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DRAFT
Environmental Impact Report
Trails at Corona
Riverside County, California

State Clearinghouse Number 2018071048

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Table of Contents

List of Appendices

List of Tables

List of Exhibits

Figures

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACBM	asbestos-containing building material
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACP	Alternative Compliance Plan
ADA	Americans with Disabilities Act
ADEIR	Administrative Draft EIR
ADT	Average Daily Traffic
ADWF	Average Dry Weather Flow
AERMAP	EPA Terrain Preprocessor
AERMOD	American Meteorological Society/EPA Regulatory Model
AFB	Air Force Base
AFY	acre-feet per year
AIA	Airport Influence Area
AIC	Archaeological Information Center
AICUZ	Air Installation Compatibility Use Zone
ALUC	Airport Land Use Commission
AMSL	above mean sea level
APA	Administrative Procedure Act
APCD	Air Pollution Control District
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQI	Air Quality Index
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ASE	Associated Soils Engineering, Inc.
ASF	age sensitivity factors
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASR	Aquifer Storage and Recovery
AST	aboveground storage tank
ASTM	American Society of Testing and Materials

ATCM	Airborne Toxic Control Measures
BAU	business-as-usual
bgs	below ground surface
BIOS 5	Biogeographic Information and Observation System
BLM	Bureau of Land Management
BMP	Best Management Practices
BP	Before Present
BRA	Biological Resources Assessment
BTU	British Thermal Unit
BVOC	biogenic volatile organic compound
C&D	construction or demolition waste
C_2F_6	hexafluoroethane
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Health and Safety Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CA MUTCD	California Manual on Uniform Traffic Control Devices
CAP	Climate Action Plan
CASQA	California Stormwater Quality Association
CBC	California Building Standard Code
CBD	Center for Biological Diversity
CCAA	California Clean Air Act
CCCC	California Climate Change Center
CCR	California Code of Regulations
CDC	Center for Disease Control and Prevention
CDFW	California Department of Fish and Wildlife
CDWP	Corona Department of Water and Power
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CETAP	Community and Environmental Transportation Acceptability Process
CFC	chlorofluorocarbon

CFD	City of Corona Fire Department
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CHL	California Historical Landmarks
CHRIS	California Historical Resources Information Center
CHWMP	County Hazardous Waste Management Plan
CIP	capital improvement projects
CIWMP	Countywide Integrated Waste Management Plan
CLOMR	Conditional Letter of Map Revision
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society Electronic Inventory
CNUSD	Corona-Norco Unified School District
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPD	Corona Police Department
CPHI	California Points of Historical Interest
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSA	Community Service Area
CTF	Cleaner Technology and Fuels
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DBH	diameter at breast height
DBR	daily breathing rates
d/D	depth of flow to diameter of pipe ratio
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DIF	Development Impact Fee
DPM	diesel particulate matter

DTSC	California Department of Toxic Substances Control
DU	dwelling unit
DU/acre	dwelling unit per acre
DWR	California Department of Water Resources
EAP	Existing Plus Ambient Growth Plus Project
EAPC	Existing Plus Ambient Growth Plus Project Plus Cumulative
ECC	Emergency Command Center
EGETS	Expanded Groundwater Extractions and Treatment System
EI	Expansion Indices
EIC	Eastern Information Center
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EMD	Emergency Management Department
EMFAC2017	ARB 2017 Emissions Factors model
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPA	United States Environmental Protection Agency
ER	Estate Residential
ERS	Environmental Record Search
ESA	Environmental Site Assessment
EVA	Emergency Vehicle Access
EVMWD	Elsinore Valley Municipal Water District
FAA	Federal Aviation Administration
FAR	floor area ratio
FCS	FirstCarbon Solutions
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FGC	Fish and Game Code
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FRHZ	Fault Rupture Hazard Zone
FTA	Federal Transit Administration
GC	General Commercial
GCC	General Community Commercial
GHG	greenhouse gas
GIS	Geographic Information Systems
g/L	grams/liter

GLA	Glen Lukos Associates, Inc.
GPA	General Plan Amendment
GPBO	General Plan Buildout
GPCD	gallons per capita per day
GPD	gallons per day
gpm	gallons per minute
GWh	gigawatt-hour
GWh/y	gigawatt-hours per year
GWP	global warming potential
HANS	Habitat Evaluation and Acquisition Negotiation Process
HAP	hazardous air pollutant
HCDA	Housing and Community Development Act
HCM	Highway Capacity Manual
HCS7	Highway Capacity Software, Version 7
HFC	hydrofluorocarbon
HI	hazard index
HMTA	Hazardous Materials Transportation Act
HOA	Homeowner's Association
HOPE	Homeless Outreach Psychological and Evaluation
HOV/HOT	High Occupancy Vehicle/High Occupancy Toll
HRA	Health Risk Assessment
HRI	California Historic Resources Inventory
HUD	United States Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
HWCL	Hazardous Waste Control Law
HWL	high water level
HWSA	Hazardous and Solid Waste Amendments
IGR	Intergovernmental Review
IOU	investor-owned utility
IPaC	Information for Planning and Consultation
IPCC	United Nations Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
ISO	Independent System Operator
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
IU	Infrastructure and Utilities
JVS	Jurupa Valley Station
kBtu	kilo-British thermal unit

kW	kilowatts
kWh	kilowatt-hour
LBP	lead-based paint
LBPPA	Lead-Based Paint Poisoning Prevention Act
lbs/day	pounds per day
LCFS	Low Carbon Fuel Standard
L_{dn}	day/night average sound level
LDR	Low Density Residential
LED	light emitting diode
L_{eq}	equivalent sound level
LEV	Low-Emission Vehicle
LI	Light Industrial
L_{max}	maximum noise/sound level
LOMR	Letter of Map Revision
LOS	Level of Service
LRA	Local Responsibility Area
LSE	load-serving entities
LST	Localized Significance Threshold
LU	Land Use
LUST	Leaking Underground Storage Tank
MBR	membrane bioreactor
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant levels
MCV	Manual of California Vegetation
MDR	Medium Density Residential
MERV	Minimum Efficiency Reporting Value
Metropolitan	Metropolitan Water District of Southern California
mg	million gallon
mgd	million gallons per day
MIR	Maximally Impacted Sensitive Receptor
MLD	Most Likely Descendent
MM	Mitigation Measure
MMI	Modified Mercalli Intensity
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
mpg	miles per gallon

mph	miles per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resources Zones
MS4	Municipal Separate Storm Sewer System
MSHCP	Multiple Species Habitat Conservation Plan
MSW	municipal solid waste
MT	metric tons
MW	megawatt
MWD	Metropolitan Water District
MWh	megawatt-hour
MXD	mixed-use development
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHB	National Association of Home Builders
NAHC	Native American Heritage Commission
NAL	Numeric Action Levels
NCCP	National Communities Conservation Plan
NCHRP	National Cooperative Highway Research Program
NDC	nationally determined contributions
NEHRP	National Earthquake Hazards Reduction Program
NEL	Numeric Effluent Limits
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NF_3	nitrogen trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NIMS	National Incident Management System
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA	National Marine Fisheries Service
NOC	Notice of Completion
NOP	Notice of Preparation
NO_X	nitrogen oxides
NP	Non-Plastic
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act

NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSF	National Science Foundation
OAL	Office of Administrative Law
OCWD	Orange County Water District
OEHHA	California Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHWM	ordinary high water mark
ONAC	Office of Noise Abatement and Control
OP	Office Professional
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OS-MIN	Open Space Mineral Resources
OS-R	Open Space Recreation
PA	Planning Area
PC	passenger car
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PDWF	Peak Dry Weather Flow
PeMS	Performance Measurement System
PFC	perfluorocarbon
Phase I ESA	Phase I Environmental Site Assessment
PHF	peak-hour factor
PID	photo ionization detector
PM_{10}	particulate matter, including dust, 10 micrometers or less in diameter
$PM_{2.5}$	particulate matter, including dust, 2.5 micrometers or less in diameter
PM_X	particulate matter
ppb	parts per billion
ppd	pounds per day
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PRIMP	paleontological resource impact mitigation program
Psi	pounds per square inch
PUC	Public Utilities Code
PVC	polyvinyl chloride
PWQMP	Preliminary Water Quality Management Plan
PWWF	Peak Wet Weather Flow

R-1	One-Family Dwelling
R1-7.2	Single-Family Residential zoning
R1-9.6	Single-Family Residential zoning
RBBD	Road and Bridge Benefit District
RBC	Reinforced Box Culvert
RCA	Riverside Conservation Authority
RCDWR	Riverside County Department of Waste Resources
RCFC&WCD	Riverside County Flood Control and Water Conservation District
RCFD	Riverside County Fire Department
RCIP	Riverside County Integrated Project
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resource Conservation and Recovery Act
RCTC	Riverside County Transportation Commission
RCTLMA	Riverside County Transportation and Land Management Agency
REL	Reference Exposure Level
RHNA	Regional Housing Need Allocation
RivCoParks	Riverside County Regional Park and Open-Space District
RivTAM	Riverside County Traffic Analysis
RMP	Risk Management Plan
rms	root mean square
RNG	renewable natural gas
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
RWMP	Recycled Water Master Plan
RWQCB	Regional Water Quality Control Board
SANBAG	San Bernardino Associated Governments
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SBBA	San Bernardino Basin Area
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCHWMA	Southern California Hazardous Waste Management Authority
SCS	Sustainable Communities Strategy
SDWA	National Safe Drinking Water Act
SEAOC	Structural Engineers Association of California

SED	socioeconomic data
SEMS	Standardized Emergency Management System
SF_6	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act
SHS	State Highway System
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SMP	Sewer Master Plan
SO_2	sulfur dioxide
SoCAB	South Coast Air Basin
SoCalGas	Southern California Gas Company
SOI	Sphere of Influence
SP	Service Population
SR	State Route
SRA	Source Area Receptor
SRO	single-room occupancy
State Water Board	California State Water Resources Control Board
SVP	Society of Vertebrate Paleontology
SWAT	Special Weapons and Tactics
SWP	California State Water Project
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
TAH	time at home factors
TAZ	Traffic Analysis Zone
TCAP	Temescal Canyon Area Plan
TCM	transportation control measures
TCR	Tribal Cultural Resources
TDM	Transportation Demand Management
TDR	Transfer of Development Rights
TDS	total dissolved solids
TDV	Time Dependent Valuation
TEA-21	Transportation Equity Act for the 21st Century
Tg	teragram
therms/y	therms per year
TIA	Traffic Impact Analysis
TIS	Traffic Impact Study

TMA	Transportation Management Association
TMDL	Total Maximum Daily Load
TOD	Transit Oriented Development
TPH	total petroleum hydrocarbons
TRU	Transport Refrigeration Unit
TSCA	Toxic Substances Control Act
TSF	thousand square feet
TTM	Tentative Tract Map
TUMF	Transportation Uniform Mitigation Fee
UNFCCC	United Nations Framework Convention on Climate Change
USACE	United States Army Corps of Engineers
USCS	Uniform Soil Classification System
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
VdB	vibration in decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
VOC	volatile organic compound
WATERS	Watershed Assessment, Tracking and Environmental Results System
WDR	Waste Discharge Requirements
WIMP	Wind Implementation Monitoring Program
WMI	Waste Management, Inc.
WMWD	Western Municipal Water District
WQMP	Water Quality Management Plan
WRCOG	Western Riverside Council of Governments
WRCRWA	Western Riverside County Regional Wastewater Authority
WRF	Water Recycling Facility
WRP	Waste Recycling Plan
WWECP	Wet Weather Erosion Control Plan
WWTP	Wastewater Treatment Plan
WWRF	Western Water Recycling Facility
ZEV	Zero-Emission Vehicle

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EXECUTIVE SUMMARY

Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Trails at Corona Project (State Clearinghouse No. 2018071048). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

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

Project Summary

Project Location

The proposed Trails at Corona Specific Plan (proposed project) is located on the former Mountain View Golf Course, south of State Route (SR) 91 and generally west of Avenida Del Vista and east of Serfas Club Drive, in both unincorporated Riverside County and the City of Corona.

The project site comprises approximately 104.8 acres, of which approximately 79.9 acres are within the County of Riverside's jurisdiction and approximately 24.9 acres are within the City of Corona's jurisdiction. The County of Riverside portion of the site is located within the unincorporated community of Coronita. The City of Corona surrounds the site to the north, east, south, and west; however, the site is connected to and adjacent to the County of Riverside unincorporated communities of Green River and Prado Basin. The site has regional access via SR-91.

The Assessor's Parcel Numbers (APN) for the project site are APN 102-050-004, APN 102-050-005, APN 102-050-008, APN 102-050-021, APN 102-050-022, APN 102-050-024; APN 102-112-008, APN 102-113-015, APN 102-160-003, APN 102203-007, APN 102-192-017, APN 103-203-006 and APN 103-301-010 within the County of Riverside, and APN 103-020-007, APN 103-020-008, APN 103-020-009, APN 103-020-010, and APN 103-020-011 within the City of Corona.

Project Description

The project applicant proposes an age-restricted (60+) mixed-use community, including open space with parks and trails, residential areas of various densities, and retail/commercial (Exhibit 2-3).

Residential Uses

The proposed project is divided into six Planning Areas, five of which are within the County of Riverside and one is within the City of Corona. Multiple Planning Areas contain open space in the

form of parks and trails that would be generally accessible to the public with a mix of private and public park/open space areas. The proposed project would provide new residents and existing residents in the surrounding areas an interconnected series of trails, parks, and recreational areas.

The following uses are proposed in each planning area:

- **Planning Area 1:** 66 single-family paired unit residences; open space.
- **Planning Area 2***: At the time the Notice of Preparation (NOP) was published, the project applicant proposed the development of approximately 10,000 square feet of retail/commercial space on Planning Area 2. However, the development of Planning Area 2 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2.*
- **Planning Area 3:** 115 single-family detached residences; 50 paired-housing residences; community center.
- **Planning Area 4:** 47 single-family detached residences.
- **Planning Area 5:** 31 single-family detached residences.
- **Planning Area 6 (City of Corona):** *At the time the Notice of Preparation (NOP) was published, the project applicant proposed the development of 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 6.*

All residences would be 100 percent active adult, age-restricted (60+), and single-story homes.

Open Space, Parks, and Trails

Each Planning Area contains open space in the form of parks and trails open to the general public. Parks could include a combination of some of the following: walking, running and biking trails, tot lots,[1] active sport courts, or dog parks. Park benches and large greenspaces could also be provided for passive recreation.

The parks would serve the purpose of water quality clean up from storm and residential runoff, cleaning water before it percolates into the ground or enters the storm drain system. Additionally, some park areas will serve as detention basins, providing increased flood protection and flow control.

Circulation

The proposed project proposes various access points from Frontage Road, Kirkwood Drive, Paseo Grande, and Pine Crest Drive.

[1] A playground for children, especially younger children.

Project Objectives

The objectives of the proposed project are to:

- Develop a specific plan to guide development in underutilized, currently vacant parcels in Riverside County.
- Convert a vacant, underutilized property into a master-planned mixed-use community in alignment with County of Riverside 2020 General Plan Policy LU 33.1.
- Generate new, additional property tax revenues for Riverside County and the City of Corona through to the conversion of an unused property.
- Provide a range of housing options, including single-family housing and paired-housing residences in alignment with County of Riverside 2020 General Plan Policy LU 28.4.
- Provide active adult age-restricted housing within Riverside County.
- Help meet the respective Regional Housing Need Allocation of Riverside County, as set out in their Housing Element.
- Create a walkable, mixed-use environment, by providing the opportunity for retail and commercial spaces within the community in alignment with County of Riverside 2020 General Plan Policies LU 29.3 and C 4.7.
- Develop an open space, parks, and trail system for public use, allowing both existing and new residents to take advantage of the development in alignment with County of Riverside 2020 General Plan Policy LU 3.1d.
- Provide stormwater and residential water runoff treatment through natural processes, using the open space, parks, and trail system in alignment with the County of Riverside 2020 General Plan Policies LU 5.2. and LU 5.3.
- Promote land use compatibility with neighboring residential uses by creating landscaped setbacks as buffers, and the development of a compatible housing density (units per acre) to the adjoining uses in alignment with County of Riverside 2020 General Plan Policy LU 7.1.
- Provide a circulation system that is complementary to local residential neighborhoods and encourages pedestrian and bicycle circulation in alignment with County of Riverside 2020 General Plan Policies LU 13.6 and C 16.4a.
- Provide an infrastructure system, including sewer, water, and storm drain systems that will adequately serve full buildout of the proposed project in alignment with County of Riverside 2020 General Plan Policies LU 5.1 and LU 5.2.
- Provide adequate off-street parking for all on-site uses, so as to not impact the development's neighbors in alignment with County of Riverside 2020 General Plan Policy C 3.26.
- Complete General Plan Initiating Proceeding adopted on April 18, 2017.

Significant Unavoidable Impacts

All project-related impacts can be mitigated to below a level of significance; therefore, the proposed project does not have any significant unavoidable impacts. As a result, an analysis of alternatives to the proposed project is not technically required under CEQA. CEQA Guidelines Section 15126.6(b) states: ". . . 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 . . ." The County therefore is not required to consider the feasibility of project alternatives or make any specific findings (PRC § 21002; *Laurel Hills Homeowners Association v. City Council* (1978) 83 Cal. App. 3d 515, 521; see also Kings *County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 730–731; and *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Ca1. 3d 376, 400-403).

Although not required by CEQA, the following three alternatives to the proposed project are analyzed and evaluated for their ability to meet the proposed project's objectives. A brief summary of the alternatives is included below.

Alternatives to the Proposed Project

Below is a summary of the alternatives to the proposed project considered in Section 5, Alternatives to the proposed project.

- **Alternative 1—No Project Alternative/No Build-Existing Land Use Activities Alternative:** The No Project/No Build Alternative provides a comparison between the environmental impacts of the proposed project in contrast to the environmental impacts that could result from not approving, or denying, the project, as well as not changing the land use designation(s) for the site. Under the No Project/No Build Alternative, the site would remain in its existing condition and no development would occur.
- **Alternative 2—Development within the Existing Land Use Designations Alternative:** Recreational uses would be developed on the proposed Planning Areas within the jurisdiction of the County of Riverside (Planning Areas 1, 2, 3, 4, and 5), approximately 79.9 acres. The recreational activities include a Topgolf™ facility in Planning Areas 1 and 2 with an associated parking lot. Planning Area 3 and 4 would consist of an off-road vehicle park, and Planning Area 5 would be a lakeside area for camping and fishing activities with associated parking lots. Planning Area 6 within the City of Corona with a General Plan Land Use Designation of Low Density Residential (LDR), is zoned as Agricultural (A) and would feature 16 large-lot, low density, single-family housing units.
- **Alternative 3—Reduced Intensity Alternative:** The Reduced Intensity Alternative proposes to develop a mixed-use project with development that consists of 240 market-rate units on 79.9 acres, with an average of approximately three units per acre, on the Planning Areas within the County of Riverside (Planning Areas 1 through 5). The residential portion of this alternative, or the "240-Unit Alternative" was developed in response to comments from residents regarding the proposed project. This alternative would develop 125 fewer dwelling units without any age restriction on the project site. With the reduction in dwelling unit

proposed under this Alternative, the Homeowner's Association (HOA) would not be able to support the maintenance of the trail system; therefore, this Alternative would not include the trail system. In addition, the Reduced Intensity Alternative would develop retail/commercial or light/industrial development within Planning Area 1 (365,000 square feet in total).

Environmental Topics

An NOP for the proposed project was issued on July 20, 2018. The NOP describing the original concept for the proposed project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period extending from July 20, 2018, through August 27, 2018. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

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

Although analyzed in this Draft EIR, the following resource areas were not included in the NOP as separate topical areas as they were not yet designated as individual topical areas by the County at the time of the NOP release in 2018.

- Energy
- Paleontological Resources
- Wildfire

Disagreement Among Experts

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

Potentially Controversial Issues

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

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

- Aesthetics
- Air Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems

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

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

Public Review of the Draft EIR

Upon completion of the Draft EIR, the Riverside County Planning Department filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code [PRC], § 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3) and 21092.2. During the public review period, the Draft EIR, including the technical appendices, is available online at https://planning.rctlma.org/ceqa-environmental-noticing and at the Riverside County Planning Department offices. The address is provided below:

Riverside County Planning Department
4080 Lemon Street, 12th Floor
Riverside, CA 92502-1409
Hours:
Monday–Friday: 8:00 a.m. to 5:00 p.m.

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

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Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, the County will provide any public agency that commented on the EIR with a written proposed response to the agency's comments at least 10 days prior to the public hearing before the Riverside County Planning Department on the proposed project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the proposed project.

Mitigation Monitoring Matrix

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation, and required monitoring for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this Draft EIR. Table ES-1 is included in the Draft EIR as required by CEQA Guidelines Section 15123(b)(1).

