant and unavoidable. (*Greater)*

TRIBAL CULTURAL RESOURCES

The project would result in significant but mitigable impacts associated with the accidental discovery of tribal cultural resources. The Costco Project on North Site Alternative is anticipated to result in comparable tribal cultural resource impacts due to the similar extent of site development and land as the Costco project and future development of the North Site Remainder Area. Thus, impacts under the Costco Project on North Site Alternative would be similar to those that would occur with the project and would remain significant but mitigable. (*Similar*)

UTILITIES AND SERVICE SYSTEMS

As identified in Section 3.16, "Utilities and Service Systems," the project would result in less-than-significant impacts associated with water supply service, wastewater service, and solid waste service. The Costco Project on North Site Alternative could result in more development potential associated with the commercial development potential of the South Site Remainder Area (170,818 square feet of GFA). This increase in commercial development potential could increase utility service demands over the project by approximately 20.5 EDUs for water service, approximately 20.6 EDUs for wastewater service, and 0.6 tons per day of solid waste service. Thus, impacts under the Costco Project on North Site Alternative would be greater than those that would occur with the project, but would remain less than significant. (*Greater*)

WILDFIRE AND EVACUATION

The project would result in significant but mitigable wildfire hazard impacts that could occur under project construction activities. The Costco Project on North Site Alternative would have similar level of construction related wildfire hazard as the project and could be mitigated similar to the project. Thus, impacts under Costco Project on North Site Alternative would be similar to those that would occur with the project. (*Similar*)

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Because the No Project–No Development Alternative would avoid all adverse impacts resulting from construction and operation of the project analyzed in Chapter 3, it is the environmentally superior alternative. However, the No Project–No Development Alternative would not meet the objectives the project as presented above.

When the environmentally superior alternative is the No Project Alternative, the State CEQA Guidelines (Section 15126[d][2]) require selection of an environmentally superior alternative from among the other action alternatives evaluated. As illustrated in Table 5-1, the Offsite Alternative (Alternative 5) would result in reduced impacts associated with air quality, public services, and utilities than the project, but would have greater impacts than the project for energy, GHG, and transportation. Thus, the Offsite Alternative would be the environmentally superior alternative of the alternatives evaluated.

Table 5-1 Summary of Environmental Effects of the Alternatives Relative to the Proposed Project

Environmental Topic	Proposed Project Impact Summary	Alternative 1 No Project – No Development Alternative	Alternative 2 No Project – Development Consistent With General Plan and Zoning Alternative	Alternative 3 Flipped Costco Project Site Plan Alternative	Alternative 4 Relocation of Fuel Facility Alternative	Alternative 5 Offsite Alternative	Alternative 6 Costco Project on North Site Alternative
Aesthetics	Less than significant	Less	Similar	Greater	Similar	Similar	Greater
Air Quality	Less than significant (with mitigation)	Less	Less	Greater	Greater	Less	Greater
Biological Resources	Less than significant (with mitigation)	Less	Similar	Similar	Similar	Similar	Similar
Cultural Resources	Less than significant (with mitigation)	Less	Similar	Similar	Similar	Similar	Similar
Energy	Less than significant	Less	Less	Greater	Greater	Greater	Greater
Geology, Soils, and Paleontological Resources	Less than significant (with mitigation)	Less	Similar	Similar	Similar	Similar	Similar
Greenhouse Gas Emissions and Climate Change	Less than significant	Less	Similar	Greater	Greater	Greater	Greater

Environmental Topic	Proposed Project Impact Summary	Alternative 1 No Project – No Development Alternative	Alternative 2 No Project – Development Consistent With General Plan and Zoning Alternative	Alternative 3 Flipped Costco Project Site Plan Alternative	Alternative 4 Relocation of Fuel Facility Alternative	Alternative 5 Offsite Alternative	Alternative 6 Costco Project on North Site Alternative
Hazards and Hazardous Materials	Less than significant (with mitigation)	Less	Similar	Similar	Similar	Similar	Similar
Hydrology and Water Quality	Less than significant	Less	Similar	Similar	Similar	Similar	Similar
Land Use and Planning	Less than significant	Less	Similar	Similar	Similar	Similar	Similar
Noise and Vibration	Less than significant (with mitigation)	Less	Greater	Greater	Similar	Similar	Greater
Population and Housing	Less than significant	Less	Similar	Similar	Similar	Similar	Similar
Public Services and Recreation	Less than significant	Less	Greater	Similar	Similar	Less	Greater
Transportation	Significant and unavoidable (VMT impacts only)	Less	Less	Similar	Similar	Greater	Greater
Tribal Cultural Resources	Less than significant (with mitigation)	Less	Similar	Similar	Similar	Similar	Similar
Utilities and Service Systems	Less than significant	Less	Greater	Similar	Similar	Less	Greater
Wildfire and Evacuation	Less than significant (with mitigation)	Less	Similar	Similar	Similar	Similar	Similar