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Table ES-1: Mitigation Monitoring Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Section 3.1—Aesthetics, Light, and Glare			
Impact AES-1a: The proposed project would not have a substantial adverse effect upon a scenic highway corridor within which it is located.	No mitigation measures are required.	Less than significant impact.	None.
Impact AES-1b: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and unique or landmark features; obstruct any prominent scenic visa or view open to the public; or result in the creation of an aesthetically offensive site open to public view.	No mitigation measures are required.	Less than significant impact.	None.
Impact AES-1c: In non-urbanized areas, the proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point). In an urbanized area, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality.	No mitigation measures are required.	Less than significant impact.	None.
Impact AES-2: The proposed project would not interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655.	No mitigation measures are required.	No impact.	None.
Impact AES-3a: The proposed project would not create a new source of substantial light	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
or glare which would adversely affect day or nighttime views in the area.			
Impact AES-3b: The proposed project would not expose residential property to unacceptable light levels.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.2—Agriculture Resources and Forest Resources			
Impact AG-1a: The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.	No mitigation measures are required.	No impact.	None.
Impact AG-1b: The proposed project would not conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve.	No mitigation measures are required.	Less than significant impact.	None.
Impact AG-1c: The proposed project would not cause development of nonagricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 “Right-to-Farm”)	No mitigation measures are required.	No impact.	None.
Impact AG-1d: The proposed project would not involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to nonagricultural use.	No mitigation measures are required.	No impact.	None.
Impact AG-2a: The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)),	No mitigation measures are required.	No impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).			
Impact AG-2b: The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use.	No mitigation measures are required.	No impact.	None.
Impact AG-2c: The proposed project would not involve other changes in the existing environment, which due to their location or nature, could result in conversion of forest land to non-forest use.	No mitigation measures are required.	No impact.	None.
Section 3.3—Air Quality			
Impact AIR-1: The proposed project would not conflict with or obstruct implementation of the applicable air quality plan with implementation of mitigation.	**MM AIR-1a:** As part of a standard building permit submittal, prior to the issuance of building or grading permits, the project applicant shall provide the City of Corona and County of Riverside with documentation demonstrating that project construction will use low-volatile organic compound (VOC) Architectural Coatings with a project-wide average VOC content of 10 grams per liter (g/L) or less.. **MM AIR-1b:** As part of a standard grading permit submittal, the project applicant shall submit documentation to the County of Riverside that demonstrates that all off-road construction equipment in excess of 50 horsepower is equipped with engines meeting the United States Environmental Protection Agency (EPA) Tier IV off-road engine emission standards. **MM AIR-1c**: As part of a standard grading permit submittal, the project applicant shall include completion and submittal of a dust control plan as part of the construction contract standard	Less than significant impact.	**MM AIR-1a:** Prior to grading activities, as part of the grading permit submittal for the proposed project **MM AIR-1b:** Prior to grading activities, as part of the grading permit submittal for the proposed project **MM AIR-1c:** Prior to grading activities, as part of the grading permit submittal for the proposed project

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	specifications to South Coast Air Quality Management District (SCAQMD). The dust control plan shall include measures to meet the requirements of SCAQMD Rules 402 and 403, including, but limited to, watering actively disturbed areas no less than 3 times per day.		
Impact AIR-2: The proposed project would not 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors) with implementation of mitigation.	Implementation of **MM AIR-1a.**	Less than significant impact.	**MM AIR-1a:** Prior to grading activities, as part of the grading permit submittal for the proposed project
Impact AIR-3c: The proposed project would not expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations with implementation of mitigation.	**MM AIR-4a**: All residents shall be provided with information that describes the potential risk from living near a freeway and that the incorporation of an advanced air filtration system has been provided to reduce that risk. The information shall also indicate that the residents have the option to open windows for circulation; however, that by opening windows, they reduce or eliminate the effectiveness of the air filtration system within their unit as long as the unit is open to unfiltered air.	Less than significant impact.	**MM AIR-4a:** Prior to building occupation of the proposed project
Impact AIR-1d: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.4—Biological Resources			
Impact BIO-1: The proposed project would not conflict with the provisions of an adopted Habitat Conversation Plan, Natural	Implementation of **MM BIO-1 and MM BIO-4.** **MM BIO-1: MSHCP Consistency**	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Conservation Community Plan, or other approved local, regional, or State conservation plan.	All necessary processes to prove MSHCP consistency must be carried out prior to any ground disturbance or issuance of any grading permits. These may include future analysis and surveys and re-submitting the project to the County/Planning Department if MSHCP consistency requires significant changes to the project than what is currently proposed.		
Impact BIO-2: The v project would not have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12) with implementation of mitigation.	**MM BIO-2: Migratory and Nesting Birds and Bats Avoidance** Implementation of the following avoidance and minimization measures would avoid or minimize potential effects to migratory birds and habitat in and adjacent to the project site. These measures shall be implemented for construction work during the nesting season (February 15 through August 31). A. If construction or tree removal is proposed during the breeding/nesting season for migratory birds (typically February 15 through August 31), a qualified Biologist shall conduct pre-construction surveys for special-status birds, special-status bats, and as well as other migratory birds and roosting bats within the construction area, including a 300-foot survey buffer, no more than 3 days prior to the start of ground-disturbing activities in the construction area. B. If an active nest is located during pre-construction surveys, the United States Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be	Less than significant impact.	**MM BIO-1(A, B):** During construction work throughout nesting season (February 15 through August 31) **MM BIO-1(C, D):** During pre-construction surveys of the project site

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified Biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 300 feet around an active raptor nest and a 50-foot radius around an active migratory bird nest) or alteration of the construction schedule. C. A qualified Biologist shall delineate the buffer using nest buffer signs, Environmentally Sensitive Area fencing, pin flags, and/or flagging tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently.		
Impact BIO-3: The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, or any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service with implementation of mitigation.	**MM BIO-3: Burrowing Owl** A. No more than 30 days prior to the first ground-disturbing activities, the project applicant shall retain a qualified Biologist to conduct a pre-construction survey on the project site. The survey shall establish the presence or absence of western burrowing owl and/or habitat features, and evaluate use by owls in accordance with California Department of Fish and Wildlife (CDFW) survey guidelines. B. On the parcel where the activity is proposed, the Biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership need not be surveyed. The	Less than significant impact.	**MM BIO-2:** No more than 30 days prior to ground-disturbing activities

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	survey shall take place near the sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owl shall be identified and mapped. During the breeding season (February 1–August 31), surveys shall document whether burrowing owl are nesting on or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys shall document whether burrowing owl are using habitat on or directly adjacent to any disturbance area. Survey results will be valid only for the season during which the survey is conducted. C. If burrowing owl are not discovered, further mitigation is not required. If burrowing owl are observed during the pre-construction surveys, the applicant shall perform the following measures to limit the impact on the burrowing owls: • Avoidance shall include establishment of a 160-foot non-disturbance buffer zone. Construction may occur during the breeding season if a qualified Biologist monitors the nest and determines that the birds have not begun egg-laying and incubation, or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1-January 31), the project applicant shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a 160-foot non-disturbance buffer zone. • If it is not possible to avoid occupied burrows, passive relocation shall be		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent re-occupation. Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.		
Impact BIO-4: The proposed project would not 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 with implementation of mitigation.	Implement **MM BIO-2** and **MM BIO-3**.	Less than significant impact.	**MM BIO-1(A, B):** During construction work throughout nesting season (February 15 through August 31) **MM BIO-1(C, D):** During pre-construction surveys of the project site **MM BIO-2:** No more than 30 days prior to ground-disturbing activities
Impact BIO-5: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service with implementation of mitigation.	**MM BIO-4 Compensation for Impacts to Jurisdictional Features and Riparian Habitat** • A formal delineation is required to document the full extent of jurisdictional waters within the project site. Impacts on waters of the United States (i.e., United States Army Corp of Engineers [USACE] jurisdiction) would require a Section 401 Water Quality Certification from the Regional Water Quality Control Board	No impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	(RWQCB). Impacts to wetlands under the California Department of Fish and Wildlife (CDFW) jurisdiction would require a Section 1602 Streambed Alteration Agreement from the CDFW. • The applicant shall obtain a Section 404 Clean Water Act (CWA) permit from the USACE for impacts to waters of the United States as well as a Section 401 permit from the RWQCB and a Section 1602 Streambed Alteration Agreement from the CDFW for impacts to waters of the State, as necessary. These permits shall be obtained prior to issuance of grading permits and implementation of the proposed project. • The project applicant shall ensure that the proposed project will result in no net loss of waters of the United States by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined in the CWA Section 404/401 permit requirements. • The project applicant shall also prepare a Determination of Biologically Equivalent or Superior Preservation (DBESP) document and seek approval from the Wildlife Agencies (CDFW and United States Fish and Wildlife Service [USFWS]), as well as the Regional Conservation Authority (RCA), to compensate for any impacts to MSHCP Riparian Riverine habitat and jurisdictional areas before impacts to these resources are implemented. • Compensatory mitigation may consist of (1) obtaining credits from a mitigation bank; (2) making a payment to an in lieu fee program that will conduct wetland, stream, or other		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	aquatic resource restoration, creation, enhancement, or preservation activities; and/or (3) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This final type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project /permit applicant retains responsibility for the implementation and success of the mitigation project. • Evidence of compliance with this mitigation measure shall be provided prior to initiating construction and grading activities for the proposed project.		
Impact BIO-6: The proposed project would not have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means with implementation of mitigation.	Implementation of **MM BIO-4.**	No impact.	None.
Impact BIO-7: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Implementation of **MM BIO-1, MM BIO-4 and MM BIO-5.** **MM BIO-5: Oak Tree Inventory** • An oak tree inventory and analysis will be conducted for the project site, including proposal of mitigation for any oak trees that are proposed to be impacted. This analysis shall be conducted prior to any ground	Less than significant impact.	**MM BIO-4:** Prior to any ground disturbance, vegetation removal, or issuance of a grading permit

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	disturbance, vegetation removal or issuance of a grading permit.		
Section 3.5—Cultural Resources			
Impact CUL-1a: The proposed project would not alter or destroy a historic site.	No mitigation measures are required.	No impact.	None.
Impact CUL-1b: The proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 with implementation of mitigation.	**MM CUL-1: Inadvertent Discovery of Cultural Resources** In the event that significant archaeological resources are discovered during construction activities, operations shall stop within a 100-foot radius of the find and an Archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology shall be consulted to evaluate the potential resource, and determine whether it requires further study. The lead agency shall require the standard inadvertent discovery clause to be included on the grading plans to inform contractors of this requirement. Potentially significant archaeological resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. The qualified Archaeologist shall make recommendations to the lead agency concerning appropriate measures that shall be implemented to protect the discovered resources, including but not limited to excavation and evaluation of the finds in accordance with CEQA Guidelines, Section 15064.5. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate California Department of Parks and Recreation (DPR) forms	Less than significant impact.	**MM CUL-1:** During construction activities

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	and evaluated for significance in terms of CEQA Guidelines.		
Impact CUL-2a: The proposed project would not alter or destroy an archaeological site with implementation of mitigation.	Implement **MM CUL-1**.	Less than significant impact.	**MM CUL-1:** During construction activities
Impact CUL-2b: The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 with implementation of mitigation**.**	Implement **MM CUL-1 and CUL-2**.	Less than significant impact.	**MM CUL-1:** During construction activities
Impact CUL-2c: The proposed project would not disturb any human remains, including those interred outside of formal cemeteries with implementation of mitigation.	**MM CUL-2: Accidental Discovery of Human Remains** In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. During the course of project development, if there is accidental discovery or recognition of any human remains, the following steps shall be taken: • There shall be no further excavation or disturbance within 100 feet of the remains until the County Coroner is contacted to determine whether the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the Most Likely Descendant (MLD) of the deceased Native American. The MLD may make	Less than significant impact.	**MM CUL-2:** During the course of project development

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	recommendations to the landowner or the person responsible for the excavation work within 48 hours, for appropriate treatment and disposition of, with appropriate dignity, the human remains, and any associated grave goods as provided in Public Resources Code Section 5097.98. • Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the MLD or on the project site in a location not subject to further subsurface disturbance: – The NAHC is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being notified by the commission. – The descendant identified fails to make a recommendation. – The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.		
Section 3.6—Energy			
Impact ENER-1: The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact ENER-2: The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.7—Geology and Soils			
Impact GEO-1: The proposed project would not be subject to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault with implementation of mitigation.	No mitigation measures are required.	Less than significant impact.	None.
Impact GEO-2: The proposed project would not be subject to seismic-related ground failure, including liquefaction.	No mitigation measures are required.	Less than significant impact.	None.
Impact GEO-3: The proposed project would not be subject to strong seismic ground shaking with implementation of mitigation.	No mitigation measures are required.	Less than significant impact.	None.
Impact GEO-4: The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards with implementation of mitigation.	**MM GEO-1:** Development constructed on slopes or unstable soil shall be reduced through conformance with the following: • The permanent slopes shall have a slope ratio not greater than 2:1 (horizontal: vertical). • Fill slopes constructed in natural ground with a gradient greater than 20 percent shall require construction of a keyway at the toe of the fill slope. Upon fill slope grading, the slope faces shall be overbuilt, cut to grade, and compacted by back-rolling with a loaded sheepfoot roller at vertical intervals not to exceed 4 feet and track-walked upon completion.	Less than significant impact.	**MM GEO-1:** Prior to construction, as part of the grading plan

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	• The outer surface of the slope shall be compacted to at least 90 percent relative compaction. • To enhance the surficial stability of the fill slopes, slopes shall be planted or otherwise covered as soon as feasible after grading before construction of any structures begin. The use of purely Non-Plastic (NP) artificial earth materials such as poorly graded sand on slope faces shall be prohibited. Slopes constructed in this manner shall be inspected and verified by a Geotechnical Consultant after grading for the possible presence of loose sands, weak rock, fractures, adverse bedding, groundwater seepage or other forms of weakness that may affect slope stability.		
Impact GEO-5: The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence with implementation of mitigation.	**MM GEO-2**: On-site soils shall be prepared in conformance with the following: • On-site soils within the footprint of the single-family residential structures shall be overexcavated and removed uniformly to a minimum depth of 3 feet below existing grade or finish grade, whichever is lower, in areas exposing older alluvium (Map Symbol Qoal). • On-site soils within the footprint of the single-family residential structures shall overexcavated and removed uniformly up to 10 feet below existing grades in areas of younger alluvium (Map Symbol Qal–i.e., canyon bottoms), and replaced with properly compacted fill such that the building foundations and slabs are supported on a re-	Less than significant impact.	**MM GEO-2:** During on-site soil preparation for the proposed project

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	engineered, compacted fill layer. The excavation bottoms shall be near uniform. • The overexcavation shall extend laterally to a minimum distance equal to the depth of removal beyond the perimeters of the single-family residential structures, wherever possible. The project shall adhere to the requirements on the quality, corrosivity and expansion potential of fill soils identified in Sections 6.2.9 and 6.2.10 of the 2018 Associated Soils Engineering, Inc. (ASE) Geotechnical Investigation Report. • Soils exposed at excavation bottoms to a depth of 1 foot shall be scarified, reworked and recompacted to exhibit a minimum 90 percent relative compaction with a minimum moisture content of 2 percentage points above the optimum moisture content prior to receiving fill placement. The exposed excavation bottoms shall be observed, tested, and approved by a Geotechnical Consultant prior to placing compacted fill. In case of the presence of localized loose soils, the overexcavation shall be deepened accordingly to delete the loose soil condition. However, this deepened overexcavation shall be terminated when the exposed native, undisturbed soils exhibit a natural relative compaction greater than 85 percent, subject to the testing and inspection by the representative from the Geotechnical Consultant. • A Geotechnical Consultant shall be provided with appropriate foundation details and staking during grading to verify that depths and/or locations of the overexcavation are		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	adequate. For areas on-site that grading stipulated in both Sections 6.2.1 and 6.2.3 of the 2018 ASE Geotechnical Investigation Report apply, the more stringent grading criteria between the two sections shall govern. • The depth of overexcavation shall be reviewed by a Geotechnical Consultant during the actual construction. Any subsurface obstruction, buried structural elements, and unsuitable material encountered during grading, shall be immediately brought to the attention of the Geotechnical Consultant for proper exposure, removal, and processing. The additional site grading recommendations and requirements in the 2018 ASE Geotechnical Investigation Report shall be implemented.		
Impact GEO-6: The proposed project would not be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard with implementation of mitigation.	Implementation of **MM GEO-1**.	Less than significant impact.	**MM GEO-1:** Prior to construction, as part of the grading plan
Impact GEO-7a: The proposed project would not change topography or ground surface relief features with implementation of mitigation.	Implementation of **MM GEO-1**.	Less than significant impact.	**MM GEO-1:** Prior to construction, as part of the grading plan
Impact GEO-7b: The proposed project would not create cut or fill slopes greater than 2:1 or higher than 10 feet with implementation of mitigation.	Implementation of **MM GEO-1**.	Less than significant impact.	**MM GEO-1:** Prior to construction, as part of the grading plan
Impact GEO-7c: The proposed project would not result in grading that affects or negates subsurface sewage disposal systems.	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact GEO-8a: The proposed project would not result in substantial soil erosion or loss of topsoil with implementation of mitigation.	**MM GEO-3:** On-site soils shall be prepared in conformance with the following: • Any soil re-used or imported as fill for the completion of subgrade preparation shall consist of predominantly "Very Low" to "Low" expansive, granular material exhibiting an Expansion Indices (EI) not greater than 35, and shall exhibit a relatively uniform gradation, free of debris, particles greater than 4 inches in maximum dimension, organic matter, or other deleterious materials. For the excavated on-site soils to be blended such that the resultant EI is not exceeding 35, a general rule-of-thumb would be blending 1 part of excavated site soils with 2 parts of imported "Very Low" (EI ≤ 20) expansive soils. • Unless otherwise approved by a Geotechnical Consultant, the fill materials shall also comply with the soil corrosivity criteria tabulated in the 2018 Associated Soils Engineering, Inc. (ASE) Geotechnical Investigation Report. All blended material and potential import material must be approved by a Geotechnical Consultant or their representative, prior to its use and arrival on-site, and shall be subject to continuing verification testing during site grading. • Unless indicated otherwise, existing site soils having EI ≥ 35 are considered suitable for reuse as fill in depths greater than 2 feet from finish subgrade during site grading within the footprint of the buildings and flatworks. Any fill placed within 2 feet from finish subgrade shall exhibit a tested EI ≤ 35. This shall be achieved by using approved "Very Low" to "Low" site soils, imported "Very Low" to "Low" expansive soils, or blended site soils	Less than significant impact.	**MM GEO-3:** During on-site soil preparation for the proposed project

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	and imported soils with a tested "Very Low" expansive soils, as per discussed previously in Section 6.2.3 of the 2018 ASE Geotechnical Investigation Report. There is no depth restriction to the reuse of site soils for fill in nonstructural or landscape areas, and backfilling of utility trenches. • All fill soils shall also be (1) free of debris, particles greater than 4 inches in maximum dimension, organic matter, or other deleterious materials, (2) not environmentally contaminated, and (3) adequately moisture conditioned to permit achieving the required compaction. No nesting of large particles (2 to 4-inch size) shall be permitted during backfilling operations. • On-site soils and import materials approved for use as fill shall be placed in horizontal lifts not exceeding 8 inches in loose thickness, moisture conditioned to a minimum of 2 percentage points above optimum moisture content for "Low" expansive import or blended material, as well as for untreated site clayey/silty soils, and to a minimum of 1 percentage point above optimum moisture content for "Very Low" expansive import material, and compacted to a minimum 90 percent relative compaction, per American Society of Testing and Materials (ASTM) D1557-12 Test Method, unless otherwise stated. The additional imported soils and backfilling recommendations and requirements in the 2018 ASE Geotechnical Investigation Report shall be implemented.		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact GEO-8b: The proposed project would not be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial direct or indirect risks to life or property with implementation of mitigation.	**GEO-4:** In view of minimizing the potential adverse effects associated with the project being located on expansive soils, preparation of on-site soils shall be reduced through conformance with the applicable recommendations from the 2018 Associated Soils Engineering, Inc. (ASE) Geotechnical Investigation Report. Laboratory test results on near surface soil samples indicates a "Very Low" to "Medium" soil expansion potential (i.e., Expansion Indices [EI] = 10 to 55 per American Society of Testing and Materials [ASTM] D4829-11 Test Method) as defined in 2016 California Building Standards Code (CBC). While foundation and slab design recommendations presented in this Soils Report have taken into account the likely presence of "Medium" expansive soils on-site, the soil expansion potential shall be re-evaluated through additional testing during or after rough grading operations to verify the design adequacy of foundation or slab-on-grade against the re-tested soil expansion potential as heterogeneity within soil mass is not uncommon. Lightly loaded structural elements such as shallow foundations and slabs could undergo movements that might potentially result in distress due to the "Medium" expansion potential of site clayey/silty soils. Design provisions presented in Sections 6.2 and 6.3 of the 2018 ASE Geotechnical Investigation Report, such as the use of "Very Low" to "Low" expansive fill beneath lightly loaded structural elements, adequate reinforcements, deeper foundations, or other measures, may help alleviate the effects of soils expansion.	Less than significant impact.	**MM GEO-4:** During on-site soil preparation for the proposed project

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	The additional expansive soils recommendations and requirements in the 2018 ASE Geotechnical Investigation Report shall be implemented.		
Impact GEO-8c: The proposed project would not have soils incapable of adequately supporting use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	No mitigation measures are required.	No impact.	None.
Impact GEO-9: The proposed project would not be impacted by or result in an increase in wind erosion and blowsand, either on or off-site.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.8—Greenhouse Gas Emissions			
Impact GHG-1: The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment with implementation of mitigation.	No mitigation measures are required.	Less than significant impact.	None.
Impact GHG-2: The proposed project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases with implementation of mitigation.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.9—Hazards and Hazardous Materials			
Impact HAZ-1a: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials with implementation of mitigation.	**MM HAZ-1:** Prior to the initiation of construction for the project, the developer shall implement the following applicable recommendations made in the Phase I Environmental Site Assessment (Phase I ESA) dated November 30, 2015: • Remove the septic tanks and appropriately backfill the resulting excavations.	Less than significant impact.	**MM HAZ-1**: Prior to the initiation of construction for the proposed project

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	• Clear brush and debris-filled depressions and drainage courses. • Remove rubble and construction materials and remnant concrete cart paths from the project site and adjacent areas. • Locate and remove all transite pipe from the fairways in, around, and adjacent to areas proposed for development.		
Impact HAZ-1b: The proposed project would not 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.	No mitigation measures are required.	Less than significant impact.	None.
Impact HAZ-1c: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan.	No mitigation measures are required.	Less than significant impact.	None.
Impact HAZ-1d: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school.	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact HAZ-1e: The proposed project would not 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 not create a significant hazard to the public or the environment.	No mitigation measures are required.	Less than significant impact.	None.
Impact HAZ-2a: The proposed project would not result in an inconsistency with an Airport Master Plan.	No mitigation measures are required.	No impact.	None.
Impact HAZ-2b: The proposed project would require review by the Airport Land Use Commission.	No mitigation measures are required.	Less than significant impact.	None.
Impact HAZ-2c: 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, the proposed project would not result in a safety hazard for people residing or working in the project area.	No mitigation measures are required.	Less than significant impact.	None.
Impact HAZ-2d: For a project within the vicinity of a private airstrip, or heliport, the proposed project would not result in a safety hazard for people residing or working in the project area.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.10—Hydrology and Water Quality			
Impact HYD-1a: The proposed project would violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact HYD-1b: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of this basin.	No mitigation measures are required.	Less than significant impact.	None.
Impact HYD-1c: The proposed project would not substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces.	No mitigation measures are required.	Less than significant impact.	None.
Impact HYD-1d: The proposed project would not result in substantial erosion or siltation on-site or off-site.	No mitigation measures are required.	Less than significant impact.	None.
Impact HYD-1e: The proposed project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site.	No mitigation measures are required.	Less than significant impact.	None.
Impact HYD-1f: The proposed project would not 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.	No mitigation measures are required.	Less than significant impact.	None.
Impact HYD-1g: The p proposed roject would not impede or redirect flood flow.	No mitigation measures are required.	Less than significant impact.	None.
Impact HYD-1h: In flood hazard tsunami, or seiche zones, the proposed project would not risk the release of pollutants due to project inundation.	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact HYD-9: The proposed project would not conflict with a water quality control plan or sustainable groundwater management plan.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.11—Land Use and Planning			
Impact LUP-1: The proposed project would not cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact.	No mitigation measures are required.	Less than significant impact.	None.
Impact LUP-2: The proposed project would not disrupt or divide the physical arrangement of an established community (including a low-income or minority community).	No mitigation measures are required.	No impact.	None.
Section 3.12—Mineral Resources			
Impact MIN-1: The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State.	No mitigation measures are required.	Less than significant impact.	None.
Impact MIN-2: The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.	No mitigation measures are required.	Less than significant impact.	None.
Impact MIN-3: The proposed project would not potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines.	No mitigation measures are required.	No impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Section 3.13—Noise			
Impact NOI-1: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the proposed project would not expose people residing or working in the project area to excessive noise levels.	No mitigation measures are required.	No impact.	None.
Impact NOI-2: For a project located within the vicinity of a private airstrip, the proposed project would not expose people residing or working in the project area to excessive noise levels.	No mitigation measures are required.	No impact.	None.
Impact NOI-3: The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies with implementation of mitigation.	**MM NOI-1a:** To reduce potential construction noise impacts, the following best management practices, standard to all grading permits, shall be implemented: • The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment. • The construction contractor shall locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. • The construction contractor shall prohibit unnecessary idling of internal combustion engines.	Less than significant impact.	**MM NOI-1a:** During construction before the completion of the proposed project **MM NOI-1b**: During construction before the completion of the proposed project

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	• The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. • The construction contractor shall limit construction activities to hours between 7:00 a.m. and 6:00 p.m. during non-holiday weekdays and Saturdays, and between 10:00 a.m. and 6:00 p.m. on Sundays and federal holidays. **MM NOI-1b:** To ensure that the project will meet the interior noise level standard of 45 dBA CNEL, the proposed project shall ensure all habitable rooms located within 350 feet of the centerline of SR-91 are supplied with a mechanical ventilation system (heating, ventilation, and air conditioning [HVAC] system) to allow the windows to remain closed for prolonged periods of time.		
Impact NOI-4: The proposed project would not generate excessive groundborne vibration or groundbourne noise levels.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.14—Paleontological Resources			
PALEO-1: The proposed project would not directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature with implementation of mitigation.	**MM PALEO-1a: Stop Construction Upon Encountering Paleontological Materials** A qualified Paleontological Monitor shall be present during all phases of ground disturbance in excess of 10 feet in order to check for the inadvertent exposure of fossils or other resources	Less than significant impact.	**MM PALEO-1a:** During grading and excavation activities for the proposed project **MM PALEO-1b:** Prior to grading activities

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	of paleontological value. This may be followed by regular periodic or "spot-check" paleontological monitoring during ground disturbance as needed. In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 100-foot radius of the find shall be temporarily halted or diverted. The applicant's construction contractor shall notify a qualified Paleontologist to examine the discovery. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The Paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The Paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the applicant determines that avoidance is not feasible, the Paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to Riverside County for review and approval prior to implementation, and the applicant shall adhere to the recommendations in the plan. **MM PALEO-1b: Prepare a Paleontological Resource Impact Mitigation Program** The applicant shall provide the County Geologist a Paleontological Resource Impact Mitigation Program (PRIMP) prior to grading activity. The PRIMP shall include specific steps to be taken that would mitigate impacts to paleontological		**MM PALEO-1c:** During all phases of ground disturbance

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	resources consistent with the Riverside County General Plan: Multipurpose Open Space Element. **MM PALEO-1c: Monitoring** A qualified Paleontological Monitor shall be present during all phases of ground disturbance in excess of 10 feet in order to check for the inadvertent exposure of fossils or other resources of paleontological value. This may be followed by regular periodic or "spot-check" paleontological monitoring during ground disturbance as needed.		
Section 3.15—Population and Housing			
Impact POP-1: The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	No mitigation measures are required.	No impact.	None.
Impact POP-2: The proposed project would not create a demand for additional housing, particularly housing affordable to households earning 80 percent or less of the County's median income.	No mitigation measures are required.	No impact.	None.
Impact POP-3: The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	No mitigation measures are required.	Less than significant impact.	None.
Section 3.16—Public Services			
Impact PS-1a: The proposed project would not result in substantial adverse physical	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
impacts associated with the provision of new or physically altered government 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 fire protection.			
Impact PS-1b: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 Sheriff services.	No mitigation measures are required.	Less than significant impact.	None.
Impact PS-1c: The proposed project would not result insubstantial adverse physical impacts associated with the provision of new or physically altered government 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 schools.	No mitigation measures are required.	No impact.	None.
Impact PS-1d: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered government	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
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 libraries.			
Impact PS-1e: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 health services.	No mitigation measures required.	Less than significant impact.	None.
Section 3.17—Recreation			
Impact REC-1a: The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	No mitigation measures required.	Less than significant impact.	None.
Impact REC-1b: The proposed project would not Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	No mitigation measures are required.	Less than significant impact.	None.
Impact REC-1c: The proposed project would not be located within a Community Service Area or recreation and park district with a	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Community Parks and Recreation Plan (Quimby fees).			
Impact REC-2a: The proposed project would include the construction or expansion of a trail system.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.18—Transportation and Traffic			
Impact TRANS-1: The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	No mitigation measures are required.	Less than significant impact.	**None.**
Impact TRANS-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	No mitigation measures are required.	Less than significant impact.	None.
Impact TRANS-3: The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	No mitigation measures are required.	Less than significant impact.	**None.**
Impact TRANS-4: The proposed project would not cause an effect upon, or a need for new or altered maintenance of roads.	No mitigation measures are required.	Less than significant impact.	None.
Impact TRANS-5: The proposed project would not cause an effect upon circulation during the project's construction.	No mitigation measures are required.	Less than significant impact.	
Impact TRANS-6: The proposed project would not result in inadequate emergency access or access to nearby uses.	No mitigation measures are required.	Less than significant impact.	None.
Section 3.19—Tribal Cultural Resources			

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact TCR-1: The project site would not be listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1 (k).	No mitigation measures are required.	Less than significant impact.	None.
Impact TCR-2: The proposed project would not be a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe) with implementation of mitigation.	Implement **MM CUL-1** and **MM CUL-2**.	Less than significant impact.	**MM CUL-1:** During construction activities **MM CUL-2**: During project development.
Section 3.20—Utilities and Service Systems			
Impact USS-1a: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage systems, whereby the construction or relocation would cause significant environmental effects.	No mitigation measures are required.	Less than significant impact.	None.
Impact USS-1b: The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	No mitigation measures are required.	Less than significant impact.	None.
Impact USS-2a: The proposed project would not require or result in the construction of new wastewater treatment facilities,	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects.			
Impact USS-2b: The proposed project would result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	No mitigations measures are required.	Less than significant impact.	None.
Impact USS-3a: The proposed project would not generate solid waste in excess of State or Local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	No mitigation measures are required.	Less than significant impact.	None.
Impact USS-3b: The proposed project would comply with federal, State, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan).	No mitigation measures are required.	Less than significant impact.	None.
Impact USS-4: The proposed project would not impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects: A. Electricity B. Natural Gas C. Communication Systems D. Street Lighting	No mitigation measures are required.	Less than significant impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
E. Maintenance of public facilities, including roads F. Other governmental services			
Section 3.21—Wildfire If located in or near a State Responsibility Area or lands classified as Very High Fire Hazard Severity Zone:			
Impact WILD-1: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	No mitigation measures are required.	Less than significant impact.	None.
Impact WILD-2: Due to slope, prevailing winds, and other factors, the proposed project would not exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	No mitigation measures are required.	Less than significant impact.	None.
Impact WILD-3: The proposed project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	No mitigation measures are required.	Less than significant impact.	None.
Impact WILD-4: The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	No mitigation measures are required.	Less than significant impact.	None.
Impact WILD-5: The proposed project would not expose people or structures to significant risk of loss, injury, or death involving wildland fires.	No mitigation measures are required.	Less than significant impact.	None.

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CHAPTER 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) in order to evaluate the potential environmental impacts associated with the implementation of the Trails at Corona (State Clearinghouse [SCH] No. 2018071048). This document is prepared in conformance with CEQA (California Public Resources Code [PRC], § 21000, *et seq*.) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, § 15000, *et seq.*). This Draft EIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the proposed project.

1.1.1 - Overview

The proposed project consists of a mixed-use community, including open space with parks and trails, residential areas of various densities, and retail/commercial. The proposed project provides for six planning areas, five of which are within the County of Riverside and one in the City of Corona. Chapter 2, Project Description, presents a complete description of the proposed project.

1.1.2 - Purpose and Authority

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

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

- Table of Contents
- Executive Summary
- Introduction
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Alternatives to the Proposed Project
- Other CEQA Considerations

1.1.3 - Lead Agency Determination

The Riverside County Planning Department is designated as the lead agency for the proposed project. CEQA Guidelines Section 15367 defines the lead agency as ". . . the public agency, which has

the principal responsibility for carrying out or approving a project." Other public agencies may use this Draft EIR in the decision-making or permit process and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by FirstCarbon Solutions (FCS), an environmental consultant. Prior to public review, the document was extensively reviewed and evaluated by the Riverside County Planning Department. This Draft EIR reflects the independent judgment and analysis of the Riverside County Planning Department as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel is provided in Chapter 8 of this Draft EIR, respectively.

1.2 - Scope of the Draft EIR

This Draft EIR addresses the potential environmental effects of the proposed project. The Riverside County Planning Department issued a Notice of Preparation (NOP) for the proposed project on July 20, 2018, which circulated between July 20, 2018, and August 27, 2018, for the statutory 30-day public review period. A second NOP was issued on July 24, 2018, pursuant to CEQA Guidelines, Sections 15082(a), 15103, and 15375 due to a discrepancy regarding the Public Scoping Meeting date on the original NOP. The NOP was circulated to responsible and trustee State agencies, local organizations, and interested individuals, to identify issues to be addressed in the Draft EIR. The 30-day circulation and review period required by CEQA concluded on August 27, 2018.

The scope of this Draft EIR includes the potential environmental impacts identified in the NOP's and issues raised by agencies and the public in response to the NOP's. The NOP's are contained in Appendix A of this Draft EIR.

A total of 42 comment letters were received in response to the NOP's. They are listed in Table 1-1 and provided in Appendix A of this Draft EIR.

Table 1-1: NOP Comment Letters

Agency/Organization	Author	Date
Public Agencies		
City of Chino Hills	Joann Lombardo, Community Development Director	July 30, 2018
Southern California Gas Company (SoCalGas)	Luis Ramirez, Pipeline Planning Assistant	August 1, 2018
Temecula Band of Luiseño Mission Indians Pechanga Reservation	Tuba Ebru Ozdil, Cultural Analyst	August 2, 2018
City of Eastvale	Bryan Jones, Interim City Manager	August 2, 2018
County of Riverside	Heather Thomson, County Archaeologist	August 6, 2018
Native American Heritage Commission	Gayle Totton, Associate Governmental Program Analyst	August 8, 2018
Riverside County Department of Waste Resources	Jose Merlan, Urban/Regional Planner III	August 8, 2018

Agency/Organization	Author	Date
City of Corona	Joanne Coletta, Community Development Director	August 22, 2018
South Coast Air Quality Management District	Daniel Garcia, Program Supervisor	August 22, 2018
South Coast Air Quality Management District	Robert Dalbeck, Assistant Air Quality Specialist	August 22, 2018
Individuals		
NI Associates, Inc.	Ned Ibrahim, Principal/Senior Project Manager	August 7, 2018
Wittwer Parkin	Pearl Kan	August 23, 2018
Resident	Juan and Norma Montesinos	July 21, 2018
Resident	Kelly McDonald	July 21, 2018
Resident	Efrain Meraz	July 21, 2018
Resident	Cara Rau	July 22, 2018
Resident	Susan Richins	July 22, 2018
Resident	Kevin Osborn	July 22, 2018
Resident	Karen Ulmer	July 23, 2018
Resident	Krupali Tejura	July 23, 2018
Resident	Andrew Sundsboe	July 23, 2018
Resident	Megan Maciha	July 23, 2018
Resident	Michael Della Rocco	July 23, 2018
Resident	Michelle Della Rocco	July 23, 2018
Resident	Mark Harris	July 24, 2018
Resident	Olga Hernandez	July 25, 2018
Resident	Lisa Vorell	July 25, 2018
Resident	Jenny Mota	July 25, 2018
Resident	Debbie Prosch	July 25, 2018
Resident	Sanyo Francis	July 25, 2018
Resident	Sarah Nelson	July 26, 2018
Resident	Mark Stebbins	July 26, 2018
Resident	Chun-Ho Kuo	July 28, 2018
Resident	Deborah K. Hill	July 31, 2018
Resident	Katie Keating	July 31, 2018
Resident	Esther Becerra	August 1, 2018
Resident	Teri L. Gibson	August 6, 2018

Agency/Organization	Author	Date
Resident	Michele Wentworth, Greater Corona Traffic Alliance	August 7, 2018
Resident	John Donaldson	August 20, 2018
Resident	John Donaldson	August 23, 2018
Resident	Lolly Janoski	August 23, 2018
Resident	Dean Stamp	August 25, 2018

1.2.1 - Scoping Meeting

Pursuant to CEQA Guidelines Section 15082(c)(1), the County of Riverside held a public scoping meeting for the proposed project on Tuesday, August 7, 2018, at the County Administrative Center, Board Chambers, First Floor, 4080 Lemon Street, Riverside, CA 92501. The meeting was duly noticed in the NOP that was sent to the Office of Planning and Research and each responsible and trustee agency on July 24, 2018, by certified mail. The NOP was also posted on the County of Riverside and City of Corona's website and directly mailed to public agencies and private parties who requested notice and posted at the City of Corona. The scoping meeting comment cards are provided in Appendix A. Table 1-2 provides the names of attendees to the scoping meeting.

Table 1-2: Scoping Meeting Attendees

Attendee Name	Attendee Name	Attendee Name	Attendee Name
Cleon Benson	Patricia Ellsworth	Steve Nolan	Karen Spiegel
Roger Benvenuti	Christine Fuehrer	Karen Parker	Dean Stamp
Yousuf Bhaghani	Kory Hernandez	Dale Pluong	Jim Steiner
Angela Cherry	Stanley Hill	Edward Raya	Juergen Stens
Joanne Coletta	Linda Holdaway	Michael Reader	Nick Sutera
Rory Connell	Dave Husted	Fauzia Rizvi	Karen Ulmer
Cathy Donaldson	William Larsen	Jamie Shaver	Loretta Ward
John Donaldson	Joe Morgan	Wes Speek	Matt Woody
Source: FCS 2018.			

1.2.2 - Environmental Issues Determined not to be Significant

CEQA Guidelines Section 15063 states that if a lead agency determines that an EIR will clearly be required for a project, an Initial Study is not required; therefore, no Initial Study was prepared for this project. The Draft EIR is comprehensive in nature, evaluating all subject issues from the CEQA Appendix G Checklist. In particular, the following issues are addressed in the Draft EIR:

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

The Draft EIR addresses the short and long-term effects of the proposed project on the environment and includes a cumulative impact analysis. Alternatives to the proposed project are also evaluated in the Draft EIR. Mitigation has been proposed for any potentially significant impacts. After the public comment period and finalization of the Draft EIR, a Mitigation Monitoring and Reporting Program (MMRP) will be developed as required by Section 15097 of the CEQA Guidelines.

1.2.3 - Currently Proposed Project

As detailed in the NOP, the project applicant originally proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, immediately prior to publication of the Draft EIR, the project applicant subsequently indicated that the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Nonetheless, to provide a robust analysis of reasonably foreseeable development this Draft EIR, including technical studies with the exception of traffic, analyzes the development of Planning Areas 2 and 6 consistent with the NOP and original project approval.

Section 3.18, Transportation, evaluates the development of Planning Areas 1, 2, 3, 4, and 5. Planning Area 6 was not included in the traffic analysis in order to provide additional details regarding reasonably foreseeable project-specific impacts and related improvements and mitigation measures. In all sections, the Draft EIR analyzes reasonably foreseeable development.

CEQA's requirement that a project description be consistent does not mean that the project cannot change as it proceeds through CEQA review. See, e.g., *East Sacramento Partnership for a Livable City v. City of Sacramento* (2016) 5 CA5th 281, 292; *Western Placer Citizens for an Agric. & Rural Env't v County of Placer* (2006) 144 CA4th 890, 898; *Kings County Farm Bureau v City of Hanford* (1990) 221 CA3d 692, 736. As the court noted in *County of Inyo v. City of Los Angeles* (1977) 71 CA3d 185, 199,

> The CEQA reporting process is not designed to freeze the ultimate proposal in the precise mold of the initial project; indeed, new and unforeseen insights may emerge during investigation, evoking revision of the original proposal.

An EIR's project description may contemplate a larger project than the lead agency ultimately approves. See *Dusek v. Redevelopment Agency* (1985) 173 CA3d 1029, 1040. A lead agency may also approve changes to a project that reduce its size or environmental impacts without revising the EIR's project description. *Western Placer Citizens for an Agric. & Rural Env't v. County of Placer* (2006) 144 CA4th 890, 905. It is within the scope of the Lead Agency's discretionary authority to consider proposed changes to the project description that would reduce the size of the project and/or reduce impacts.

1.3 - Organization of the Draft EIR

This Draft EIR is organized into the following main sections:

- **Chapter ES: Executive Summary.** This section includes a summary of the proposed project and alternatives to be addressed in the Draft EIR. A brief description of the areas of controversy and issues to be resolved, and overview of the MMRP, in addition to a table that summarizes the impacts, mitigation measures, and level of significance after mitigation, are also included in this section.
- **Chapter 1: Introduction.** This chapter provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.
- **Chapter 2: Project Description.** This chapter includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the proposed project are also provided.
- **Chapter 3: Environmental Impact Analysis.** This chapter analyzes the environmental impacts of the proposed project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Chapter 3 are as follows:
  - **Section 3.1—Aesthetics, Light, and Glare:** Addresses the potential visual impacts of development intensification and the overall increase in illumination produced by the proposed project.
  - **Section 3.2—Agriculture Resources and Forest Resources:** Addresses the project's potential impacts on local agriculture/farmland and forest land.
  - **Section 3.3—Air Quality:** Addresses the potential air quality impacts associated with project implementation, as well as consistency with South Coast Air Quality Management District (SCAQMD) policies. In addition, the section also evaluates project emissions of toxic air contaminants.
  - **Section 3.4—Biological Resources:** Addresses potential impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat; and impacts on listed, proposed, and candidate threatened and endangered species.
  - **Section 3.5—Cultural Resources:** Addresses potential impacts on historical resources, archaeological resources, and burial sites.

- **Section 3.6—Energy**: Addresses the potential impacts to the environment due to wasteful, inefficient, or unnecessary consumption of energy as well as compliance with renewable energy plans.
- **Section 3.7—Geology and Soils:** Addresses the potential impacts the proposed project may have on soils and assesses the effects of project development in relation to geologic and seismic conditions.
- **Section 3.8—Greenhouse Gas Emissions:** Addresses the potential impacts of the proposed project regarding the generation of greenhouse gas (GHG) emissions and energy.
- **Section 3.9—Hazards and Hazardous Materials:** Addresses the potential for the presence of hazardous materials or conditions on the project site and in the project area that may have the potential to impact human health and potential wildfires.
- **Section 3.10—Hydrology and Water Quality:** Addresses the potential impacts of the proposed project on local hydrological conditions, including drainage areas, and changes in the flow rates.
- **Section 3.11—Land Use and Planning:** Addresses the potential land use impacts associated with division of an established community and consistency with the adopted land use plan, policies, or regulations.
- **Section 3.12—Mineral Resources:** Addresses potential project impacts on known mineral resources and availability of locally important mineral resources.
- **Section 3.13—Noise:** Addresses the potential noise impacts during construction and at project buildout from mobile and stationary sources. The section also addresses the impact of noise generation on neighboring uses.
- **Section 3.14—Paleontological Resources:** Addresses the potential direct or indirect impacts of the proposed project on any unique paleontological resource, site, or unique geologic features at the project site.
- **Section 3.15—Population and Housing:** Addresses the potential impact of development in terms of population growth, employment opportunities, housing affordability, and the jobs-to-housing balance.
- **Section 3.16—Public Services:** Addresses the potential impacts upon public services, including fire protection, law enforcement, schools, parks, and recreational facilities.
- **Section 3.17—Recreation:** Addresses the potential impacts on the local and regional roadway system, public transportation, bicycle, and pedestrian access.
- **Section 3.18—Transportation and Traffic:** Addresses the impacts on the local and regional roadway system, public transportation, bicycle, and pedestrian access.
- **Section 3.19—Tribal Cultural Resources:** Addresses impacts on tribal cultural resources listed or eligible for the California Register of Historical Resources, or in local register of historical resources.
- **Section 3.20—Utilities and Services Systems:** Addresses the potential impacts upon service providers, including fire protection, law enforcement, water supply, wastewater, solid waste, and energy providers.
- **Section 21—Wildfire:** Addresses the potential impact of the proposed project on emergency response plans as well as the ways the proposed project could contribute to wildfire hazards.

- **Chapter 4: Cumulative Effects.** This chapter discusses the cumulative impacts associated with the proposed project, including the impacts of past, present, and probable future projects.
- **Chapter 5: Alternatives to the Proposed Project.** This chapter compares the impacts of the proposed project with three land use project alternatives: the No Project Alternative/Existing Land Use Activities Alternative, the Development within the existing Land Use Designations Alternative, and the Reduced Intensity Mixed-Use Project Alternative. An environmentally superior alternative is identified. In addition, alternatives initially considered but rejected from further consideration are discussed.
- **Chapter 6: Other CEQA Considerations.** This chapter provides a summary of significant environmental impacts, including unavoidable and growth-inducing impacts. This chapter discusses the cumulative impacts associated with the proposed project, including the impacts of past, present, and probable future projects. In addition, the proposed project's energy demand is discussed.
- **Chapter 7: Persons and Organizations Consulted/List of Preparers.** This chapter also contains a full list of persons and organizations that were consulted during the preparation of this Draft EIR. This chapter also contains a full list of the authors who assisted in the preparation of the Draft EIR, by name and affiliation.
- **Appendices.** The Draft EIR appendices includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

1.4 - Documents Incorporated by Reference

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

- City of Corona 2020-2040 General Plan
- City of Corona General Plan Technical Update EIR
- County of Riverside 2020 General Plan
- County of Riverside 2015 General Plan EIR No. 521, as amended
- Riverside County Fire Department Strategic Plan
- Western Municipal Water District Urban Water Management Plan
- City of Corona Department of Water and Power Urban Water Management Plan

These documents are specifically identified in Section 9, References, of this Draft EIR. In accordance with CEQA Guidelines Section 15150(b), the General Plan, and the referenced documents and other sources used in the preparation of the Draft EIR are available for review at all locations listed below at the addresses shown in Section 1.6 below.

1.5 - Documents Prepared for the Proposed Project

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

- Biological Regulatory Overview. 2016. Glenn Lukos Associates.
- Fault Investigation. 2019. Associated Soil Engineering, Inc.
- Phase I Cultural Resources Assessment. 2018. FirstCarbon Solutions.
- Preliminary Water Report. 2018. KWC Engineers.
- Preliminary Hydrological Analysis. 2024. KWC Engineers.
- Preliminary Project Specific Water Quality Management Plan. 2024. KWC Engineers.
- Phase I Environmental Site Assessment. 2015. G3SoilWorks.
- Phase II Environmental Assessment Revised. 2016. G3SoilWorks.
- Phase II Environmental Assessment Above Ground Fuel Tank Soil Sampling Report. 2019. G3SoilWorks.
- Phase II Environmental Site Assessment Report Clarification. 2024. G3SoilWorks.
- Preliminary Water Report. 2018. KWC Engineers.
- Preliminary Geotechnical Investigation. 2016. Associated Soils Engineering, Inc.
- Report of Supplemental Geotechnical Investigation and Grading Plan Review. 2018. Associated Soils Engineering, Inc.
- Trails at Corona (SP00397) Traffic Impact Analysis. 2024. Urban Crossroads.
- Trails at Corona Specific Plan Vehicle Miles Traveled (VMT) Analysis. 2021. Urban Crossroads.
- Trails at Corona Focused Traffic Assessment. 2024. Urban Crossroads.
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis. 2022. FirstCarbon Solutions, Inc.
- Western Riverside County MSHCP Riparian/Riverine Assessment Report. 2024. FirstCarbon Solutions, Inc.

1.6 - Review of the Draft EIR

Upon completion of the Draft EIR, the Riverside County Planning Department filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (PRC § 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding jurisdictions, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at the Riverside County Planning Department Offices and other municipal offices. The address for each location is provided below:

Riverside County Planning Department
4080 Lemon Street, 12th Floor
Riverside, CA 92502-1409
Hours:
Monday through Friday: 8:00 a.m.–5:00 p.m.

Riverside County Public Library (Louis Robidoux Library)
5840 Mission Boulevard
Jurupa Valley, CA 92509
Hours:
Monday through Friday: 8:00 a.m.–5:00 p.m.

City of Corona Public Library
650 S Main Street
Corona, CA 92882
Hours:
Monday-Thursday 10:00 a.m.-8:00 p.m.
Friday 10:00 a.m.–5:00 p.m.
Saturday 1:00 p.m.–5:00 p.m.