6 OTHER CEQA SECTIONS

6.1 GROWTH INDUCEMENT

California Environmental Quality Act (CEQA) Section 21100(b)(5) specifies that the growth-inducing impacts of a project must be addressed in an environmental impact report (EIR). Section 15126.2(d) of the State CEQA Guidelines provides the following guidance for assessing growth-inducing impacts of a project:

> *Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

A project can induce growth directly, indirectly, or both. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may foreseeably lead to environmental effects. If substantial growth inducement occurs, it can result in secondary environmental effects, such as increased demand for housing, demand for other community and public services and infrastructure capacity, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open-space land to urban uses, and other effects.

6.1.1 Summary of Growth-Inducing Impacts

As stated above, a project is considered growth-inducing if it would directly or indirectly foster substantial economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding element. Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are only sparsely developed or are underdeveloped. Typically, development projects on sites that are designated for development and surrounded by existing suburban uses are not considered growth-inducing.

6.1.2 Growth-Inducing Impacts of the Project

Implementation of the proposed project would construct commercial uses (Costco project and future development of the North Site Remainder Area[1]) to serve the existing population in El Dorado Hills and the surrounding unincorporated area of the county and would not directly result in an increase in population within the unincorporated county. The project site is surrounded by suburban development in El Dorado Hills. Additionally, this development is consistent with the type of development the General Plan anticipates at the project site. Operation of both the Costco project and future commercial uses of the North Site Remainder Area are estimated to generate approximately 616 new jobs in the El Dorado Hills Community Plan area. As described in Section 3.12, "Population and Housing," this extent of employment growth has been anticipated based on the project site General Plan land use designations and zoning, as well as projected within the 1,389 new jobs expected to be created in the El Dorado Hills Community Region by 2045 (BAE 2025). The General Plan and the environmental impact analysis provided in its EIR was based on future land use forecast of 25,323 jobs in the El Dorado Hills area (EPS 2002). This rate of job growth would not induce new population or housing growth that is not anticipated by the County.

Development of the proposed project would include connections and installation of utilities and infrastructure (water, sewer, and roadways) to serve the Costco project. The infrastructure improvements would not encourage growth in these adjacent areas, as they are already developed with suburban uses. Therefore, it is not expected that the project would induce growth.

GROWTH-INDUCING EFFECTS OF CONSTRUCTION

Construction activities associated with the proposed Costco project and future development of the North Site Remainder Area would be temporary and intermittent, with construction of the Costco project currently anticipated to be completed in 2027. The timeline of construction of the North Site Remainder Area is currently not known but is presently presumed to start in 2027 and be completed by 2028. Therefore, construction activities would not result in long-term increases in employment. In addition, construction workers would come from nearby population centers (e.g., Cities of Folsom, Rancho Cordova, Elk Grove, and Sacramento) and would not create a need for housing. For these reasons, substantial population growth or increases in housing demand in the region as a result of these construction jobs are not anticipated. Therefore, the project would not directly induce population growth by bringing substantial numbers of construction jobs to the area or result in associated increases in demand for housing or goods and services.

6.2 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

The State CEQA Guidelines Section 15126.2(b) requires EIRs to include a discussion of the significant environmental effects that cannot be avoided if the proposed project is implemented. As documented throughout Chapter 3 (project level impacts) and Chapter 4, "Cumulative Impacts," of this Draft EIR, after implementation of the recommended mitigation measures, most of the impacts associated with the proposed project would be reduced to a less-than-significant level. The following impacts are considered significant and unavoidable; that is, no feasible mitigation is available to reduce the project's impacts to a less-than-significant level.

- Impact 3.14-2 and 4-14: The Costco project would result in a net increase of 21,123 daily VMT when compared to existing conditions, and development of the North Site Remainder Area would result in 11,462 VMT. Thus, implementation of the project and development of the North Site Remainder Area would exceed the threshold of no net increase in regional VMT. Implementation of identified mitigation measures would assist to reduce the extent of VMT impacts. However, it is not possible to determine if VMT associated with future commercial development of the Costo project and the North Site Remainder Area would be reduced below the County's threshold under project and cumulative conditions.

[1] While the Costco project (including annexation for fire protection, water, and sewer services) could induce development of the North Site Remainder Area development of that area has been analyzed throughout the Draft EIR as part of the project.

6.3 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the project. Specifically, the State CEQA Guidelines section 15126.2(c) states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or non-use thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generation to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

The project would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- construction materials, including such resources as soil, rocks, wood, concrete, glass, and steel;
- land area committed to the new Costco facilities and future development in the north site Remainder Area; and
- energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

The use of these nonrenewable resources is expected to account for a minimal portion of the region's resources and would not affect the availability of these resources for other needs within the region. Construction activities would not result in inefficient use of energy or natural resources. Construction contractors would be required to comply with emissions control measures applicable to the project. Long-term project operation would not result in substantial increase in consumption of energy and natural resources. See Section 3.5, "Energy," of this EIR for further discussion.

With respect to operational activities, compliance with all applicable building codes, as well as project mitigation measures, would require that natural resources be conserved or recycled to the maximum extent feasible. Nonetheless, a long-term increase in the demand for electricity, natural gas, and water would occur. However, as discussed in Section 3.5, "Energy," the project would not involve a wasteful or unjustifiable use of energy or other resources, and energy conservation efforts would also occur with the proposed construction and operation of the project. Therefore, the use of energy on site would occur in an efficient manner.

6.4 ECONOMIC IMPACT AND URBAN DECAY ANALYSIS

Urban decay is defined as the visible and lasting physical deterioration of buildings and property that is substantial in extent and results from prolonged commercial vacancies, business closures, or the long-term underutilization of commercial sites. Such deterioration may contribute to conditions that discourage investment and maintenance of properties and structures and may result in indirect secondary effects such as increased vandalism, loitering, graffiti, and unauthorized uses. When these conditions are pervasive and sustained over time, they may impair the beneficial use of properties and adversely affect the health, safety, and general welfare of the surrounding community.

Observable indicators of urban decay may include, but are not limited to: boarded-up or broken doors and windows; abandoned or inoperative vehicles or trailers; extensive graffiti, including gang-related or offensive markings; accumulation of refuse or illegal dumping; damaged or overturned waste containers; broken parking lot barriers or infrastructure; scattered broken glass; deteriorated landscaping, including dead vegetation or overgrown weeds; prolonged lack of building maintenance; makeshift encampments associated with housing insecurity; and visibly dilapidated or non-functional fencing.

An Urban Decay Analysis Study (study) was prepared for the project. The study was prepared to assess the economic impacts of the Costco warehouse and fueling facility. This study estimates the extent to which the opening of the Costco warehouse and fueling facility, and other cumulative retail projects, may or may not contribute to urban decay in the market area resulting from potential store closures attributable to existing retailer sales diversions. A summary of the study and its findings are presented in the section below. The complete study is included as Appendix M in this

Draft EIR (ALH Urban and Regional Economics 2025). This study was independently peer reviewed by the County's consultant (Goodwin Consulting Group) and concurred with the conclusions of the analysis (Goodwin Consulting Group 2025).

6.4.1 Consideration of Socioeconomic Impacts

The State CEQA Guidelines define the parameters under which the consideration of socioeconomic impacts is included in an environmental evaluation. State CEQA Guidelines Section 15131 states that "economic or social information may be included in an EIR or may be presented in whatever form the agency desires." Further, State CEQA Guidelines Section 15131(a) states that "economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes." State CEQA Guidelines Section 15131(b) also provides that "economic or social effects of a project may be used to determine the significance of physical changes caused by the project." For example, the level of significance of a physical division of a community from the installation of rail lines could be measured by the social effect on the community.

In the case of the project, concerns have been expressed that the location of a new Costco in the El Dorado Hills community could, through its economic effects, result in secondary environmental impacts. The term urban decay is commonly used to describe the physical effects that can result when new retail uses cause existing business closures and physical deterioration of the areas in which such businesses are located.