City of Riverside Public Library
3900 Mission Inn Avenue
Riverside, CA 92501
Hours:
Tuesday through Saturday:
10:00 a.m.–6:00 p.m.

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

Russell Brady, Principal Planner
Riverside County Planning Department
4080 Lemon Street, 12th Floor
Riverside, CA 92502-1409
Phone: 951.955.0314
Email: rbrady@rivco.org

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

CHAPTER 2: PROJECT DESCRIPTION

This Draft Environmental Impact Report (Draft EIR) analyzes the potential environmental effects of implementation of the Trails at Corona Specific Plan in the County of Riverside and City of Corona.

2.1 - Project Location and Setting

2.1.1 - Location

The proposed Trails at Corona Specific Plan (proposed project) is located on the former Mountain View Golf Course, south of State Route (SR) 91, and generally west of Avenida Del Vista, in both unincorporated Riverside County and the City of Corona (see Exhibit 2-1 and Exhibit 2-2).

The project site comprises approximately 104.8 acres, of which approximately 79.9 acres are within the County of Riverside's jurisdiction and approximately 24.9 acres are within the City of Corona's jurisdiction. The County of Riverside portion of the site is located within the unincorporated community of Coronita. The City of Corona generally surrounds the site to the north, east, south, and west; however, the site is connected to and adjacent to the County of Riverside unincorporated communities of Green River and Prado Basin. The site has regional access via SR-91.

The Assessor's Parcel Numbers (APNs) for the project site are as follows:

City of Corona: APN 103-020-007, -008, -009, -010, and -011.

Riverside County: APN 102-050-004, -008, -021, -022, -024; 102-112-008, 102-113-015, 102-160-003, 102-203-007, 102-192-017, and 103-301-010.

2.2 - Project Characteristics

2.2.1 - Proposed Project

The project applicant proposes a mixed-use community, including residential areas of various densities that would be 100 percent age-restricted to active-adults 60 years old and older, as well as a retail/commercial site with associated parking, and approximately 40 acres of open space with parks and trails. (Exhibit 2-3a, Exhibit 2-3b).

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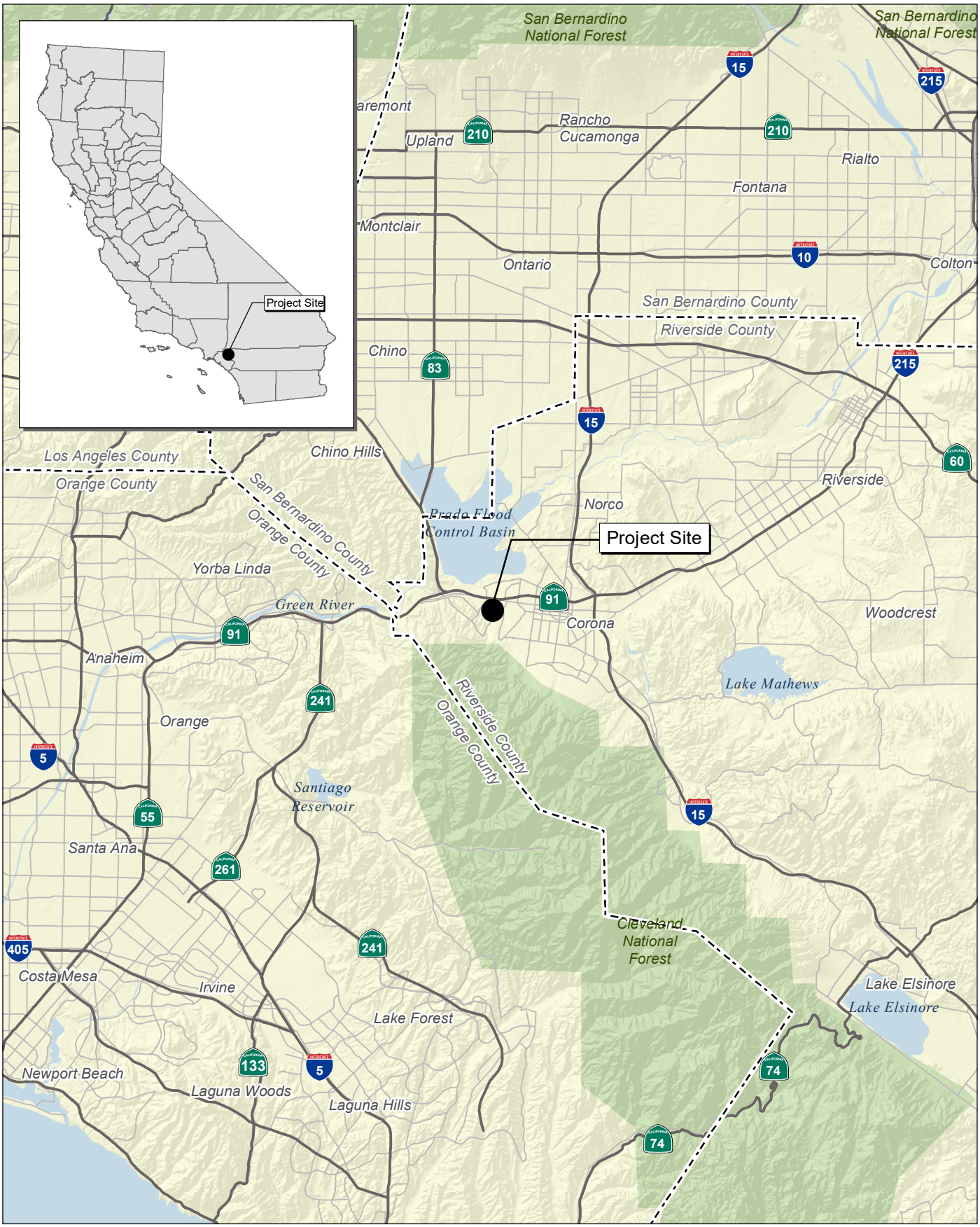

Source: Census 2000 Data, The CaSIL.

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Exhibit 2-1
Regional Location Map

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Source: ESRI Aerial Imagery.

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1,000 500 0 1,000 Feet

Exhibit 2-2
Local Vicinity Map

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Source: Urban Arena, 2021.

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Exhibit 2-3a
Original Planning Areas

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Source: Urban Arena, 2024.

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Exhibit 2-3b
Revised Planning Areas

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Residential Uses

The proposed project is divided into six Planning Areas, five of which are within the County of Riverside and one in the City of Corona; each Planning Area contains open space in the form of parks and trails open to the entire community.

The following uses are proposed in each of the six planning areas:

- Planning Area 1: 66 two-family residences.
- Planning Area 2: At the time of the publication of the Notice of Preparation (NOP), and during the preparation of this Draft EIR, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick-service food retail use in Planning Area 2. However, Planning Area 2 is now proposed to remain as open space and improvements are limited to a proposed 96-inch storm drain from Planning Area 1 that continues through Planning Area 2 to connect to an existing storm drain line. No development permits or approvals are being sought in Planning Area 2. Nonetheless, consistent with the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 contemplated in the NOP when evaluating potential environmental impacts. This Draft EIR will also identify where the alternate proposal, under which Planning Area 2 remains undeveloped, would result in a different impact conclusion.
- Planning Area 3: 115 single-family detached residences, 50 two-family residences, and community center.
- Planning Area 4: 47 single-family detached residences.
- Planning Area 5: 31 single-family detached residences.
- Planning Area 6 (City of Corona): At the time of the publication of the NOP, and during the preparation of this Draft EIR, the project applicant proposed the development of 56 single-family detached residences and a new trail system in Planning Area 6. However, Planning Area 6 is now proposed to remain as open space and no development of Planning Area 6 is contemplated. Nonetheless, consistent with the original project proposal, this Draft EIR analyzes the full development of Planning Area 6 contemplated in the NOP when evaluating potential environmental impacts. This Draft EIR will also identify where the alternate proposal, under which Planning Area 6 remains undeveloped, would result in a different impact conclusion.

All proposed dwelling units would be 100 percent active adult and age-restricted to 60 years old and older under the proposed project.

Open Space, Parks, and Trails

As noted above, each Planning Area contains open space in the form of parks and trails open to the general public. Parks would include a combination of walking, running and biking trails, tot lots, active sport courts, or dog parks. Park benches and large greenspaces would be provided for passive recreation.

The parks would also provide water quality restoration for storm and residential runoff, passively cleaning runoff as it percolates into the ground or before it enters the storm drain system. Additionally, some park areas would serve as detention basins, providing increased flood protection and flow control.

Circulation

The project proposes access from Frontage Road, Kirkwood Drive, Paseo Grande, and Pine Crest Drive.

2.2.2 - Existing Project Site Land Uses, Land Use Designation, and Zoning

The project site is currently vacant and has been vacant since the closing of the Mountain View Golf Course in 2009.

Planning Areas 1, 2, 3, 4, and 5 of the project site have a County of Riverside 2020 General Plan Land Use Designation of Open Space Recreation (OS-R). The County of Riverside zoning for these Planning Areas is One-Family Dwelling (R-1). The project includes a proposed General Plan Amendment from OS-R to Medium Density Residential (MDR), as well as a change of zoning from R-1 to S-P.

Planning Area 6, in the City of Corona, has a General Plan Land Use Designation of Low Density Residential (LDR) and is zoned as Agricultural (A). No change to these designations is proposed.

2.2.3 - Surrounding Land Uses, Land Use Designations and Zoning

Planning Area 1–Planning Area 5

Planning Area 1 through Planning Area 5 are within the County of Riverside:

West

The majority of the land uses immediately to the west are residential uses, as well as school facilities (Coronita Elementary School).

- **Riverside County General Plan Land Use Designation:** MDR
- **Riverside County Zoning:** R-1

North

Immediately north of Planning Area 1 is SR-91; land uses beyond SR-91 include commercial (McDonald's, Arco station, In-N-Out-Burger, Nissan, and Hyundai car dealerships) and industrial land uses. Land uses to the north of Planning Areas 2 through 5 are residential.

- **City of Corona General Plan Land Use Designation:** General Commercial (GC) and Light Industrial (LI)
- **City of Corona Zoning:** Commercial (C-3) and Light Industrial (M-1)

East

The majority of the land uses immediately to the east are residential uses, as well as school facilities (Cesar Chavez Academy).

- **Riverside County General Plan Land Use Designation:** Medium Density Residential (MDR)
- **Riverside County Zoning:** R-1

South

Land uses immediately to the south include residential uses, as well as vacant parcels.

- **City of Corona General Plan Land Use Designation:** General Commercial (GC) and Light Industrial (LI)
- **City of Corona Zoning:** Single-Family Residential (R1-9.6) and Agricultural (A)

Planning Area 6

Planning Area 6 is within the City of Corona:

North

The majority of the land uses immediately to the north are residential, as well as vacant parcels

- **City of Corona General Plan Land Use Designation:** LDR
- **City of Corona Zoning:** R1-9.6
- **Riverside County General Plan Land Use Designation:** OS-R
- **Riverside County Zoning:** R-1

West, East, and South

Land uses immediately to the west, east, and south are all residential uses.

- **City of Corona General Plan Land Use Designation:** LDR
- **City of Corona Zoning:** Single-Family Residential (R1-9.6 and R1-7.2)

2.3 - Project Objectives

The objectives of the proposed project are to:

- Develop a specific plan to guide development in underutilized, currently vacant parcels in Riverside County.
- Convert a vacant, underutilized property into a master-planned mixed-use community in alignment with County of Riverside 2020 General Plan Policy LU 33.1.
- Generate new, additional property tax revenues for Riverside County through the conversion of unused property.

- Provide a range of housing options, including single-family housing and two-family residences in alignment with County of Riverside 2020 General Plan Policy LU 28.
- Provide active adult age-restricted housing within Riverside County.
- Help meet the respective Regional Housing Need Allocation (RHNA) of Riverside County, as set out in their Housing Element.
- Create a walkable, mixed-use environment, by providing the opportunity for retail and commercial spaces within the community in alignment with County of Riverside 2020 General Plan Policies LU 29.3 and C 4.7.
- Develop an open space, parks, and trail system for public use, allowing both existing and new residents to take advantage of the development in alignment with County of Riverside 2020 General Plan Policy LU 3.1d.
- Provide stormwater, and residential water runoff, treatment through natural processes, using the open space, parks, and trail system in alignment with the County of Riverside 2020 General Plan Policies LU 5.2. and LU 5.3.
- Promote land use compatibility with neighboring residential uses by creating landscaped setbacks as buffers, and the development of a compatible housing density (units per acre) to the adjoining uses in alignment with County of Riverside 2020 General Plan Policy LU 7.1.
- Provide a circulation system that is complementary to local residential neighborhoods and encourages pedestrian and bicycle circulation in alignment with County of Riverside 2020 General Plan Policies LU 13.6 and C 16.4a.
- Provide an infrastructure system, including sewer, water, and storm drain systems that will adequately serve full buildout of the proposed project in alignment with County of Riverside 2020 General Plan Policies LU 5.1.
- Provide adequate off-street parking for all on-site uses, so as to not impact the development's neighbors in alignment with County of Riverside 2020 General Plan Policy C 3.26.
- Complete General Plan Initiating Proceedings adopted on April 18, 2017.

2.4 - Intended Uses of This Draft EIR

This Draft EIR is being prepared by the Riverside County Planning Department to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed project. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, Riverside County is the lead agency for the proposed project and has primary discretionary authority over the proposed project and project approvals. The Draft EIR is intended to address all public infrastructure improvements and all future development that are within the parameters of the proposed project. Once certified, it is the intent of the Lead Agency that this EIR may be used pursuant to any of CEQA's streamlining or exemption processes. Future activities within the scope of the project description and analysis provided in this EIR would not require further environmental documentation.

2.4.1 - Discretionary and Ministerial Actions

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

- General Plan Amendment (GPA) No. 1174
- Change of Zone No. 1800014
- Specific Plan No. 397
- Tentative Parcel Map No. 37501, 37502, 37503, and 37504
- Environmental Impact Report No. CEQ180053

If the full development of Planning Area 2 were to occur, the project application would require the following discretionary approvals and actions:

- Tentative Parcel Map No. 37519
- Tentative Tract Map No. 37519

Subsequent ministerial actions would be required for the implementation of the proposed project including issuance of grading and building permits as well as plot plans for future site development.

2.4.2 - Responsible and Trustee Agencies

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

- City of Corona
- California Department of Fish and Wildlife

Actions that are necessary to implement the project that must be taken by other agencies are:

- FEMA Conditional Letter of Map Revision (CLOMR)
- Regional Water Quality Control Board (RWQCB) Waste Discharge Permit

If the full development of Planning Area 6 were to occur, the following actions would be necessary to implement the project that must be taken by other agencies:

- City of Corona Tentative Parcel Map No. 37500
- City of Corona approval of a Water Quality Management Plan (WQMP)
- City of Corona approval of a Storm Water Pollution Prevention Plan (SWPPP)

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CHAPTER 3: ENVIRONMENTAL IMPACT ANALYSIS

Organization of Issue Areas

This Draft Environmental Impact Report (Draft EIR) provides analysis of impacts for those environmental topics where it was determined in the Notice of Preparation, or through subsequent analysis that the proposed project would result in "potentially significant impacts." Sections 3.1 through 3.21 discuss the environmental impacts that may result with approval and implementation of the proposed project.

Issues Addressed in this Draft EIR

The following environmental issues are addressed in Chapter 3:

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

Level of Significance

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

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

Impact Analysis and Mitigation Measure Format

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

Summary Heading of Impact

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

Impact Analysis

A narrative analysis follows the impact statement. In some cases, the impact discussion will reference State and federal regulations and agency policies that would fully or partially reduce the impact. In addition, policies and programs from applicable local land use plans that partially or fully address impacts may be cited and the proposed project would be evaluated in the context of these requirements.

Level of Significance Before Mitigation

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

Mitigation Measures

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

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

Level of Significance After Mitigation

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

Abbreviations used in the mitigation measure numbering are:

Code	Environmental Issue
AES	Aesthetics, Light, and Glare
AG	Agriculture Resources and Forest Resources
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources

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

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3.1 - Aesthetics, Light, and Glare

This section describes the existing aesthetics and potential effects from project implementation on the site and its surroundings. Descriptions and analysis in this section are based upon existing site conditions, project site plans/exhibits, the County of Riverside 2020 General Plan, and the City of Corona 2020-2040 General Plan. The purpose of this section is to describe the existing aesthetic environment and to analyze any potential impacts that the project may have on aesthetics and visual resources. Comments during the Notice of Preparation and Scoping meeting on aesthetics, light, and glare were taken into consideration in the analysis below.

3.1.1 - Existing Conditions

Visual Character

Regional Setting

The project site is located within the Temescal Canyon Area Plan (TCAP) of the County of Riverside. As indicated in the TCAP, the area comprises canyon, hills, and mountains. The canyon contains a majority of the existing and planned development. The Santa Ana Mountains, Chino Hills, and Gavilan Hills create the backdrop for these communities. The Santa Ana Mountains and the Cleveland National Forest add a powerful visual element to the western side of the area, as it forms complex peaks and ridges on the western boundary. The Chino Hills are a mountain range on the border of Orange, Los Angeles, and San Bernardino counties, with a small portion in Riverside County. The Gavilan Hills to the east are characterized by rock outcroppings and sparse low-lying vegetation, while the Santa Ana Mountains to the west make up a large portion of the Cleveland National Forest.

Local Setting

The approximately 104.8-acre project site contains privately owned, undeveloped land that was formerly the Mountain View Golf Course until its closure in 2009. Since 2009, the project site has been vacant with the exception of trash and homeless encampments.

Views of the project site include small slopes with vegetation, bare soil, and trees, as well as man-made structures including a pond and the former golf course's clubhouse. The project site is predominantly covered by depauperate communities of non-native grasses and various types of non-native trees. The western, southern, and eastern portions of the property consist of a majority of existing residential dwellings and institutional dwellings, such as schools. The northern area opens up to State Route (SR) 91.

Light and Glare

The introduction of light from interior and outdoor uses can be a nuisance to adjacent residential areas and can diminish the view of the clear night sky. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into a light source. Light spill is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated.

The general project site is currently relatively dark at night, as there is minimal lighting on-site. The surrounding area has general residential light and glare. Light and glare from SR-91, the nearest highway, is shielded by a block wall. Additionally, the TCAP does not identify the project site as being within the Mount Palomar Nighttime Lighting Policy Area.

Viewshed

A viewshed includes all the surface areas visible from an observer's viewpoint, as well as views from SR-91. The majority of views to the project site can be seen from homes surrounding the project site and from Serfas Club Drive, Paseo Grande, and Kirkwood Drive. The project site is visible from the surrounding residential dwellings as the majority of their backyards are immediately adjacent to the project site; views of the project site include the small hills, non-native grasses, and trees, in line with its former use as a golf course. The project site is not visible from SR-91. Views from the project site currently consists of the surrounding residential dwellings.

3.1.2 - Regulatory Framework

State Regulations

In 1963, the Legislature created the California Scenic Highway Program, the purpose of which is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The State laws governing the Scenic Highway Program are in the California Streets and Highways Code (Sections 260–263). A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The status of a proposed State Scenic Highway changes from eligible to officially designated when the local governing body applies to the California Department of Transportation (Caltrans) for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway (Caltrans 2013b). Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies.

Local Regulations

County of Riverside 2020 General Plan

The County of Riverside contains abundant natural visual resources, including low-lying valleys, mountain ranges, rock formations, rivers, and lakes. Scenic backdrops include hillsides and ridges that rise above urban or rural areas or highways. Scenic vistas are points accessible to the general public that provide a view of the countryside. These features are often enjoyed via Riverside County's many roadways. Because of the visual significance of many of these areas, several roadways have been officially recognized as either Eligible or Designated State or County Scenic Highways. Enhancement and preservation of Riverside County's scenic resources will require careful application of scenic highway standards along Official Scenic Routes. The County of Riverside 2020 General Plan Land Use Element sets forth the following applicable policies that are relevant to aesthetics, light, and glare:

Land Use Element

LU 9.3 Incorporate open space, community greenbelt separators, and recreational amenities into Community Development areas in order to enhance recreational opportunities and community aesthetics and improve the quality of life.

LU 14.1 Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.

LU 21.3 Ensure that development does not adversely impact the open space and rural character of the surrounding area.

LU 26.1 Require that development be designed to blend with undeveloped natural contours of the site and avoid an unvaried, unnatural, or manufactured appearance.

Multipurpose Open Space Element

OS 5.6 Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.

OS 9.3 Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes.

OS 21.1 Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County.

OS 22.1 Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses.

OS 22.4 Impose conditions on development within scenic highway corridors requiring dedication of scenic easements consistent with the Scenic Highways Plan, when it is necessary to preserve unique or special visual features.

Circulation Element

C 16.3 Require that trail alignments either provide access to or link scenic corridors, schools, parks, bus stops, transit terminals, park and ride commuter lots, and other areas of concentrated public activity, where feasible.

C 19.1 Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan.

The Temescal Canyon Area Plan and Applicable Policy Areas

The project site is located within the TCAP, which is a component of the County of Riverside 2020 General Plan Land Use Element that provides area-specific policies and requirements to address

local conditions and issues. The TCAP encompasses the City of Corona, as well as several unincorporated communities within Riverside County. Within the TCAP, some areas are identified as "policy areas." According to the TCAP, a policy area is a portion of an Area Plan that contains special or unique characteristics that merit detailed attention and focused policies. The project site is not covered under a designated policy area. Policies within the TCAP related to aesthetics are provided below.

TCAP 10.1 Adhere to Riverside County's lighting requirements for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Palomar Observatory.

TCAP 14.1 Protect the scenic highways in the Temescal Canyon Area Plan from change that would diminish the aesthetic value of adjacent properties in accordance with policies in the Scenic Corridors sections of the Land Use, Multipurpose Open Space, and Circulation Elements (including State Route 71 and State Route 91).

TCAP 23.2 Identify and preserve the ridgelines that provide a significant visual resource for Temescal Canyon through adherence to the Hillside Development and Slope section of the General Plan Land Use Element and the Scenic Resources section of the Multipurpose Open Space Element.

County of Riverside Zoning Ordinance

The County of Riverside Zoning Ordinance includes standards and regulations pertaining to the buildout and aesthetics of areas in accordance with their zoning designations. Article XVIIa SP Zone (Specific Plan), notes that development standards must abide by the Specific Plan, which is reviewed and approved by the County.

County of Riverside Ordinance Number 655

The intent of Riverside County Ordinance No. 655 is to restrict the permitted use of certain light fixtures within a defined distance from Palomar Observatory, that emit undesirable light rays into the night sky, which have a detrimental effect on astronomical observation and research. As noted above, the project site is not located within the Mount Palomar Nighttime Lighting Policy Area.

County of Riverside Ordinance Number 915

The intent of Riverside County Ordinance No. 915 is to provide minimum requirements for outdoor lighting in order to reduce light trespass, and to protect the health, property, and well-being of residents in the unincorporated areas of the County. The proposed project would be required to abide by Ordinance No. 915.

City of Corona 2020-2040 General Plan

The City of Corona is situated on a river plain and is bounded on three sides by the Santa Ana Mountains, Gavilan Hills, and the Chino Hills, which dominate most viewsheds from within the City. Additionally, the Temescal Wash bisects the City. This combination and intersection of mountains, valleys, and plains create a visually dynamic landscape of varying shapes, colors, and textures. These visual features of Corona are an essential part of Corona's community design features that

contribute to quality of life. The City of Corona 2020-2040 General Plan sets forth the following applicable policies that are relevant to aesthetics, light, and glare:

Land Use Chapter

LU 1.5 Accommodate land use development in balance with the preservation and conservation of open spaces for recreation, aesthetic relief, natural resource value, and public safety (such as floodways, seismic fault zones, and other).