The California courts have identified the term "urban decay" as the physical manifestation of a project's potential socioeconomic impacts. The leading case is *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, in which the court set aside two environmental impact reports for two proposed Wal-Mart projects that would have been located less than five miles from each other. This was the first court decision to use the term "urban decay," as opposed to the term "blight." The court quoted "experts [who] are now warning about land use decisions that cause a chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake." (Id. at p. 1204.) The court also discussed prior case law that addressed the potential for large retail projects to cause physical deterioration of a downtown area or general deterioration of a downtown area.

Even though there is no evidence that the Costco project could result in urban decay, an urban decay analysis was prepared to evaluate the issue and is included in Appendix M of the Draft EIR. There are two pertinent questions to be asked with regard to the effects of the proposed project in terms of this economic impact and urban decay analysis: (1) would the proposed Costco project result in sales losses that are sufficiently large at existing retail establishments to force some to close; and (2) would the affected closed stores stay idle long enough to create physical changes that could be defined as urban decay?

Unless these questions are answered in the affirmative, effects of the project, such as potential store closures and the potential shift of retail jobs, would not be considered significant as urban decay impacts.

6.4.2 Study Methodology and Results

EXISTING SETTING

The geographic extent for the project's market area includes portions of El Dorado County extending eastward from the county's western boundary, but not including South Lake Tahoe, and south/southeast to include a major portion of Amador County (excluding Kirkwood and other nearby areas to the east and Comanche North Shore and Buena Vista in the southern part of Amador County).

Field research, market research, and interviews conducted as part of the study indicated that current market conditions are relatively strong, except with some older commercial properties experiencing absent and/or lackluster owner interest. The project's market area inventory is considered within good to excellent condition with well-located properties garnering market interest and backfilling with new retail tenants. Vacant retail properties in some markets with weak or weakening conditions often transition to alternate uses. Such changes do not appear to be happening in the market area, demonstrating the presence of a generally healthy retail sector.

RETAIL SALES

The study estimates the potential impacts of the proposed Costco project on existing retailers in the market area pursuant to sales generated by existing retailers. It also estimates the extent to which the opening of the proposed Costco warehouse retail building and fuel facility, in combination with other cumulative retail projects, may or may not contribute to urban decay in the market area as a result of store closures attributable to existing retailer sales diversions.

The study relied on a retail model that estimated spending potential based on number of households, income, and consumer spending patterns. The model then compared potential spending to actual taxable sales data published by the State of California Department of Tax and Fee Administration (DTFA). For any study area, retail in which local spending is not fully captured (i.e., spending happens elsewhere) is categorized as "leakage," while retail where more sales are captured than are generated by residents is categorized as "attraction." This type of study is called a retail demand, sales attraction, and spending leakage analysis.

For the purpose of generating a retail demand, sales attraction, and spending leakage analysis for the Costco project's market area, the study looked at retail sales data for 2024 as well as population and income data. The study then compared total estimated household spending to actual retail sales in the portion of the El Dorado County market area, in Amador County, and in the entire market area. To estimate total sales within the market area, the study looked at sales from portions of the El Dorado County market area and sales in Amador County. A summary of results are presented in Table 6-1, below.

Table 6-1 El Dorado Hills Costco Market Area Retail Sales Attraction and Spending Leakage Summary (2024)

Retailer Type	Market Area Retail Sales Attraction/(Leakage)	
	Amount ($)	Percent (%)
Motor Vehicle and Parts Dealers	(92,512,084)	-22
Home Furnishings and Appliances	(70,804,734)	-61
Building Materials and Garden Equipment	98,595,019	37
Food and Beverage Stores	165,300,898	26
Gas Stations	115,923,095	32
Clothing and Accessories	(92,029,122)	-56
General Merchandise Stores	16,913,863	6
Food Services and Drinking Places	(126,887,637)	-30
Other Retail Groups*	310,863,292	54
Total	**325,362,591**	**11**

Note: *Other Retail Groups could include office supplies, pet supplies, sporting goods, bookstores, and jewelry stores.

Source: adapted from ALH Urban & Regional Economics 2025 (Appendix M).

6.4.3 Sales Projections

SALES WITHIN PROJECT MARKET AREA

The study estimated that retail sales from the project would total approximately 297 million dollars, before taxes. Of the annual sales amount, 84 percent is estimated to come from retail consumers while 16 percent is estimated to come from wholesale consumers (i.e., businesses that purchase items wholesale from Costco, and then resell the items as part of their business operations). Of the retail consumer amount, 85 percent is estimated to be generated within the project's market area. Consequently, 111.5 million dollars in consumer retail sales are estimated to be competitive with other retailers in the market area. Because of Costco's wide range of products, estimated sales would be spread across many types of retail categories (including those listed in Table 6-1).