LU-2.4 Maintain and reinforce the City's urban form and pattern of viable commercial and business centers and residential neighborhoods; prevent incompatibilities in land uses that could detract from the appearance, quality, or functioning of each area.

LU-4.2 Distribute and phase the timing of development to protect the viability, character, and quality of existing residential neighborhoods, commercial districts, and industrial/business areas.

LU-5.4 Encourage preparation of Specific Plans for large vacant lands planned for residential, commercial, industrial, or mixed-use purposes, or for the reuse of existing multiple properties where the intent is to establish a cohesive district.

LU-5.13 Require that new master-planned residential subdivisions incorporate parks, greenways, and open spaces as character-defining amenities for their residents, emphasizing the retention of natural landforms and important plant communities.

LU-7.7 Require that single-family detached and attached housing be well designed in a manner that will enhance and maintain a high level of neighborhood quality in consideration of the following principles:

- Avoidance of "box-like" structures through the articulation and modulation of building elevations and masses.
- Variation of rooflines and architectural design treatment of all elevations that are visible from public places.
- Use of entries and windows on street-facing elevations to visually "open" the house to the neighborhood.
- Minimize the use of paving for driveways and parking areas in front yard setbacks.

LU-7.10 Require that fencing and walls in residential neighborhoods meet high aesthetic and safety standards in consideration of the following principles:

- Fencing and walls should not obstruct vehicle sight lines and create hazards for pedestrians and bicyclists.
- Fencing and walls should be compatible with or complement the architectural design of nearby structures.
- Fencing and walls shall be regularly maintained, repaired, and kept in excellent condition.

- Fencing and walls should make a positive contribution to the character of the neighborhood.

LU-9.3 Encourage the integration of a mix of housing types into new residential neighborhoods, which may include single-family homes, townhomes, row houses, live-work, and multi-family units to the extent the integration is appropriate and complements surrounding land uses.

LU-9.7 Site and design new residential developments to enhance neighborhood quality by:

- Establishing a network of streets and pedestrian paths that promote neighborhood activity, internal access, and connectivity to surrounding areas.
- Enhancing the visual quality and character of street frontages through extensive landscape and reduction of the visual dominance of garages.
- Promoting architectural diversity for residential, commercial, and other supporting uses consistent with established design guidelines.
- Varying heights and rooflines of new development (residential, commercial, etc.) along the street frontages to allow for visual interest.

LU-9.9 Require that residential neighborhoods be designed to ensure visual and physical compatibility among their various uses, as well as adjoining neighborhoods, commercial and industrial districts, and open spaces.

LU-9.10 Require that new residential development pay its fair share of the cost of capital improvements, public facilities, and services needed to serve that development. Ensure that funding mechanisms for landscape maintenance and improvement are required for each.

Community Design Chapter

CD-6.4 Require that projects be designed and sited to maintain the natural topographic, physiographic, and aesthetic viewshed characteristics of those features, utilizing the following conditions:

- Minimize the area and height of cuts and fills to the extent technically achievable, ensuring that slope tops and bottoms are rounded and facilitate a smooth and seamless transition where natural and built slopes intersect.
- Configure development sites to mimic predevelopment natural topography by clustering sites and individual units and avoiding extensive fragmentation of steep slopes, “stair stepping” and varying terraces of structures, and/or other design practices.
- Minimize the size of flat development pads in site grading to that necessary to accommodate the building footprint, a reasonable amount of usable outdoor space, and structural and site stability.

- Encourage building architectural design styles, forms and shapes, materials, and building siting to complement rather than visually dominate their landscape setting.
- Minimize the height of retaining walls, and design with smooth flowing forms that follow topography and with material colors and textures that blend in with the surrounding landscape.
- Plant hillside and canyon slopes with natural species of drought-tolerant plants to soften the visual impact of land grading, retaining walls, structures, and roads and maintain (to the extent feasible) natural vegetation.
- Restore disrupted vegetation, wildlife habitat, natural water courses, drainage swales, and other important viewshed features. Vegetation should be arranged in informal masses to create a textured slope characteristic of natural chaparral mountain slope terrain.

CD-7.2 Regulate new development, substantial rehabilitation, or renovation projects through provisions that require an analysis of impacts of development on the quality of the City's designated highways and corridors.

Environmental Resources Chapter

ER-8.4 Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes.

3.1.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, as well as Riverside County's environmental checklist, aesthetics impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Scenic Resources

a) Have a substantial effect upon a scenic highway corridor within which it is located.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view.

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

Mount Palomar Observatory

a) Interfere with the nighttime use of the Mount Palomar Observatory, as protected through Riverside County Ordinance No. 655.

Other Lighting Issues

a) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

b) Expose residential property to unacceptable light levels.

3.1.4 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Scenic Highway

Impact AES-1a:	**Have a substantial adverse effect upon a scenic highway corridor within which it is located?**

Source(s): Project Application Materials, County of Riverside 2020 General Plan, including Figure C-8 "Scenic Highways," City of Corona 2020-2040 General Plan, and City of Corona 2020-2040 General Plan Technical Update EIR.

Impact Analysis

County of Riverside (Planning Area 1–5)

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas. However, the development of Planning Area 2 is no longer contemplated and this acreage would remain undeveloped as open space. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.

Many corridors in the County traverse its scenic resources. The enhancement of aesthetic experiences for residents and visitors to the County has a significant role in promoting tourism, which is important to the County's overall economic future. Because of the visual significance of some of these areas, several roadways have been officially recognized as either State or County designated or eligible scenic highways. Enhancement and preservation of the County's scenic resources require careful application of scenic highway standards along Official Scenic Routes. As described in the County of Riverside 2020 General Plan Figure C-8 "Scenic Highways," three highway segments are designated Potentially State Eligible Scenic Highways in the vicinity of the project site:

- Interstate 15 (I-15) Freeway, from the City of Corona, south to the San Diego County line.
- SR-91 from its intersection with I-15 Freeway west to the Riverside County line.

- SR-71 from SR-91 north to the Riverside County line.

SR-91 is located immediately north of the project site and is listed by the State as eligible for designation as a State Scenic Highway. The status of SR-91 as eligible State Scenic Highways only means that it is eligible to be designated when a local governing body applies to Caltrans for such an approval and adopts a Corridor Protection Plan. The "eligibility" itself provides no additional distinction or requirements that need to be analyzed under CEQA. However, the proposed project is not visible from SR-91 as there is a continuous block wall that shields the proposed project site. Therefore, the proposed project would have a less than significant impact on scenic views from SR-91. Additionally, scenic views from I-15 Freeway and SR-71 would not be impacted by the proposed project, as I-15 is located approximately 3.35 miles east of the proposed project and SR-71 is located approximately 1.36 miles northwest of the proposed project.

As such, impacts would be less than significant.

City of Corona (Planning Area 6)
At the time of this analysis, the project applicant proposed the development of 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 6.

As described in the City of Corona 2020-2040 General Plan, the scenic highway plan for the City is a composite of vistas, activity centers, corridors and pathways, edge areas, and entry and approach areas. The plan provides for the establishment, development, and protection of the City's highways and corridors for scenic purposes. The plan includes the following elements:

- **Scenic corridors:** Visible land area outside the highway right-of-way; generally described as the view from the road.
- **Rural designated scenic highway:** A route that traverses a defined corridor within which natural scenic resources and aesthetic values are protected and enhanced.
- **Urban designated scenic highway.** A route that traverses a defined visual corridor that offers an unhindered view of attractive urban scenes.
- **Unique functions of a scenic highway.** Views for enjoyment of highway users, visual relief from urban development, connection between activity centers, City identification, and accents to entranceways and special areas of the City.

Table 3.1-1 describes the Scenic Corridors in the City of Corona and their locations.

Table 3.1-1: Scenic Corridors in the City of Corona

Scenic Corridors	Location
Local Corridors	
Grand Boulevard	Views of the City's historic core, particularly historic residential estates along the edge of the circle, and mature trees in the parkway.
Main Street from 3rd Street to southern terminus	Views of the City's historic core, the Santa Ana Mountains to the west and south, and the low foothills of the San Bernardino Mountains to the east.
Ontario Avenue, from Mangular to State Street	Views of the Santa Ana Mountains to the west and the low foothills of the San Bernardino Mountains to the east.
Chase Drive from Foothill Parkway to Spring Meadows Drive[1]	Views of the Santa Ana Mountains to the west and the low foothills of the San Bernardino Mountains to the east.
Foothill Parkway, from Paseo Grande to Bedford Canyon Road[2]	Views looking north to the Prado Basin on the west and the hills and valleys leading toward the San Bernardino Mountains in the north and east.
Magnolia, from Ontario Avenue to Rimpau Avenue	Views of the Santa Ana Mountains and the narrow pass between the San Bernardino Mountain foothills at the northwest end of the City.
Green River Road, from SR-91 to Palisades Drive[1]	Views of a narrow canyon.
Palisades Drive, from Green River to Serfas Club Drive[1]	Views of a narrow canyon.
Eagle Glen Parkway, from I-15 to southern terminus[1]	Views of the City from the top of the east slope of Eagle Glen.
State and County Corridors	
SR-71	SR-71 traverses on the east side of the Chino Hills, offering view of preserved hillsides on western edge of Chino Hills State Park.
SR-91 and I-15	The SR-91 offers views of the Santa Ana Canyon (SR-91) and the Norco/Corona Hills; I-15 offers view of Temescal Valley.
Cajalco Road	Cajalco Road is a County-eligible scenic corridor that extends eastward from the I-15 at the City's border up to the Gavilan Plateau.

Source: City of Corona 2020-2040 General Plan Technical Update EIR (December 2019)
Notes:
[1] New local scenic corridors under the City of Corona 2020-2040 General Plan update
[2] Foothill Westerly extension was not designated a scenic corridor in the 2004 General Plan, but under the 202-2040 General Plan Update the route is designated as a local.

The closest designated local corridor to the proposed project is Ontario Avenue, the Ontario Avenue/Mangular Avenue intersection is located approximately 2,820 feet southeast of the project site. However, the proposed project would not impact scenic views from Ontario Avenue, due to the surrounding built-up area that prevents the project site from being visible from Ontario Avenue. The

remaining designated local scenic highways corridors are located further from the project site than Ontario Avenue, and therefore would not be impacted by implementation of the proposed project.

As previously mentioned for Planning Areas 1-5, the nearest Officially Designated State Scenic Highway is SR-91, between SR-55 to east of the City of Anaheim's city limit, located approximately 3.28 miles west of the project site. Therefore, the proposed project would not impact scenic views from the adjacent portion of SR-91, as that portion is not an Officially Designated State Scenic Highway. As such, the proposed project would have less than significant impacts upon a State Scenic Highway.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Scenic Resources

Impact AES-1b:	**Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?**

Source(s): Project Application Materials, County of Riverside 2020 General Plan, including Figure C-8 "Scenic Highways," County of Riverside General Plan 2015 EIR, and City of Corona 2020-2040 General Plan.

Impact Analysis

County of Riverside (Planning Area 1–5)

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas. However, the development of Planning Area 2 is no longer contemplated and this acreage would remain undeveloped as open space. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.

The County of Riverside's General Plan 2015 EIR defines a scenic vista in Western Riverside County as open views of local foothills or mountains. No outstanding scenic vistas and visual features, as defined by the County of Riverside 2020 General Plan, are located on the project site. The proposed project would not obstruct any designated scenic vistas, as the proposed project would be constructed on the former golf course, which is at a lower elevation than the surrounding properties. Exhibit 3.1-1 shows all of the Planning Areas and Exhibits 3.1-2 through 3.1-6 provide a typical cross section view of the proposed project located in Riverside County, showing that any existing vistas of local foothills or mountains from existing dwellings would not be impaired.

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Source: Urban Arena, 2021.

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Exhibit 3.1-1
Planning Areas

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Source: Urban Arena, 2021.

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Exhibit 3.1-2
Planning Area 1

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Source: Urban Arena, 2021.

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Exhibit 3.1-3
Planning Area 2

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Source: Urban Arena, 2021.

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Exhibit 3.1-4
Planning Area 3

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Source: Urban Arena, 2021.

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Exhibit 3.1-5
Planning Area 4

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Source: Urban Arena, 2021.

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Exhibit 3.1-6
Planning Area 5

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The County of Riverside 2020 General Plan Policy OS 9.3 requires the maintenance and conservation of superior examples of native trees, natural vegetation, stands of established trees, and other ecosystem features. While not necessarily an Aesthetics Policy, the proposed project does include some hydrologic features and both riparian and non-riparian vegetation. As outlined in Section 3.4, Biological Resources, the proposed project provides mitigation to protect wildlife species, conserve species habitat and riparian areas, and would abide by local County of Riverside policies pertaining to local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. While there are trees located on the proposed project site, they are non-native trees, as such, there are no unique trees, rockcroppings or unique landmarks on the site.

Additionally, the project site has been vacant with the exception of trash and homeless encampments since the golf course's closure in 2009; the proposed project would enhance the project site through the construction of dwelling units, open space, and trails improvements. As such, the proposed project would not significantly impact designated scenic resources by the County of Riverside, including scenic views of, or scenic views from, the project site. Impacts would be less than significant.

City of Corona (Planning Area 6)

At the time of this analysis, the project applicant proposed the development of 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 6.

According to the City of Corona 2020-2040 General Plan, a wide variety of scenic vistas associated with natural features that dominate the visual image of the City. Significant vistas include Prado Basin views from Sierra del Oro, the basin and canyon areas on the west; views south to the Santa Ana Mountains from the I-15/SR-91 freeway interchange; southern view of the foothills from major streets south of Ontario Avenue; and views of San Gabriel Mountains from higher elevations south of Ontario Avenue. The proposed project is not located in or along any of the significant vistas outlined in the City of Corona 2020-2040 General Plan, as the proposed project is not located in the Sierra del Oro, nor is it visible from the view south from the I-15/SR-91 interchange, nor is located on a high elevation south of Ontario Avenue.

Additionally, the project site was formerly a developed golf course with non-native plants and manicured greens. The property consists of remnant fairways, cart paths, a vacant clubhouse, and other features, including, now abandoned, former man-made golf course ponds. The majority of the site appears to be regularly mowed. It is not a natural open space area. Further, it has been vacant and with the exception of trash and homeless encampments since the golf course's closure in 2009; the proposed project would enhance the project site through the construction of dwelling units and public open space and trails improvements.

As outlined above and shown in Exhibit 3.1-7, Planning Area 6 within the City of Corona would be constructed as single-story, detached single-family homes, a lower elevation than surrounding existing dwellings. Therefore, the proposed project would not obstruct existing scenic vistas.

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Source: Urban Arena, 2021.

FIRSTCARBON SOLUTIONS™

Exhibit 3.1-7
Planning Area 6

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As such, the proposed project would not significantly impact designated scenic resources in the County of Riverside, including scenic views of, or scenic views from, the project site, nor would it impact any scenic vistas identified by the City of Corona. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Visual Character or Quality

Impact AES-1c:	**In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

Source(s): Project Application Materials, County of Riverside 2020 General Plan, including Figure C-8 "Scenic Highways," and City of Corona 2020-2040 General Plan.

Impact Analysis

Implementation of the proposed project would represent a change from a disturbed, former golf course use that became vacant after the golf course closed to residential, commercial, and open space uses on the entirety of the approximately 104.8-acre site. The project site is surrounded by built-up urban areas. The following discusses the potential conflict with applicable zoning and other regulations governing scenic quality.

The portion of the proposed project in Riverside County (Planning Areas 1 through 5) would construct a mixed-use community containing approximately 33.38 acres of residential, 0.78 acre of commercial, and open space and trail uses. The County of Riverside has zoned the project site as One-Family Dwellings (R-1). A requested change of zoning from R-1 to S-P has been submitted to the County as part of the entitlements process for the project. The portion of the project site in the City of Corona (Planning Area 6) would include approximately 13.53 acres of residential uses as well as open space and trails. The project proposes a Change of Zone from Agriculture (A) to S-P under the Trails at Corona Specific Plan, which has been submitted as part of the entitlements process for the proposed project.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas 2 and of 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated

and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Upon approval of the zone change, the project site would be subject to the Specific Plan development standards and regulations. The following are the maximum building heights per each Planning Area:

- Planning Area 1 = 30 feet
- Planning Area 2 = consistent with County of Riverside General Commercial
- Planning Area 3 = 24 feet
- Planning Area 4 = 30 feet
- Planning Area 5 = 30 feet
- Planning Area 6 = 30 feet

Furthermore, the Trails at Corona Specific Plan document includes additional development standards that would govern setbacks, lot sizes. These development standards are imposed so implementation of the proposed project would not degrade scenic quality within the project site and surrounding areas. Therefore, upon approval of the requested zone change, the proposed project would be consistent with the development standards regarding scenic quality as outlined in the Trails at Corona Specific Plan document.

Additionally, the proposed project would comply with all applicable guidelines related to the scenic quality of the development. The proposed project would establish design guidelines that includes policies, standards, and guidelines for land development within the project site in conformance with Section 65450 *et seq.* of the Government Code, the County of Riverside General Plan, and County Ordinance No. 348 (Land Use Ordinance) as well as Riverside County Ordinance No. 348.4896. (SP Zoning Ordinance). The design guidelines for Planning Area 2 would be the same as those standards identified in the County of Riverside Article IX, Section 9.4 of Ordinance No. 348.4896 titled General Commercial. Further, the development standards for the parks and open space areas would be the same as those identified in Article VIII(e), Section 8.101 of Ordinance No. 348 of the County of Riverside except for Article VIII(e) 8.101D VIII(e), Section 8.101D does not apply. As such impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Mount Palomar Observatory

Impact AES-2: Interfere with the nighttime use of the Mount Palomar Observatory, as protected through Riverside County Ordinance No. 655?

Source(s): Project Application Materials, GIS database, Ord. No. 655 (Regulating Light Pollution), County of Riverside 2020 General Plan, and City of Corona 2020-2040 General Plan.

Impact Analysis

The Mount Palomar Observatory, located in San Diego County, requires darkness so that the night sky can be viewed clearly. The presence of the observatory necessitates unique nighttime lighting standards in the area. The TCAP includes Policy TCAP 10.1, which requires developments to limit light leakage and spillage that may obstruct or hinder the view. Additionally, the Riverside County Lighting Ordinance No. 655 regulates the lighting methods to be used to reduce light and glare within 45 miles of the Mount Palomar Observatory. The proposed project is approximately 55.11 miles northwest of the Mount Palomar Observatory at its closest point, outside the 45-mile area regulated by Riverside County Lighting Ordinance No. 655. Because of the project site's distance to the Mount Palomar Observatory, the proposed project would not be subject to Riverside County Lighting Ordinance No. 655. Based on the distance, there would be no impact to the Mount Palomar Observatory. As such, no impact would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Light or Glare

Impact AES-3a: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Source(s): Project Application Materials, On-site Inspection, County of Riverside 2020 General Plan, and City of Corona 2020-2040 General Plan.

Impact Analysis

The project site currently contains minimal lighting, in line with its former use as a golf course. However, various street and residential lighting exist along its perimeter and surrounding area, as the project site is surrounded by residential, commercial, and institutional uses. Implementation of the proposed project would introduce new streetlights for the internal circulation system and new residential lighting for the 365 dwelling units throughout Planning Areas 1 through 6.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Vehicle traffic on the proposed roadways and the windows from the residential and commercial development could create potential sources of light and glare. Further, intermittent traffic on the new roadways is a potential source for increased glare in the area; however, as the proposed project is located at a lower elevation than the surrounding developments, the new light and glare would be localized to the proposed project. Building windows from the residential and commercial development is another potential source for increased glare, however, all building windows in the residential and commercial developments would be glazed in order to reduce heat and energy use from cooling, which would also reduce the incidence of glare. In summary, there would be a nominal change from the existing conditions.

Riverside County Ordinance No. 915 requires all outdoor luminaries to be located adequately shielded and directed such that no direct light falls outside the parcel of origin or onto the public right-of-way. The proposed project would be required to comply with Ordinance No. 915 and would only direct light within its own boundaries. Furthermore, the proposed project would be required to comply with Chapter 8.80 of the Riverside County Code of Ordinances which provides minimum requirements for outdoor lighting in order to reduce light trespass, and to protect the health, property, and well-being of residents in the unincorporated areas of the County. Therefore, the proposed project would not create a new source of substantial light which would adversely affect day or nighttime views in the area.

In addition, the proposed open space surrounding the project site would act as a visual barrier for many of the building features, including windows and light fixtures. These additional design features would help soften the visual impact of the buildings and reduce the incidence of glare within the surrounding area. Therefore, the proposed project would not create a new source of substantial glare which would adversely affect day or nighttime views in the area. As such, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Residential Lighting

Impact AES-3b: Expose residential property to unacceptable light levels?

Source(s): Project Application Materials, On-site Inspection, County of Riverside 2020 General Plan, and City of Corona 2020-2040 General Plan.

Impact Analysis

The majority of the land uses immediately west, east, and south of the project site are residential uses. As discussed above, the proposed project has the potential to create new sources of light and glare including streetlights and intermittent vehicle traffic on the proposed internal streets, residential lighting for the proposed 365 dwelling units, and glare created by the windows from the residential and commercial development.

However, the proposed project would be required to comply with Ordinance No. 915 and Riverside County Code of Ordinances Chapter 8.80 and would only direct light within its own boundaries. Further, the proposed open space surrounding the project site would act as a visual barrier for many of the building features, including windows and light fixtures. These additional design features would help soften the visual impact of the buildings and reduce the incidence of glare within the surrounding residential area. Therefore, the proposed project would not expose residential property to unacceptable light levels. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

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3.2 - Agriculture Resources and Forest Resources

This section of the Draft Environmental Impact Report (Draft EIR) describes agricultural and forestry resources in relation to the project site and discusses the potential impacts to these resources that would occur with implementation of the proposed project. Descriptions and analysis in this section are based upon existing site conditions, project site plans/exhibits, the County of Riverside 2020 General Plan, and the City of Corona 2020-2040 General Plan.

3.2.1 - Existing Conditions

According to the Land Use Element of the County of Riverside General Plan, in terms of historic character and economic strength, one of Riverside County's most important land uses is its widespread and diverse agricultural lands. Within the County of Riverside, one of the largest industries (in terms of dollar value) is agriculture production. According to Table LU-1 in the Land Use Element of the 2020 General Plan, unincorporated Western Riverside County—where the proposed project is located—contains approximately 28,552 acres of agricultural land. Neither the project site nor adjacent land uses have General Plan Land Use Designations for agriculture or forest resources.

Based on a site visit conducted in early 2018 and again in October 2021, none of the area surrounding the project site is currently used for agriculture (i.e., crop farming) or forest resources. Land uses to the east, south, and west contain medium density residential households and institutional uses. Land uses to the north include State Route (SR) 91 and commercial uses.

The construction of the surrounding residential areas, the golf course, and golf course maintenance has disturbed much of the site since the 1960s. None of the area within the project site is currently used for traditional agriculture practices (such as crop farming). As shown in Exhibit 3.2-1, the proposed project is categorized Urban and Built-Up Land under the Farmland Mapping and Monitoring Program (FMMP), discussed below in Section 3.2.2, Regulatory Setting. Additionally, the project site is bounded by land also classified as Urban and Built-Up Land. In addition, Exhibit 3.2-2 shows the nearest Williamson Act-designated land located approximately 4 miles north of the project site; the project site is not under a Williamson Act Contract.

3.2.2 - Regulatory Framework

State Regulations

Farmland Mapping and Monitoring Program

The California Department of Conservation established the FMMP in 1982. The FMMP is a non-regulatory program that provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. The maps are updated every 2 years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance. The program rates agricultural lands according to physical characteristics and other factors such as irrigation status. The best-quality farmland, classified as Prime Farmland, is land that contains a combination of physical and chemical features able to sustain long-term agricultural production.

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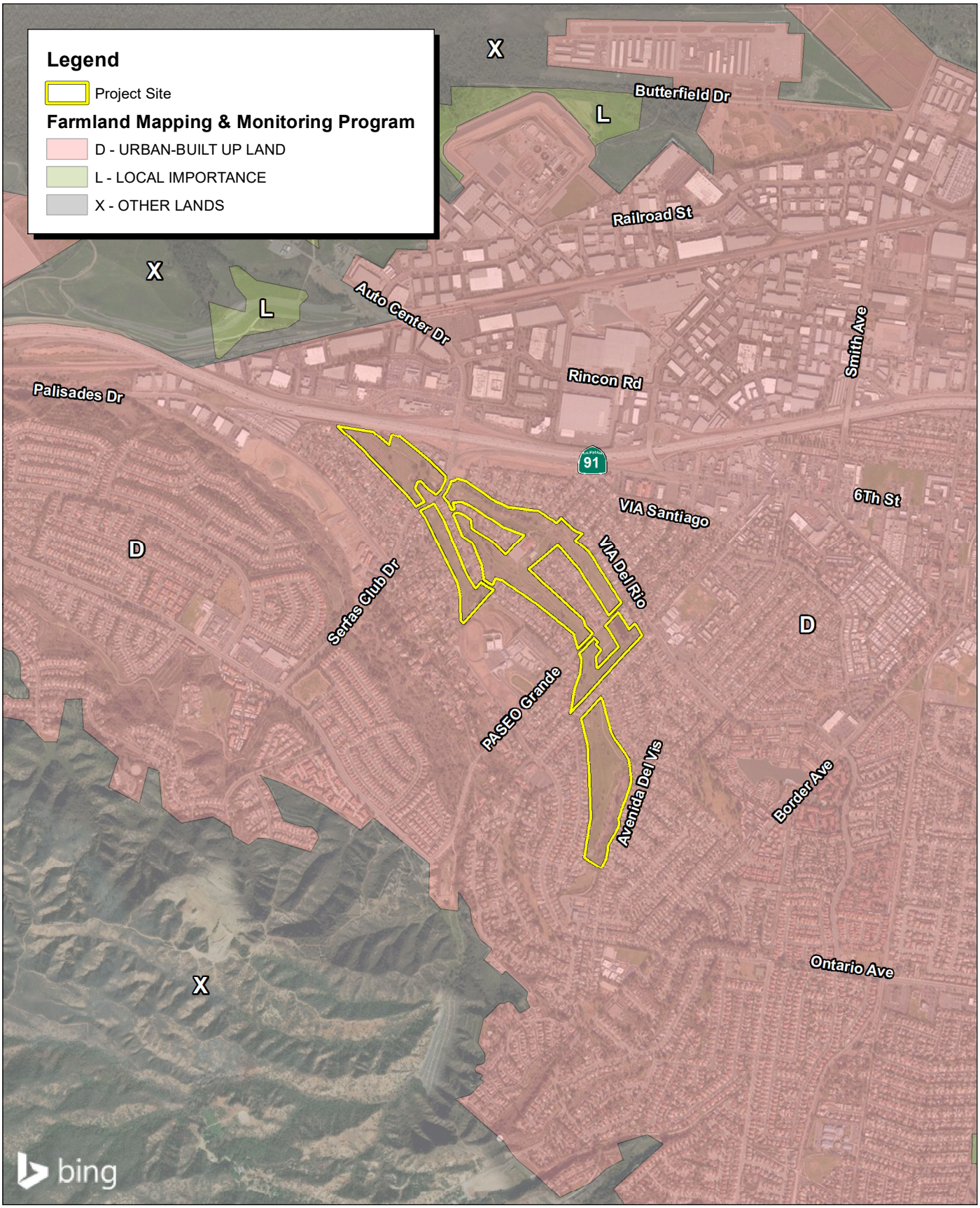

Source: Bing Aerial Imagery. Riverside County FMMP, 2016.

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Exhibit 3.2-1
Farmland Mapping and Monitoring Program Map

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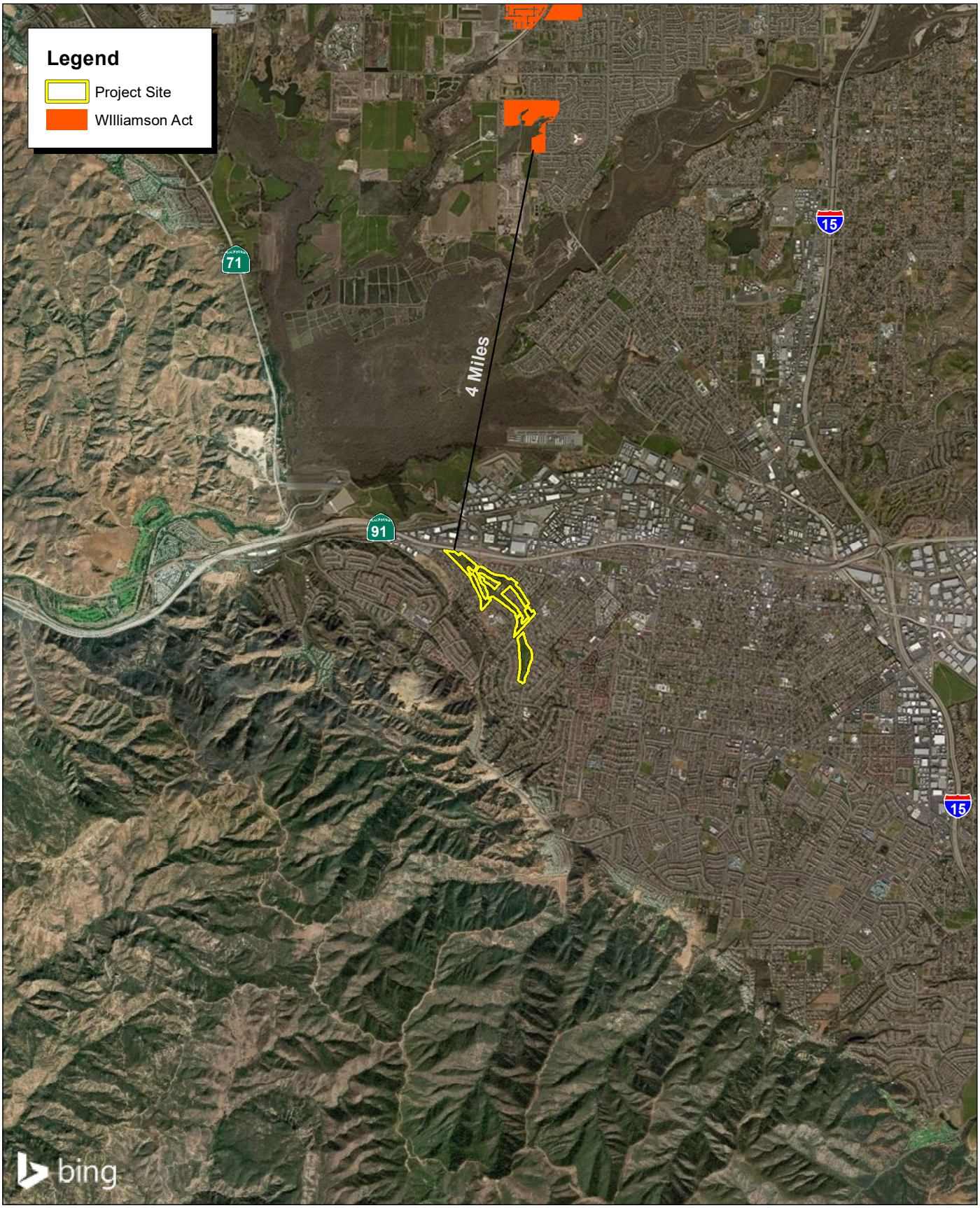

Source: Bing Aerial Imagery. Riverside County FMMP, 2016.

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Exhibit 3.2-2
Williamson Act Map

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Additional classifications include Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance (Table 3.2-1).

The FMMP also inventories and maps a variety of other land use categories. For purposes of determining a project's significance under California Environmental Quality Act (CEQA) Guidelines, only Prime Farmland, Unique Farmland, and Farmland of Statewide Importance are used to determine impacts. Conversion to nonagricultural uses of lands falling under any of these classifications is considered a potentially significant impact under CEQA Guidelines.

Table 3.2-1 provides a description of the various farmland classifications, from the United States Department of Agriculture.

Table 3.2-1: Description of Farmland Classifications

Farmland Category	Description
Prime (P)	Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
Statewide Importance (S)	Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
Unique (U)	Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
Local (L)	Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In some counties, Confined Animal Agriculture facilities are part of Farmland of Local Importance, but they are shown separately.
Grazing (G)	Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
Urban and Built-Up Land (U)	Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
Other (X)	Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.
Water (W)	Perennial water bodies with an extent of at least 40 acres.
Source: California Department of Conservation, 2007b.	

California Land Conservation Act

The California Land Conservation Act, better known as the Williamson Act, was enacted by the State Legislature in 1965 to encourage the preservation of agricultural lands. Under the provisions of the Act, landowners agreeing to keep their lands under agricultural production for a minimum of 10 years receive property tax adjustments. Williamson Act Contracts limit the use of the properties to agricultural, open space, and other compatible uses. Williamson Act lands are assessed based on their agricultural value, rather than their potential market value under nonagricultural uses.

Local Regulations

County of Riverside 2020 General Plan

The County of Riverside 2020 General Plan sets forth the following applicable policies that are relevant to agricultural resources and forest resources:

Land Use Element

LU 20.1 Encourage retaining agriculturally designated lands where agricultural activity can be sustained at an operational scale, where it accommodates lifestyle choice, and in locations where impacts to and from potentially incompatible uses, such as residential uses, are minimized, through incentives such as tax credits.

LU 20.2 Protect agricultural uses, including those with industrial characteristics (dairies, poultry, hog farms, etc.) by discouraging inappropriate land division in the immediate proximity and allowing only uses and intensities that are compatible with agricultural uses.

LU 20.4 Encourage conservation of productive agricultural lands. Preserve prime agricultural lands for high-value crop production.

LU 20.5 Continue to participate in the California Land Conservation Act (the Williamson Act) of 1965.

LU 20.7 Adhere to Riverside County's Right-to-Farm Ordinance.

The portions of the project site located in Unincorporated County of Riverside (Planning Areas 1, 2, 3, 4, and 5) are designated by the County of Riverside General Plan as Open Space Recreation (OS-R) and zoned One-Family Dwellings (R-1) by the County of Riverside.

Temescal Canyon Area Plan

Agriculture is an important component of land use in the Temescal Canyon Area. The Temescal Canyon Area Plan (TCAP) is an extension of the County of Riverside General Plan and Vision and provides customized direction specifically for this planning area. In addition to the economic importance of providing food and fiber, agricultural lands provide visual variety and community separators.

The proposed project would not interfere with agricultural resources within the TCAP, as the site is not designated for agricultural use.

County of Riverside Ordinance Number 509

This ordinance establishes uniform rules that apply to agricultural preserves.[1]

County of Riverside Ordinance Number 625. This ordinance (cited as the Riverside County Right-To-Farm Ordinance) intends to reduce the County's loss of its agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance.[2]

City of Corona 2020-2040 General Plan

The General Plan sets forth the following applicable policies that are relevant to agricultural resources and forest resources:

Environmental Resources Element

ER-8.1 Cooperate with federal and State agencies to achieve the sustainable conservation of forest lands as a means of providing open space and protecting natural resources and MSHCP habitat.

ER-8.2 Support conservation programs to reforest privately held forest lands.

ER-8.3 Work with Riverside County to update the Vegetation Map for Corona and the SOI areas in cooperation with the California Department of Fish and Wildlife, the Natural Diversity Data Base, the United States Forest Service, and other knowledgeable agencies.

Healthy Community Element

HC-3.1 Allow for limited agricultural uses, including community gardens, in areas of the city that are consistent with land use, zoning, and permitting requirements.

The City of Corona General Plan Land Use designation for the portions of the project site located in the City of Corona (Planning Area 6) is Low Density Residential (LDR) and is zoned as Agricultural (A) by the City of Corona.

3.2.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, agricultural and forest impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Agriculture

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.

[1] County of Riverside Ordinance No. 509. Website: http://www.rivcocob.org/ords/500/509.2.pdf. Accessed May 2018.
[2] County of Riverside Ordinance No. 625. Website: http://www.rivcocob.org/ords/600/625.1.pdf. Accessed May 2018.

b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act Contract or land within a Riverside County Agricultural Preserve.

c) Cause development of nonagricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm").

d) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use.

Forest

a) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).

b) Result in the loss of forest land or conversion of forest land to non-forest use.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

3.2.4 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6are no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Would the project:

Agriculture

Impact AG-1a:	**Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?**

Source(s): Riverside County 2020 General Plan, including Figure OS-2 "Agricultural Resources;" Geographic Information Systems (GIS) database; project application materials; existing site conditions; project site plans/exhibits; and the City of Corona 2020-2040 General Plan.

Impact Analysis

The FMMP agricultural land designation of the entire project site is Urban and Built-Up Land, as shown in Exhibit 3.2-1. Therefore, the proposed project would not convert Prime Farmland, Unique

Farmland, or Farmland of Statewide Importance to nonagricultural use. According to the California Department of Conservation, the farmland map category Urban and Built-Up Land is considered land that is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.

In conclusion, the proposed project does not include any uses that would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to nonagricultural use. There would be no impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Agriculture

Impact AG-1b:	**Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act Contract or land within a Riverside County Agricultural Preserve?**

Source(s): Riverside County 2020 General Plan, including Figure OS-2 "Agricultural Resources;" GIS database; project application materials; County of Riverside Ordinance No. 509; County of Riverside Ordinance No. 625; existing site conditions; project site plans/exhibits; and the City of Corona 2020-2040 General Plan.

Impact Analysis

County of Riverside (Planning Area 1–5)

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas. However, the development of Planning Area 2 is no longer contemplated and this acreage would remain undeveloped as open space. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.

The project site is designated as Open Space Recreation, as referenced in the County of Riverside's GIS database and project materials (such as a GIS map prepared with data from the FMMP). The County of Riverside GIS database shows that the project site is not located within a Riverside County Agricultural Preserve. Additionally, the County of Riverside GIS database shows the site zoned as R-1 (One-Family Dwellings), which allows for limited agricultural uses; however, according to the Riverside County General Plan Figure OS-2, Agricultural Resources, the project site is designated as

Urban Built-up Land. Therefore, the proposed project would not conflict with the existing General Plan Land Use Designation and zoning for agricultural use.

The proposed project would not conflict with County of Riverside Ordinance No. 509, as the project site is not in an agricultural preserve. Additionally, the proposed project would not conflict with County of Riverside Ordinance No. 625, as the proposed project would not cause development of nonagricultural uses within 300 feet of agriculturally zoned property. Lastly, the proposed project would not involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to nonagricultural use.

City of Corona (Planning Area 6)

At the time of this analysis, the project applicant proposed the development of 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 6.

The portion of the project site located in the City of Corona is designated as Low Density Residential, as referenced in the City of Corona 2020-2040 General Plan Land Use Map, Figure LU-1. However, per the City of Corona Zoning Map Book (August 11, 2014), the City of Corona has zoned the site as Agricultural. The City of Corona 2020-2040 General Plan Environmental Impact Report (General Plan EIR) outlines that some of the areas zoned as Agricultural are designated as uses other than Agriculture (AG) by the current land use plan, including Estate Residential (ER), Low Density Residential (LDR), Office Professional (OP), and Light Industrial (LI). The General Plan EIR states that agricultural uses would continue to be permitted on these land use designations; however, the buildout of the General Plan would convert farmland which has nonagricultural land use designations to nonagricultural use, and the associated loss of agricultural production would constitute a significant and unavoidable impact with no feasible mitigation measures to reduce the impact. Since impacts to land zoned Agricultural were wholly discussed within the General Plan EIR and the proposed project site is included in the areas analyzed by the General Plan EIR, development of the proposed residential project on land designated as LDR but zoned Agricultural would be consistent with the General Plan. The project site has not been used historically, nor is it currently used for agricultural production. The proposed project would have a less than significant impact on existing land use designations.

The proposed project would not conflict with County of Riverside Ordinance No. 509, as the project site is not in an agricultural preserve. Additionally, the proposed project would not conflict with County of Riverside Ordinance No. 625, as the proposed project would not cause development of nonagricultural uses within 300 feet of agriculturally zoned property.

Williamson Act

Neither the project site nor project vicinity is under a Williamson Act Contract; the nearest property under Williamson Act Contract is located approximately 4 miles north of the project site, as shown in Exhibit 3.2-2.

Therefore, impacts to existing agricultural use or a Williamson Act Contract are anticipated to be less than significant because the proposed project would not conflict with agricultural use, land subject to a Williamson Act Contract, land within a Riverside County Agricultural Preserve, nor County of Riverside and City of Corona zoning designations.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Agriculture

Impact AG-1c:	**Cause development of nonagricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?**

Source(s): Riverside County 2020 General Plan, including Figure OS-2 "Agricultural Resources;" GIS database; project application materials; existing site conditions; project site plans/exhibits; and the City of Corona 2020-2040 General Plan.

Impact Analysis

The project site is currently vacant and has been vacant since the closing of Mountain View Golf Course in 2009. As discussed above, the portion of the project site located in the City of Corona (Planning Area 6) of the proposed project is zoned as Agricultural; however, the area surrounding the project site is not zoned for agricultural use by the County of Riverside or the City of Corona.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

The land uses within 300 feet of the project site are described as follows:

West

The majority of the land uses immediately to the west are residential uses, as well as Brentwood Park and school facilities (Coronita Elementary School).

The County of Riverside General Plan Land Use designates this area as Medium Density Residential (MDR) and it is zoned One-Family Dwellings (R-1).

North

Immediately north of the project site is SR-91 and further north is typified by commercial uses (McDonald's, Arco Station, In-N-Out-Burger, Nissan and Hyundai car dealerships) and industrial land uses.

The City of Corona 2004 General Plan Land Use designates this area as General Commercial (GC) and Light Industrial (LI). Additionally, it is zoned as Commercial (C-3) and Light Industrial (M-1).

East

The majority of the land uses immediately to the east are residential uses, as well as school facilities (Cesar Chavez Academy).

The County of Riverside General Plan Land Use designates this area as Medium Density Residential (MDR) and it is zoned One-Family Dwellings (R-1).

South

The majority of land uses immediately to the south are residential uses and school facilities (John Adams Elementary School) as well as vacant parcels (Planning Area 6 within the City of Corona).

The City of Corona 2004 General Plan Land Use designates this area as General Commercial (GC) and Light Industrial (LI). Additionally, it is zoned as Single-Family Residential (R1-9.6) and Agricultural (A).

The proposed project would not conflict with County of Riverside Ordinance No. 625, as the proposed project would not cause development of nonagricultural uses within 300 feet of agriculturally zoned property. While the proposed project proposes a nonagricultural use on the project site it is not within 300-feet of an agriculturally zoned property. There would be no impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Agriculture

Impact AG-1d:	**Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use?**

Source(s): Riverside County General Plan Figure OS-2 "Agricultural Resources," GIS database, Project Application Materials, existing site conditions, project site plans/exhibits, the County of Riverside General Plan, and the City of Corona 2004 General Plan.

Impact Analysis

The land surrounding the project site consists of commercial, institutional, and residential land uses and is not being used for agricultural purposes. Thus, development of the proposed project is not anticipated to have a significant impact involving other changes in the existing environment that could result in conversion of Farmland to nonagricultural use. Additionally, the use of the project site for residential and commercial/retail uses would not cause any conversion of farmland to a nonagricultural use in another location. The project site would be used for residential and commercial/retail, which would not have any direct or indirect impacts on agricultural lands. The project site is not used for farming and is not zoned for agricultural uses. Therefore, the proposed project would have no impact on forestry resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Forest

Impact AG-2a:	**Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g))?**

Source(s): Riverside County 2020 General Plan, including Figure OS-3a "Forestry Resources Western Riverside County Parks, Forests, and Recreation Areas;" project application materials; existing site conditions, project site plans/exhibits, and the City of Corona 2020-2040 General Plan.

Impact Analysis

The land surrounding the project site consists of commercial, institutional, and residential land uses and is not being used for agricultural or forestry purposes. Thus, development of the proposed project is not anticipated to have a significant impact involving other changes in the existing environment that could result in conversion of forest land to non-forest use. The project site is not located on Figure OS-3b, Forestry Resources Riverside County Parks, Forests, and Recreation Areas.

The proposed project would not involve the conversion of forest land because the project site does not contain any forest land. Additionally, the use of the project site for residential purposes would not cause any conversion of forest land to a non-forest use in another location. The project site would be used for residential purposes that would not have any direct or indirect impacts on forest lands. The project site is not used for forest use and is not zoned for forest uses. Therefore, the proposed project would have no impact on forestry resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Forest

Impact AG-2b:	**Result in the loss of forest land or conversion of forest land to non-forest use?**

Source(s): Riverside County 2020 General Plan, including Figure OS-3a "Forestry Resources Western Riverside County Parks, Forests, and Recreation Areas," Figure OS-3b "Forestry Resources Eastern Riverside County Parks, Forests, and Recreation Areas;" project application materials; existing site conditions; project site plans/exhibits; and the City of Corona 2020-2040 General Plan.

Impact Analysis

The proposed project would not involve the conversion of forest land because the project site does not contain any forest land. The project site is not located on Figure OS-3b, Forestry Resources Riverside County Parks, Forests, and Recreation Areas. Additionally, the use of the project site for residential purposes would not cause any conversion of forest land to a non-forest use in another location. The project site would be used for residential purposes that would not have any direct or indirect impacts on forest lands. The project site is not used for forest use and is not zoned for forest uses. Therefore, the proposed project would have no impact on forestry resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Forest

Impact AG-2c:	**Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?**

Source(s): Riverside County 2020 General Plan, including Figure OS-3a "Forestry Resources Western Riverside County Parks, Forests, and Recreation Areas," Figure OS-3b "Forestry Resources Eastern Riverside County Parks, Forests, and Recreation Areas;" project application materials; existing site conditions; project site plans/exhibits; and the City of Corona 2020-2040 General Plan.

Impact Analysis

The proposed project would not involve the conversion of forest land because the project site does not contain any forest land. The project site is not located on Figure OS-3b, Forestry Resources Riverside County Parks, Forests, and Recreation Areas. Additionally, the use of the project site for residential purposes would not cause any conversion of forest land to a non-forest use in another location. The project site would be used for residential purposes that would not have any direct or indirect impacts on forest lands. The project site is not used for forest use and is not zoned for forest uses. Therefore, the proposed project would have no impact on forestry resources.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

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3.3 - Air Quality

This section describes the existing air quality setting and potential effects from project implementation on the site and its surrounding area. Information included in this section is based on project-specific air quality modeling results included in Appendix B**.**

3.3.1 - Environmental Setting

South Coast Air Basin

The project site comprises approximately 104.8 acres, of which approximately 79.9 acres are within the County of Riverside's jurisdiction and approximately 24.9 acres are within the City of Corona's jurisdiction. All 104.8 acres comprising the proposed project are within the South Coast Air Basin (SoCAB). The San Gabriel, San Bernardino, and San Jacinto Mountains bound the SoCAB on the north and east while the Pacific Ocean lies to the west of the SoCAB. The southern limit of the SoCAB is the San Diego County line. The SoCAB consists of Orange County, Los Angeles County (except for the Antelope Valley), the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County.