MARKET AREA SALES BASE AND RETAIL LEAKAGE

The market area's retail sales base is estimated to total approximately $2.9 billion in 2024; approximately 80 percent of the sales base can be attributed to the El Dorado County portion of the market area. The study indicates that this portion of market area (i.e., El Dorado County) is characterized by a modest amount of retail leakage, amounting to 8 percent of the area's demand. This means that across all retail categories, 8 percent of estimated household spending leaves the county and is spent elsewhere (i.e., approximately $237 million in local demand leaves the market area).

When combining the market area retail sales with the estimated retail demand generated by households, the market area has an aggregate level of 11 percent retail sales attraction, totaling $325 million (Table 6-1). Retail attraction is greatest in the following categories: other retail group, food and beverage stores, and gas stations. These categories correspond to the categories comprising the greatest amount of potential El Dorado Hills Costco sales. Thus, the majority of Costco sales would be in strong market area retail sales categories, with the potential for Costco sales to strengthen these retail attraction categories. The four leakage categories identified in the market area consist of home furnishings and appliance stores, motor vehicles and parts dealers, clothing and clothing accessories stores, and food services and drinking places. Costco sales would have the potential to reduce existing leakage in these categories.

6.4.4 Impacts on Existing Market Area Retailers

Factoring in the portion of Costco sales that would come from people who live outside the area, along with the money that local stores might get back from shoppers who had been spending elsewhere (i.e., recaptured leakage), and normal ebb and flow of economic cycles, the study estimated potential sales impacts among food stores and gas stations in the market area. Specifically, the study estimated this impact at 2.5 to 7.5 percent of food and beverage store sales ($15.9 to $47.9 million), and 2.9 to 7.9 percent of market area gasoline station sales ($10.3 to $28.2 million).

FOOD (GROCERY) STORES

The market area has at least 28 stores with significant food sales, including conventional grocery stores, discount food stores, general merchandise stores, and niche stores. This does not include relatively smaller convenience-oriented stores as Costco would not compete with a store that satisfies a shopper's need for a quick convenience item. Costco would also not directly compete with any single one of the 28 stores selling food because of the nature of Costco product sales (e.g., bulk items and limited number of products). These Costco retail merchandising factors would likely contribute to the reduction of potential food store sales impacts resulting from the project. Because of the comparatively limited number of products available for purchase, the bulk nature of the products, and the bagging and purchasing procedures implemented at Costco, the potential for sales to be diverted away from any of the existing retailers selling food products to an extent so severe as to cause store closure is highly unlikely. The study states that the performance of grocery stores and other stores selling food products in the market area is not available, however, most stores appear to have robust performance with a dedicated customer base.

GASOLINE STATIONS

There are at least 47 gas stations with 116 fueling stations (232 handles) in the market area. A same-day price comparison indicated that approximately 40 percent of the El Dorado County gas stations had gas prices equal to or less than Costco's fuel prices. This comparison included gas stations located within five or more miles from the proposed Costco project site. Existing gas stations have features that differentiate them from Costco gas services, including 24/7 gas availability (the proposed Costco fuel facility is proposed to operate between the hours of 5:00 a.m. and 10:00 p.m. daily), wider range of gas product availability, presence of convenience stores, restrooms, and other select amenities such as car wash stations, repair services, and smog services. Additionally, only Costco members may purchase gas at Costco fuel facilities, which further narrows the customer base.

Potential gasoline sales impacts would be dispersed throughout the market area. It is possible that potential impacts could be greatest at areas closest to the project site, as it would be easier for Costco members to redirect their gasoline purchase trip from stations closer rather than more distant from the proposed Costco. However, even gas stations located further from the proposed Costco would likely experience sales diversions depending on consumer activities and timing gas purchases in coincidence with a shopping trip to Costco. The study indicates that the appeal of increased operating hours and presence of various other amenities at non-Costco gas stations would result in comparative market area gas station advantages.

6.4.5 Urban Decay Impact Determination

METHODOLOGY

As described above, State CEQA Guidelines Section 15131(a) states that "economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes." State CEQA Guidelines Section 15131(b) also provides that "economic or social effects of a project may be used to determine the significance of physical changes caused by the project."