Regional Climate

The regional climate factors such as the temperature, wind, humidity, precipitation, and amount of sunshine have a substantial influence on air quality in the SoCAB. The annual average temperatures throughout the SoCAB vary from the low to middle 60°F (degrees Fahrenheit). Because of a decreased marine influence, the eastern portion of the SoCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SoCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SoCAB have recorded maximum temperatures above 100°F.

Although the climate of the SoCAB can be characterized as semi-arid, the air near the land surface is relatively humid on most days because of the presence of a marine layer from the Pacific Ocean. This shallow layer of sea air is an important modifier of SoCAB climate. Humidity restricts visibility in the SoCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SoCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature of the coastal areas. These effects decrease with distance from the coast.

More than 90 percent of the SoCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately 9 inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SoCAB with frequency being higher near the coast.

Because of its generally clear weather, about three-quarters of available sunshine is received in the SoCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14.5 hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SoCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to 10 periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over Southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SoCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island, which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SoCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SoCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as oxides of nitrogen (NO_X) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

3.3.2 - Regulatory Setting

Air pollutants are regulated to protect human health and for secondary effects such as visibility and building soiling. The Clean Air Act of 1970 tasks the United States Environmental Protection Agency (EPA) with setting air quality standards. The State of California also sets air quality standards that are in some cases more stringent than federal standards and address additional pollutants. The following section describes these federal and State standards and the health effects of the regulated pollutants.

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970 and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. The EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and environmentally based criteria (science-based guidelines) for setting permissible levels. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide (SO_2)

Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect public health. Another set of limits intended to prevent environmental and property damage are called secondary standards.[1] The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants.

California Clean Air Act

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

Toxic Air Contaminants

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants.

[1] United States Environmental Protection Agency (EPA). 2021. NAAQS Table. Website: https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed November 3, 2021.

The 1990 Clean Air Act Amendments significantly expanded the EPA's authority to regulate hazardous air pollutants (HAPs). Section 112 of the CAA lists 187 HAPs to be regulated by source category. Authority to regulate these pollutants was delegated to individual states. ARB and local air districts regulate TACs and HAPs in California.

Air Pollutant Description and Health Effects

The NAAQS and CAAQS, relevant effects, properties, and sources of the air pollutants are summarized in Table 3.3-1.

Table 3.3-1: Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.	Ozone is a photochemical pollutant, as it is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), nitrogen oxides (NO_X), and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind. Hot, sunny, and calm weather conditions are favorable to ozone formation.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_X) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.070 ppm[f]			
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood-burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide[b] (NO_2)	1 Hour	0.18 ppm	100 ppb	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contribution to atmospheric discoloration; increased visits to hospital for respiratory illnesses.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO_X (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_X is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_X can react with compounds to form nitric acid and related small particles and result in PM-related health effects.	NO_X is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide (NO_2) forms quickly from NO_X emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide[c] (SO_2)	1 Hour	0.25 ppm	75 ppb	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below State and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 (for certain areas)			
	Annual	—	0.030 ppm (for certain areas)			
Particulate matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	• Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.
	Mean	20 µg/m^3	—			
Particulate matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3			
	Annual	12 µg/m^3	12.0 µg/m^3			
Visibility-reducing particles	8 Hour	See note below[d]				

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24 Hour	25 µg/m^3	—	Decrease in ventilatory function; aggravation of asthmatic symptoms; aggravation of cardiopulmonary disease; vegetation damage; degradation of visibility; property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO_4^{2-}. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead[e]	30-day	1.5 µg/m^3	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded State or federal standards at any monitoring station since 1982.	Lead ore crushing, lead ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	—	1.5 µg/m^3			
	Rolling 3-month average	—	0.15 µg/m^3			
Vinyl chloride[e]	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a TAC and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.
Hydrogen sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H_2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Volatile organic compounds		There are no State or federal standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as a TAC.	Reactive organic gases (ROG), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROG and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, lightheadedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources

Notes:
ppm = parts per million (concentration) µg/m^3 = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

[a] Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3-hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[b] To attain the 1-hour NO_2 national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb) (0.100 ppm).

[c] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

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

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

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

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South Coast Air Quality Management District (SCAQMD). 2007. Final 2007 Air Quality Management Plan. June. Website: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2007-air-quality-management-plan/2007-aqmp-final-document.pdf?sfvrsn=2. Accessed October 25, 2021.

United States Environmental Protection Agency (EPA). 2016. Nitrogen Dioxide (NO2) Pollution. Basic Information about NO2. Website: https://www.epa.gov/no2-pollution/basic-information-about-no2#What%20is%20NO2. Accessed October 25, 2021.

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Several pollutants listed in Table 3.3-1 are not addressed in this analysis. Analysis of lead is not included in this report because no new sources of lead emissions are anticipated with the proposed project. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed as PM_{10} and $PM_{2.5}$. No components of the proposed project would result in vinyl chloride or hydrogen sulfide emissions in any substantial quantity.

Toxic Air Contaminants Health Effects

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality—2013 Edition[2] presents the relevant concentration and cancer risk data for the 10 TACs that pose the most substantial health risk in California based on available data: acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and DPM.

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program[3] demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on the engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings

[2] California Air Resource Board (ARB). 2013. California Almanac of Emissions and Air Quality. Website: https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac. Accessed October 25, 2021.

[3] California Air Resource Board (ARB). 2012. Overview: Diesel Exhaust & Health. Website: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed October 25, 2021.

in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present. No naturally occurring asbestos is located near the project site.

3.3.3 - Existing Air Quality Conditions

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. Table 3.3-2 summarizes 2018 through 2020 published monitoring data, which is the most recent 3-year period available. The table displays data from the Rubidoux—Mission Boulevard station (located approximately 13.6 miles northwest of the project site). The data shows that during the past few years, the project area has exceeded the standards for ozone (State and national), PM_{10} (State), and $PM_{2.5}$ (national). The data in the table reflects the concentration of the pollutants in the air, measured using air monitoring equipment. This differs from emissions, which are calculations of a pollutant being emitted over a certain period. No recent monitoring data for Riverside County was available for CO or SO_2. Generally, no monitoring is conducted for pollutants that are no longer likely to exceed ambient air quality standards.

Table 3.3-2: Air Quality Monitoring Summary

Air Pollutant[1]	Averaging Time	Item	2018	2019	2020
Ozone	1 Hour	Max 1 Hour (ppm)	0.123	0.123	0.143
		Days > State Standard (0.09 ppm)	22	24	46
	8 Hour	Max 8 Hour (ppm)	0.101	0.096	0.115
		Days > State Standard (0.07 ppm)	57	63	86
		Days > National Standard (0.07 ppm)	53	59	82
Carbon monoxide (CO)	8 Hour	Max 8 Hour (ppm)	ND	ND	ND
		Days > State Standard (9.0 ppm)	ND	ND	ND
		Days > National Standard (9 ppm)	ND	ND	ND
Nitrogen dioxide (NO_2)	Annual	Annual Average (ppm)	14	14	14
	1 Hour	Max 1 Hour (ppm)	55.4	56	62
		Days > National Standard (100 ppb)	0	0	0
Sulfur dioxide (SO_2)	Annual	Annual Average (ppm)	ND	ND	ND
	24 Hour	Max 24 Hour (ppm)	ND	ND	ND
		Days > State Standard (0.04 ppm)	ND	ND	ND

Air Pollutant[1]	Averaging Time	Item	2018	2019	2020
Inhalable coarse particles (PM_{10})	Annual	State Annual Average (µg/m^3)	43.9	40.9	ND
	24 hour	24 Hour (µg/m^3)	**126**	**182.4**	**137.7**
		Days > State Standard (50 µg/m^3)	127	110	115
		Days > National Standard (150 µg/m^3)	0	0	ND
Fine particulate matter ($PM_{2.5}$)	Annual	State Annual Average (µg/m^3)	12.6	11.2	14.1
	24 Hour	24 Hour (µg/m^3)	**68.3**	**57.6**	**61.9**
		Days > National Standard (35 µg/m^3)	3	5	12

Notes:
> = exceed
µg/m^3 = micrograms per cubic meter
Bold = exceedance
max = maximum
National Standard = National Ambient Air Quality Standard
ND = no data
ppb = parts per billion
ppm = parts per million
State Standard = California Ambient Air Quality Standard
[1] Riverside-Rubidoux site
Source: California Air Sources Board (ARB). Air Quality Data Statistics. https://www.arb.ca.gov/adam. Accessed October 28, 2021.

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest comparison is to the State and federal ozone standards. Air concentrations below standards indicate that health risks are sufficiently low enough to have a minimal impact on public health, as there is no such thing as a zero-risk level. When concentrations exceed the standards, impacts will vary based on the amount by which the standard is exceeded. The EPA developed the Air Quality Index (AQI) as an easy-to-understand measure of health impacts compared with concentrations in the air. Table 3.3-3 provides a description of the health impacts of ozone at different concentrations.

Table 3.3-3: Air Quality Index and Health Effects from Ozone

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI (51-100)—Moderate	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 55-70 ppb	**Health Effects Statements**: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults, and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI (101-150)—Unhealthy for Sensitive Groups	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 71-85 ppb	**Health Effects Statements**: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults, and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI (151-200)—Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 86-105 ppb	**Health Effects Statements**: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI (201-300)—Very Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 106-200 ppb	**Health Effects Statements**: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
Source: AirNow. AQI Calculator. Website: https://www.airnow.gov/aqi/aqi-calculator/. Accessed October 28, 2021.	

Based on the AQI scale for the 8-hour ozone standard, the Riverside-Rubidoux monitoring station identified multiple days in the category of "Very Unhealthy," with the highest readings of 115 parts per billion (ppb) in 2020.

Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per

year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the SoCAB are shown in Table 3.3-4. With respect to the CAAQS, the Riverside County portion of the SoCAB is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, and attainment or unclassified for all other pollutants. With respect to the NAAQS, the Riverside County portion of the SoCAB is nonattainment for ozone, $PM_{2.5}$ and lead and attainment or unclassified for all other pollutants.

Table 3.3-4: South Coast Air Basin Attainment Status

Pollutant	State Status[1]	National Status[2]
Ozone (1-hour) [a]	Nonattainment	Nonattainment (Extreme)
Ozone (8-hour)	Nonattainment	Nonattainment (Extreme)
Carbon monoxide	Attainment	Attainment (Maintenance)
Nitrogen dioxide (annual)	Attainment	Attainment (Maintenance)
Nitrogen dioxide (1-hour)	Attainment	Unclassifiable/Attainment
Sulfur dioxide	Attainment	Unclassified/Attainment
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment (Moderate)
Lead (Riverside County)	—	Attainment
Hydrogen Sulfide (H_2S)	Attainment	—
Sulfates	Attainment	—
Vinyl Chloride	Attainment	—

Notes:
[a] On June 15, 2005, the 1-Hour Ozone NAAQS was revoked for all areas except the 8-Hour Ozone nonattainment Early Action Compact areas. However, the SoCAB has not attained this standard based on 2008-2010 data and is still subject to anti-backsliding requirements.
Source: South Coast Air Quality Management District (SCAQMD). Clean Air Plans. Website: http://www.aqmd.gov/home/air-quality/clean-air-plans. Accessed October 28, 2021.

3.3.4 - Air Quality Plans and Regulations

Air pollutants are regulated at the national, state, and air basin or county level; each agency has a different level of regulatory responsibility. The EPA regulates at the national level, and the ARB regulates at the State level. The South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans (SIPs), provides research and guidance for air pollution programs, and sets the NAAQS, as described earlier.

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

Areas designated nonattainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional State and local regulation is required to achieve the standards. Regulations adopted by California are described below.

California Regulations

Low-Emission Vehicle Program

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

On-Road Heavy Duty Vehicle Program

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

ARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NO_X emissions from in-use (existing) off-road heavy duty diesel vehicles in California. Such vehicles are used in construction,

[4] California Legislative Information. 2002. Clean Car Standards—Pavley, Assembly Bill 1493. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020AB1493. Accessed October 27, 2021.

[5] California Air Resource Board (ARB). On-Road Heavy Duty Vehicle Programs. Website: https://ww2.arb.ca.gov/road-heavy duty-regulations- certification-programs. Accessed October 25, 2021.

mining, and industrial operations. The regulation limits idling to no more than 5 consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet's average NO_X emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014, for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

The latest amendments to the Truck and Bus regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.[6]

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of Best Management Practices (BMPs) to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than 1 acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Buildings often include materials containing asbestos, such as demolition of the existing commercial/residential building associated with the proposed project. In addition, asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways

[6] California Air Resources Board (ARB). 2015. On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation. Website: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed October 25, 2021.

surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations, requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found near the project site.

Diesel Risk Reduction Plan

The ARB's Diesel Risk Reduction Plan has led to the adoption of new California regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020.[7]

The ARB Air Quality Land Use Handbook lists the following ARB advisory recommendations that address the issue of siting "sensitive land uses" near specific sources of air pollution:[8]

- Chrome plating facilities
- Distribution centers
- Dry cleaners
- High traffic freeways and roads
- Large gas dispensing facilities
- Ports
- Rail yards
- Refineries

The ARB-recommended screening distances are shown in Table 3.3-5 below.

Table 3.3-5: Recommendations on Siting New Sensitive Land Uses

Source Category	Advisory Recommendations
Freeways and High Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week).

[7] California Air Resources Board (ARB). 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles. Website: http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf. Accessed October 25, 2021.

[8] California Air Resources Board (ARB). 2005. Air Quality and Land Use Handbook. Website: https://www.arb.ca.gov/ch/handbook.pdf. Accessed October 25, 2021.

Source Category	Advisory Recommendations
	Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.
Notes: These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.	

South Coast Air Quality Management District

Standard Conditions

During construction and operation, the proposed project must comply with applicable rules and regulations. The following are rules and regulations the proposed project may be required to comply with, either directly or indirectly.

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through the application of standard BMPs, such as the application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting

vehicle speeds on unpaved roads to 15 miles per hour (mph), sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with the best available control measures, so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors.

Rule 403 measures may include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar BMPs shall be provided where vehicles enter and exit the construction site onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment. This rule would apply to the application of architectural coatings to the exterior and interior or of the building walls.

SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the VOC content in asphalt used in the SoCAB. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the proposed project must comply with SCAQMD Rule 1108.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1113.

SCAQMD Rule 1143 governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, State, county, agency or special district such as water, air, sanitation, transit, or school district.

Air Quality Management Plans

The agency for air pollution control for the Riverside County portion of the SoCAB is the SCAQMD. The SCAQMD is responsible for controlling emissions primarily from stationary sources. The SCAQMD maintains air quality monitoring stations throughout the SoCAB and a portion of the Salton Sea Air Basin. The SCAQMD is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the region, in coordination with the Southern California Association of Governments (SCAG).

An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the NAAQS and/or CAAQS. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

2016 AQMP

On March 3, 2017, the SCAQMD adopted the 2016 AQMP. The 2016 AQMP addresses strategies and measures to attain the 2008 federal 8-hour ozone standard by 2032, the 2012 federal annual $PM_{2.5}$ standard by 2021 to 2025, and the 2006 federal 24-hour $PM_{2.5}$ standard by 2019. The 2016 AQMP also examined the regulatory requirements for attaining the 2015 federal 8-hour ozone standard. The 2016 AQMP also updates previous attainment plans for ozone and $PM_{2.5}$ that have not yet been met.[9] In general, the AQMP is updated every 3 to 4 years. However, the air quality planning process for the AQMP is continuous and each iteration is an update of the previous plan.

To ensure air quality goals will be met while minimizing impacts to the regional economy, the following policy objectives guided the development of the plan:

- Eliminate reliance on “black box” (future technologies) to the maximum extent possible by providing specific pathways to attainment with specific control measures.

[9] South Coast Air Quality Management District (SCAQMD). 2017. Air Quality Management Plan. Website: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed October 25, 2021.

- Calculate and take credit for co-benefits from other planning efforts (e.g., GHG reduction targets, energy efficiency, transportation).
- Develop a strategy with fair-share emission reductions at the federal, State, and local levels such as new federal engine emission standards and/or additional authority provided to the State or SCAQMD for mobile sources.
- Seek significant funding for incentives to implement early deployment and commercialization of known zero and near-zero technologies.
- Invest in strategies and technologies meeting multiple objectives regarding air quality, climate change, air toxic exposure, energy, and transportation.
- Enhance the socioeconomic analysis and select the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets.
- Prioritize non-regulatory, innovative and "win-win" approaches for emission reductions.

The 2016 AQMP also demonstrates attainment of the 2008 Ozone Standard in Coachella Valley by 2026. The AQMP also demonstrates compliance with all applicable Federal Clean Air Act requirements pertaining to nonattainment areas pursuant to the EPA approved Implementation Rules, such as the annual average and summer planning emission inventory for criteria and precursor pollutants, attainment demonstrations, reasonably available control measure and reasonably available control technology analyses, reasonable further progress, particulate matter precursor requirements, Vehicle Miles Traveled (VMT) demonstrations, and transportation conformity budgets for SoCAB and Coachella Valley.

The control measures in the 2016 AQMP are based on implementing all feasible control measures through the accelerated deployment of available cleaner technologies, BMPs, co-benefits from existing programs, and incentive measures. The 2016 AQMP control measures consist of three main components: (1) the SCAQMD's Stationary and Mobile Source Control Measures; (2) suggested State and federal Source Control Measures; and (3) Regional Transportation Plan Transportation Control Measures provided by SCAG. These measures rely on not only the traditional command-and-control approach, but also public incentive programs, as well as advanced technologies expected to be developed and deployed in the next several years.

SCAQMD CEQA Guidance

The SCAQMD has two roles under the California Environmental Quality Act (CEQA):

1. **Lead Agency:** responsible for preparing environmental analyses for its own projects (adoption of rules, regulations, or plans) or permit projects filed with the SCAQMD where the SCAQMD has primary approval authority over the project.
2. **Commenting Agency:** the SCAQMD reviews and comments on air quality analyses prepared by other public agencies (such as the project).

The SCAQMD also provides guidance and thresholds for CEQA air quality and GHG analyses.

Local

County of Riverside General Plan

Planning Area 1 to Planning Area 5 are located within County of Riverside. The County of Riverside General Plan Air Quality Element sets forth the following goals, objectives, and policies relevant to air quality:[10]

Sensitive Receptors

AQ 2.1 The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible.

AQ 2.2 Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

AQ 2.3 Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.

AQ 2.4 Consider creating a program to plant urban trees on an Area Plan basis that removes pollutants from the air, provides shade and decreases the negative impacts of heat on the air.

Mobile Pollution Source

AQ 3.2 Seek new cooperative relationships between employers and employees to reduce vehicle miles traveled.

AQ 3.3 Encourage large employers and commercial/industrial complexes to create Transportation Management Associations.

AQ 3.4 Encourage employee rideshares and transit incentives for employers with more than 25 employees at a single location.

Stationary Pollution Sources

AQ 4.1 Require the use of all feasible building materials/methods which reduce emissions.

AQ 4.2 Require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

AQ 4.3 Require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

[10] Riverside County Planning Department. 2019. Riverside County General Plan, Air Quality Measurement. Website: https://planning.rctlma.org/General-Plan-Zoning/General-Plan. Accessed October 27, 2021.

AQ 4.4 Require residential building construction to comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Code of Regulations.

AQ 4.5 Require stationary pollution sources to minimize the release of toxic pollutants through: Design features; Operating procedures; Preventive maintenance; Operator training; and Emergency response planning.

AQ 4.6 Require stationary air pollution sources to comply with applicable air district rules and control measures.

AQ 4.7 To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SoCAB, the United States Environmental Protection Agency, and the California Air Resources Board.

AQ 4.8 Expand, as appropriate, measures contained in the County's Fugitive Dust Reduction Program for the Coachella Valley to the entire County.

AQ 4.9 Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

AQ 4.10 Coordinate with the SCAQMD and MDAQMD to create a communications plan to alert those conducting grading operations in the County of first, second, and third stage smog alerts, and when wind speeds exceed 25 miles per hour. During these instances all grading operations should be suspended.

Trip Reduction

AQ 10.1 Encourage trip reduction plans to promote alternative work schedules, ride sharing, telecommuting and work-at-home programs, employee education and preferential parking.

AQ 10.2 Use incentives, regulations and Transportation Demand Management in cooperation with surrounding jurisdictions when possible to eliminate vehicle trips, which would otherwise be made.

City of Corona General Plan (2020-2040) Air Quality Goals and Policies[11]

Planning Area 6 is located within the City of Corona. The City of Corona General Plan sets forth the following Environmental Resource goals, objectives, and policies:

[11] City of Corona. 2019. General Plan 2020–2040. Website: https://www.coronaca.gov/government/departments-divisions/community- development/cdbg/general-plan-update. Accessed October 25, 2021.

GOAL ER-12 Improvement in air quality within the Corona Planning Area by controlling point sources, reducing vehicle trips, implementing efficient land use planning and construction practices, and energy conservation.

Policy ER-12.1 Promote and encourage alternate employment work schedules for public- and private-sector businesses to achieve a reduction of employee-related motor vehicle emissions in accordance with SCAQMD Rule 2202.

Policy ER-12.2 Continue to cooperate with the SCAQMD and other local authorities in the air basin, in implementing air emission reduction programs and techniques.

Policy ER-12.3 Establish and strictly enforce controls on land use activities that contain operations or materials that individually or cumulatively add significantly to the degradation of air quality in Corona.

Policy ER-12.4 Continue to expand the City-owned fleet of vehicles to alternative fuels, such as methanol or other clean-burning energy sources, as technology becomes feasible and cost-effective.

Policy ER-12.5 Increase public transit ridership by periodically adjusting local routes, where feasible, and working with regional transit providers serving Corona and its Planning Area.

Policy ER-12.6 Support major commercial centers and employment center projects, having 100 or more employees, to incorporate transit amenities, access points, and van and carpool parking as part of the project.

Policy ER-12.7 Increase the number of Park and Ride locations within the Planning Area to encourage carpooling and vanpooling.

Policy ER-12.8 Require new commercial and industrial development and redevelopment projects of sufficient scale and number of employees to provide adequate facilities for bicycles, such as bicycle racks located close to the front entranceways of buildings and shower facilities with lockers.

Policy ER-12.9 Continue to incorporate bicycle lanes in all new and upgrade roadway projects in order to encourage commuter bicycle trips. Also, improve existing bicycle lanes for greater user safety.

Policy ER-12.10 Support mixed-use commercial-residential development and continue to target residential development within and near existing planned activity centers and transportation corridors to improve the City's current jobs-housing ratio and reduce the number of vehicle trips.

Policy ER-12.11 Require that large-scale master-planned residential communities incorporate pedestrian and cycling paths/trails that link with adjacent neighborhoods, schools, areas of shopping and employment, community centers, other places of activity, and transit access points.

Policy ER-12.12 Provide effective utility of pedestrian and cycling paths/trails and place strong limitations on intrusions into these rights-of-way used for pedestrian and bicycling.

Policy ER-12.13 Reduce particulate emissions from paved and unpaved roads, parking lots, and road and building construction through the implementation of best practices as deemed feasible by the City of Corona.