This impact analysis evaluates whether the proposed Costco project, through its economic effects, could result in secondary physical environmental impacts associated with urban decay. This impact conclusion is based on the technical analysis described above from the Urban Decay Analysis Study provided in Appendix M.

THRESHOLD OF SIGNIFICANCE

For the purpose of this analysis, a significant impact would occur if: (1) would the proposed Costco project result in sales losses that are sufficiently large at existing retail establishments to force some to close; and (2) would the affected closed stores stay idle long enough to create physical changes that could be defined as urban decay?

Impact 6-1: Result in Economic Changes from the Project that Would Result in Urban Decay

Implementation of the proposed Costco project could result in sales impacts to other grocery stores and gas stations operating in the project market area. Because of the variety of shopping experiences, services, and amenities provided at competing retailers, potential sales diversions resulting from the Costco project would be dispersed within the market area, such that no store or gas station closures are expected to occur. Therefore, the Costco project is not anticipated to result in conditions that would lead to urban decay under project and cumulative conditions; this impact would be **less than significant**.

Costco Project

As described above, the Costco project market area includes 28 stores and 47 gas stations that would compete with the proposed project. Results of the study concluded that project implementation could result in potential sales impacts among food stores and gas stations in the market area. The nearest stores and gas stations to the project site that would likely experience sales competition include Raleys One, Shell, and a 76 station, all located within one mile to the west of the project site. As described above, conditions within the project market area are considered strong. Results of the study estimated that retail sales from the project would total approximately 297 million dollars. Of the total 297 million dollars in sales, 111.5 million dollars in sales are estimated to be competitive with other retailers in the market area, and because of Costco's wide range of products, estimated sales would be spread across many types of retail categories.

Grocery stores in the project market area may differ from Costco in that smaller retailers often include a larger inventory and variety of grocery options, in addition to offering more convenience-oriented shopping experiences. Given the nature of products sold at Costco, including bulk items, limited selection/variety of items, and bagging and purchasing procedures, the study concluded that implementation of the project would not directly compete with grocery stores. Similarly, existing gas stations in the project market area differ from Costco in that they may include 24/7 gas availability, a wider range of gas product availability, presence of convenience stores, restrooms, and other select amenities such as car wash stations, repair services, and smog services. Further, only Costco members may purchase items from the warehouse and gas station (ALH Urban & Regional Economics 2025).

The study concluded that while the proposed Costco project may compete with existing grocery stores and gas stations within the project market area, the potential sales diversions from both retailer types would be dispersed within the project area and would not be severe enough to result in any grocery or gas business closures. Therefore, no physical deterioration of properties or structures would occur such that conditions of urban decay would result. This impact would be **less than significant**.

Cumulative Conditions

The cumulative context for urban decay impacts includes existing and future competing businesses within the Costco project market area. As described above, 28 stores and 47 gas stations would compete with the proposed project. Additionally, five potential cumulative development projects with retail components comprising at least 25,000 square feet were identified in the market area. One of the projects is currently under construction, one is approved, and three are under review. Identified cumulative projects have a total retail potential of approximately 550,646 square feet to approximately 711,382 square feet, with most containing other proposed uses, including residential. Of the cumulative projects, the proposed Costco project is anticipated to have the greatest impact on the market area's food and beverage and gas station retail sectors. Thus, any food store and gas station sales generated by these projects would cumulatively contribute to an economic impact in the market area. However, based on the size of cumulative project retail components and buildings, it is unlikely that any cumulative project would include a food store. In addition, none of the cumulative projects include plans for new gas station development.

Due to the lack of proposed food store and gas station developments amongst the cumulative projects, a cumulative grocery and gas sales impact is unlikely. While it is possible that Costco sales may compete with sales in other retail sectors, impacts would be minimal and would likely be absorbed as part of normal business operations in the market area. Therefore, the Costco project, in combination with identified cumulative projects, would not contribute to a cumulative economic condition such that significant impacts would occur. Thus, the Costco's contribution to this impact **would not be cumulatively considerable**.

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8 REFERENCES

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Chapter 1 Introduction

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Chapter 2 Project Description

No references are cited in this chapter.

Chapter 3 Environmental Impacts and Mitigation Measures

Section 3.1 Aesthetics

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