Policy ER-12.14 Reduce energy consumed by commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects.

GOAL ER-13 Reduce greenhouse gas (GHG) emissions from City operations and community-wide sources 15% below 2008 levels by 2020, 49% below 2008 levels by 2030, and 66% below 2008 levels by 2040.

Policy ER-13.1 Maintain and periodically update a comprehensive Climate Action Plan that detail the City's strategies to reduce GHG emissions and to ensure ongoing and sustained reduction of GHG emissions from all sectors to meet 2020, 2030, and 2040 reduction targets.

Policy ER-13.2 Encourage the maximum feasible energy efficiency in site design, building orientation, landscaping, and utilities/infrastructure for all development and redevelopment projects (residential, commercial, industrial, and public agency) to support GHG emissions reductions.

Policy ER-13.3 Evaluate opportunities to reduce energy use and the urban heat island effect through site and building design, materials, and landscaping, such as reflective roofs or pavement, vegetated roofs, pervious pavement, shade trees, and revegetation of paved areas.

Policy ER-13.4 Support the increase of clean energy supply to existing and new development and municipal facilities through means to include, but not be limited to on-site or other local renewable energy sources for new and existing buildings and infrastructure.

Policy ER-13.5 Increase use of clean fuel and electric vehicles in the City through the support of the installation of electric vehicle infrastructure; explore opportunities to incentivize and/or facilitate installation of electric vehicle charging stations at convenient locations in Corona.

Policy ER-13.6 Reduce solid waste sent to the landfills and associated community-wide GHG emissions by ensuring all properties have access to curbside solid waste, recycled materials, and green/organic waste programs; target special programs for construction debris, household hazardous waste, etc.

Policy ER-13.7 Support a wide variety of transportation related measures (e.g., active transportation, increased bus and rail transit, transportation system and demand management, etc.) as articulated in the Circulation Element to reduce the number of vehicle miles traveled in Corona.

3.3.5 - Methodology

Model Selection and Guidance

The California Emissions Estimator Model (CalEEMod) version 2020.4.0 was used to estimate the proposed project's construction and operation-related air pollutant emissions. The CalEEMod model was developed in cooperation with air districts throughout the State and is designated as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with construction and operation from a variety of land uses.

Construction

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from both on-site and off-site activities. On-site emissions consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and application of architectural coatings would release ROG emissions. Off-site emissions result from motor vehicle exhaust from delivery vehicles, worker traffic and road dust (PM_{10} and $PM_{2.5}$).

Construction emissions are generally calculated as the product of an activity factor and an emission factor. The activity factor for construction equipment is a measure of how active a piece of equipment is and can be represented as the amount of material processed, elapsed time that a piece of equipment is in operation, horsepower of a piece of equipment used, or the amount of fuel consumed in a given amount of time. The emission factor relates the process activity to the amount of pollutant emitted. Examples of emission factors include grams of emissions per miles traveled and grams of emissions per horsepower-hour. The operation of a piece of equipment is tempered by its load factor which is the average power of a given piece of equipment while in operation compared with its maximum rated horsepower. A load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity.

Construction Schedule and Activities

The proposed project would be completed in two phases. Phase I consists of Planning Areas 1, 2, 3 and 6. Construction of Phase I is assumed to begin in 2022 and last through 2025. Phase II consists of Planning Areas 4 and 5. Construction of Phase II was assumed to begin in 2022 and last through

2023. Full buildout of the proposed project is assumed to occur in 2025. Table 3.3-6 shows the construction schedule for two phases.

According to applicant-provided information, project construction is anticipated to occur from April 1, 2022, through May 12, 2023. Although this date of construction has since passed, the construction schedule used in the analysis represents a "worst-case" analysis scenario since emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and compliance with more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule moved to later years. Thus, this conservative analysis evaluates the worst-case scenario.

CalEEMod default construction activities and durations were adjusted to reflect applicant-provided information.

Table 3.3-6: Anticipated Construction Schedule

Phase Name	Start Date	End Date	Days/Week	Total Days
Phase I				
Demolition	4/1/2022	5/1/2022	7	30
Site Preparation	5/2/2022	7/30/2022	7	60
Grading	7/31/2022	1/3/2023	7	155
Building Construction	1/4/2023	9/30/2024	7	635
Paving	10/1/2024	1/19/2025	7	110
Architectural Coating	1/20/2024	4/4/2025	7	75
Phase II				
Site Preparation	7/31/2022	8/10/2022	7	10
Grading	8/11/2022	9/1/2022	7	20
Building Construction	9/2/2022	4/20/2023	7	230
Paving	4/21/2023	5/11/2023	7	20
Architectural Coating	5/12/2023	6/2/2023	7	20

Demolition and Grading

Based on information provided by the project applicant, the proposed project would remove approximately 2,500 square feet of existing buildings. Cut and fill information was provided in Preliminary Earthwork Analysis, dated May 11, 2018, which was obtained from the project applicant, shown in Table 3.3-7. The analysis stated that Planning Area 1 would be a fill site to receive dirt from other planning areas. Planning Areas 3 and 6 would try to minimize export amount, and all materials would go directly to Planning Area 1. Planning Areas 4 and 5 will be balanced on-site during Phase II construction grading phase.

Table 3.3-7: Cut and Fill Information

Planning Area	1 and 2	3	4	5	Total
Raw Cut (cubic yards)	22,545	148,210	37,996	42,953	393,734
Raw Fill (cubic yards)	107,144	86,146	34,575	27,684	345,500
Raw Net (cubic yards)	84,599	62,064	3,421	15,269	48,234
Import/Export:	Import (50% from PA 3, 50% from PA 6)	Export	Balance on-site		—

Given the information contained in Table 3.3-7, soil hauling during project construction would consist of the following activities:

- 42,300 cubic yards would be exported from Planning Area 3 to Planning Areas 1 and 2, approximately 1 mile away.
- 19,764 cubic yards would be exported from Planning Area 3 to an undetermined location. Model default hauling distance is 20 miles.
- 42,300 cubic yards would be exported from Planning Area 6 to Planning Areas 1 and 2, approximately 1.5 miles away.
- 5,934 cubic yards would be exported from Planning Area 6 to an undetermined location. Model default hauling distance is 20 miles.

As such, a total export volume of 110,298 cubic yards was assigned to Phase I Grading and a weighted hauling distance of 5.6 miles was applied to Phase I Grading hauling activity in the model. Default assumptions obtained from CalEEMod include truck hauling capacity and truck type.[12]

Construction Equipment

The CalEEMod model contains built-in inventories of construction equipment for a variety of land use construction projects that incorporate estimates of the type of construction equipment required, number of equipment, their age, their horsepower, and level or tier of emission control equipment from which rates of emissions are developed. Table 3.3-8 presents the construction equipment used on the proposed project as derived from the CalEEMod model.

[12] At the time the NOP was published, the project applicant proposed construction grading activity resulting in approximately 110,928 cubic yards of soil export. However, the development of Planning Area 6 is no longer contemplated, and the site will remain undeveloped. The updated grading activity would result in a net import of 11,440 cubic yards of soil, which would result in fewer hauling vehicle trips and associated air pollutant emissions, because less soil would need to be transported from the project site. Consistent with the original project proposal, this EIR discloses the possible scope of project-related impacts and analyzes the full development of Planning Area 6, consistent with the NOP.

Table 3.3-8: Construction Equipment

Phase Name	Off-Road Equipment Type	Equipment Amount	Usage Hours	Load Factor
Phase I				
Demolition	Concrete/Industrial Saws	1	8	0.73
Demolition	Excavators	3	8	0.38
Demolition	Rubber Tired Dozers	2	8	0.4
Site Preparation	Rubber Tired Dozers	3	8	0.4
Site Preparation	Tractors/Loaders/Backhoes	4	8	0.37
Grading	Excavators	2	8	0.38
Grading	Graders	1	8	0.41
Grading	Rubber Tired Dozers	1	8	0.4
Grading	Scrapers	2	8	0.48
Grading	Tractors/Loaders/Backhoes	2	8	0.37
Building Construction	Cranes	1	7	0.29
Building Construction	Forklifts	3	8	0.2
Building Construction	Generator Sets	1	8	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7	0.37
Building Construction	Welders	1	8	0.45
Paving	Pavers	2	8	0.42
Paving	Paving Equipment	2	8	0.36
Paving	Rollers	2	8	0.38
Architectural Coating	Air Compressors	1	6	0.48
Phase II				
Site Preparation	Rubber Tired Dozers	3	8	0.4
Site Preparation	Tractors/Loaders/Backhoes	4	8	0.37
Grading	Excavators	2	8	0.38
Grading	Graders	1	8	0.41
Grading	Rubber Tired Dozers	1	8	0.4
Grading	Scraper	2	8	0.48
Grading	Tractors/Loaders/Backhoes	2	8	0.37
Building Construction	Cranes	1	7	0.29
Building Construction	Forklifts	3	8	0.2
Building Construction	Generator Sets	1	8	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7	0.37

Phase Name	Off-Road Equipment Type	Equipment Amount	Usage Hours	Load Factor
Building Construction	Welders	1	8	0.45
Paving	Pavers	2	8	0.42
Paving	Paving Equipment	2	8	0.36
Paving	Rollers	2	8	0.38
Architectural Coating	Air Compressors	1	6	0.48

Operation

Operational emissions are generated by area, energy, and mobile sources once a project commences operation. The proposed project was assumed to be fully operational in 2025. Pursuant to information provided by the applicant, Phase I would become operational in 2025. Depending on market demand, Phase II building construction was assumed to begin as early as 2022 and become operational in 2023. The major emission sources associated with project operation are summarized below.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the motor vehicle traffic that would travel to and from the project site each day. An estimate of the number of vehicle trips that the proposed project would generate for the different land use types comprising the proposed project was provided in the Traffic Impact Analysis (TIA) prepared for the proposed project.[13]

Architectural Coatings (Painting)

Paints release VOC emissions during application and drying. The buildings in the proposed project would be periodically repainted as warranted for maintenance needs. VOC emission estimation was based on CalEEMod 2020.4.0. SCAQMD Rule 1113 was applied, which requires the VOC coating concentration of architectural coatings to be no greater than 50 grams per liter of product (g/L).

Consumer Products

Consumer products are various solvents used in non-industrial applications, which emit VOCs during their product use. “Consumer Product” means a chemically formulated product used by household and institutional consumers, including, but not limited, to detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings. The default emission factor developed for the CalEEMod model was used.

[13] Urban Crossroads. 2021. Trails at Corona Traffic Impact Analysis. Accessed October 28, 2021.

Landscape Equipment

The CalEEMod model estimates the landscaping equipment (e.g., leaf blowers, chainsaws, mowers) and emissions using the default assumptions in the model.

Energy Sources

Energy source emissions would be generated by natural gas combustion required for space and water heating.

3.3.6 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, air quality impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Conflict with or obstruct implementation of the applicable air quality plan?

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

c) Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?

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

Regional Air Quality Significance Thresholds

The SCAQMD has established regional significance thresholds for VOC, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Projects located within the SoCAB with construction and operational emissions in excess of any of the thresholds presented in Table 3.3-9 would be considered significant.

Table 3.3-9: SCAQMD Regional Thresholds

Pollutant	Criteria Pollutant Mass Daily Thresholds (lbs/day)	
	Construction	Operation
NO_X	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550

Pollutant	Criteria Pollutant Mass Daily Thresholds (lbs/day)	
	Construction	Operation
Notes: CO = carbon monoxide lbs = pounds NO_X = nitrogen oxides PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; $PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers SO_X = Sulfur oxides VOC = Volatile Organic Compounds Source of regional thresholds: South Coast Air Quality Management District (SCAQMD). Revised March 2023. South Coast AQMD Air Quality Significance Thresholds. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook. Accessed April 25, 2023.		

Localized Significance Thresholds

The SCAQMD recommends that all air quality analyses include a localized assessment of both construction and operational emissions on nearby sensitive receptors. The SCAQMD has developed Localized Significance Thresholds (LST) to be implemented at the discretion of local public agencies acting as a lead agency pursuant to CEQA. LSTs represent maximum mass emissions from a project site that would not result in pollutant concentrations that exceed NAAQS or CAAQS. LSTs are based on ambient concentrations of that pollutant within the Source Receptor Area (SRA)[14] where a project is located, distance to the nearest sensitive receptor, and size of the project site, all of which are the primary factors that influence pollutant concentrations.

The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003, revised 2009) for guidance.[15] The LST Methodology assists lead agencies in analyzing localized air quality impacts, particularly CO, NO_X, PM_{10}, and $PM_{2.5}$. The SCAQMD provides LST mass rate lookup tables for projects with active construction areas that are less than or equal to 5 acres, providing specific thresholds for 1-acre, 2-acre, and 5-acre project sites. As the proposed project would disturb nearly 20 acres across the entire project site, the LSTs for a 5-acre project site were used in this analysis for a conservative assessment. These LST lookup values are provided to be used as a screening tool for identifying whether a more detailed analysis is needed for localized impacts. The appropriate LSTs can be determined based on the project's SRA, size, and distance to nearest sensitive receptor. The proposed project is partially within SRA 22, Norco/Corona, and partially within SRA 23, Metropolitan Riverside County. As such, LSTs for both SRAs are used in this analysis. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$ and were obtained for sensitive receptors located 25 meters from the source area based on the proposed project's proximity to existing sensitive receptors.

[14] A source area is that area in which contaminants are discharged, and a receptor area is that area in which the contaminants accumulate and are measured. Any of the areas can be a source area, a receptor area, or both a source and receptor area.

[15] South Coast Air Quality Management District (SCAQMD). Localized Significance Thresholds. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed October 25, 2021.

Table 3.3-10 shows the LSTs for NO_2, CO, PM_{10}, and $PM_{2.5}$ for both construction and operational activities with sensitive receptors 25 meters away. If a project exceeds an applicable LST, then the SCAQMD recommends that project-specific air quality modeling be performed.

Table 3.3-10: SCAQMD Localized Significance Thresholds

Pollutant	Construction LST (lbs/day)	Operation LST (lbs/day)
Source Receptor Area 22		
NO_2/NO_X	270	270
PM_{10}	12 (SRA 22)	3 (SRA 22)
$PM_{2.5}$	8	2
CO	1,700 (SRA 22)	1,700 (SRA 22)
Source Receptor Area 23		
NO_2/NO_X	270	270
PM_{10}	13 (SRA 23)	4 (SRA 23)
$PM_{2.5}$	8	2
CO	1,577 (SRA 23)	1,577 (SRA 23)

Notes:
CO = carbon monoxide
lbs = pounds
LST = Localized Significance Threshold
NO_X = nitrogen oxides
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers
SO_X = sulfur oxides
VOC = volatile organic compounds
Source of LSTs: South Coast Air Quality Management District (SCAQMD). Localized Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2. Accessed October 18, 2021.

Carbon Monoxide Hotspot Thresholds

The largest contributor of carbon monoxide (CO) emissions during long-term operations of a residential development project is typically from motor vehicles. A CO hotspot represents a condition wherein high concentrations of CO may be produced by motor vehicles accessing a congested traffic intersection under heavy traffic volume conditions.

Since the first regulation of CO emissions from vehicles (model year 1966) in California, vehicle emissions standards for CO applicable to light-duty vehicles have decreased tailpipe CO emissions by 96 percent for automobiles, and new cold weather CO standards have been implemented, effective for the 1996 model year. With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in the SoCAB have steadily declined.

The analysis prepared for CO attainment in the SoCAB by the SCAQMD can help evaluate the potential for CO exceedances in the SoCAB. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan and subsequent plan updates, peak carbon monoxide concentrations in the SoCAB are due to unusual meteorological and topographical conditions and not the impact of particular intersections.[16] Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans. In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vehicles per day. These modeling results and the determinations of this CO hot spot analysis is utilized in this analysis as the basis for determining whether the proposed project would result in a CO hot spot at impacted intersections and roadway segments.

Health Risk Significance Thresholds

In addition to the LSTs established above for criteria pollutants, the SCAQMD has also defined health risk significance thresholds. For TACs, "substantial" is taken to mean that the individual cancer risk exceeds a threshold considered a prudent risk management level.

The SCAQMD has defined several health risk significance thresholds that it recommends lead agencies use in assessing a project's health risk impacts. The derivation of the emissions from these sources and the assumptions used to estimate cancer risks are provided in Appendix B. In general, risk depends on the following factors:

- Identify the TACs that may be present in the air;
- Estimate the amount of TACs released from all sources, or the source of particular concern, using air samples or emission models;
- Estimate concentrations of TACs in air in the geographic area of concern by using dispersion models with information about emissions, source locations, weather, and other factors; and
- Estimate the number of people exposed to different concentrations of the TAC at different geographic locations.

TACs can also cause chronic (long-term) and acute (short-term) related non-cancer illnesses such as reproductive effects, respiratory effects, eye sensitivity, immune effects, kidney effects, blood effects, central nervous system effects, birth defects, or other adverse environmental effects. Risk characterization for non-cancer health hazards from TACs is expressed as a hazard index (HI). The HI

[16] California Air Resources Board (ARB). 2021. 2005 South Coast Carbon Monoxide Plan. Website: https://ww2.arb.ca.gov/resources/documents/2005-south-coast-carbon-monoxide-plan. Accessed October 25, 2021.

is a ratio of the predicted concentration of the proposed project's emissions to a concentration considered acceptable to public health professionals, termed the Reference Exposure Level (REL).

The SCAQMD has established the following project-specific health risk significance thresholds:

- Maximum Incremental Cancer Risk > = 10 in 1 million
- Hazard Index (project increment) > = 1.0

A significant impact would occur if a project's impacts exceeded any of these thresholds.

This guidance was applied in estimating cancer risks from the construction and operation of the proposed project as follows.

- **Estimation of Construction Health Risk Impacts**: Cancer risks during construction were estimated for the duration of construction from 2019 to 2024 using the construction DPM emissions, represented as PM_{10} emissions.
- **Estimation of Operational Health Risks**: Health risk impacts from nearby DPM emission sources corresponding to the 30-year exposure duration from pre-birth to adult receptors and adult only receptors were estimated by calculating annual average DPM air quality impacts at each receptor location within the project for each year commencing with project operation for the pre-birth to adult receptors (30 years) and the adult receptors only (30 years).

When the proposed project, in combination with one or more other projects exceeds the project-specific significance thresholds, the project is considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

In addition, it should be noted that the Health Risk Assessment (HRA) contained in this analysis was prepared for the proposed project upon its initial CEQA environmental review in 2018. At that time, the proposed project would have constructed and operated 425 dwelling units, compared with the 365 dwelling units now proposed. In addition, as construction estimates move to future years, construction emissions are expected to decrease with compliance with increasingly stringent fuel efficiency and emission control requirements and technologies. Therefore, the proposed project would result in fewer construction emissions than those used in the air dispersion modeling and HRA presented in this analysis. As a result, the emissions generated during project construction which are utilized in this HRA represent a conservative analysis of construction health impacts.

Estimation of Cancer Risks

The California Office of Environmental Health Hazard Assessment (OEHHA) has developed Risk Assessment Guidelines for estimating cancer risks that provide adjustment factors that emphasize the increased sensitivities and susceptibility of humans to exposures to TACs.[17] The recommended

[17] California Office of Environmental Health Hazard Assessment (OEHHA). 2015. Notice of Adoption of Air Toxics Hot Spots Program Guidance. Website: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0. Accessed October 28, 2021.

method for the estimation of cancer risk is shown in the equations below for the duration of the construction time period:

$$\text{Cancer Risk} = C_{DPM} \times \text{Inhalation Exposure Factor} \quad \text{(EQ-1)}$$

Where:

Cancer Risk = Total individual excess cancer risk defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from a particular source for specified exposure durations; this risk is defined as an excess risk because it is above and beyond the background cancer risk to the population; cancer risk is expressed in terms of risk per million exposed individuals.

C_{DPM} = Period average DPM air concentration calculated from the air dispersion model in $\mu g/m^3$

Inhalation is the most important exposure pathway to impact human health from DPM and the inhalation exposure factor is defined as follows:

$$\text{Inhalation Exposure Factor} = CPF \times EF \times ED \times DBR \times AAF/AT \quad \text{(EQ-2)}$$

Where:

CPF = Inhalation cancer potency factor for the TAC: 1.1 $(mg/kg\text{-}day)^{-1}$ for DPM
EF = Exposure frequency: 350 (days/year)
ED = Exposure duration (2 years of construction)
AT = Averaging time period over which exposure is averaged (days)
AAF = set of age-specific adjustment factors that include age sensitivity factors (ASF), daily breathing rates (DBR), and time at home factors (TAH)

The OEHHA recommended values for the various cancer risk parameters shown in the Equation 2 are shown in Table 3.3-11. Note, however, the SCAQMD has not officially adopted the updated OEHHA guidance for CEQA evaluations. However, the SCAQMD provides recommended values for the various cancer risk parameters as part of its procedures for demonstrating compliance with SCAQMD Rule 1401, that are also shown in Table 3.3-11.

Table 3.3-11: Exposure Assumptions for Cancer Risk—Updated OEHHA Guidance

Receptor Type	Exposure Frequency		Exposure Duration (years)	Age Sensitivity Factors (ASF)	Time at Home Factor (TAH)[1] (percent)	Daily Breathing Rate[2] (DBR) (L/kg-day)
	Hours/day	Days/year				
Sensitive/Residential						
Third Trimester	24	350	0.25	10	100	361
0–2 years	24	350	2	10	100	1,090

Receptor Type	Exposure Frequency		Exposure Duration (years)	Age Sensitivity Factors (ASF)	Time at Home Factor (TAH)[1] (percent)	Daily Breathing Rate[2] (DBR) (L/kg-day)
	Hours/day	Days/year				
3–16 years	24	350	Construction: 4 years (Phase I) and 1 year (Phase II) Operation: 14 years	3	100	572
17-30 years	24	350	14	1	100	261

Notes:
(1) Time at Home (TAH) factors recommended by the SCAQMD
(2) The daily breathing rates recommended by the SCAQMD are the 95th percentile rate for sensitive/residential receptors 0 to 2 years
(L/kg-day) = liters per kilogram body weight per day
Source of Current OEHHA Guidance: California Office of Environmental Health Hazard Assessment (OEHHA). 2015. Notice of Adoption of Air Toxics Hot Spots Program Guidance. Website: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0. Accessed October 28, 2021.
Source: Appendix B

Estimation of Non-Cancer Hazards

An evaluation of the potential non-cancer effects of chronic chemical exposures was also conducted. Adverse health effects are evaluated by comparing the annual receptor concentration of each chemical compound with the appropriate REL. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity REL. For compounds affecting the same toxicological endpoint, this ratio is summed. Where the total equals or exceeds 1, a health hazard is presumed to exist.

To quantify non-carcinogenic impacts, the hazard index approach was used.

$$HI = C_{ann}/REL \qquad \text{(EQ-3)}$$

Where:

HI = chronic hazard index
C_{ann} = annual average concentration of TAC as derived from the air dispersion model ($\mu g/m^3$)
REL = reference exposure level above which a significant impact is assumed to occur ($\mu g/m^3$)

For purposes of this assessment, the TAC of concern is DPM for which the OEHHA has defined a chronic non-cancer REL for DPM of 5 $\mu g/m^3$. The principal toxicological endpoint assumed in this assessment was through inhalation.

Health Risk Assessment for Operations

The SCAQMD recommends the preparation of an HRA to assess the potential health impacts to new sensitive receptors sites to be located near substantial sources of DPM emissions. The proposed

project itself is not expected to generate significant amounts of DPM emissions. However, a portion of the residential component of the project would be situated in close proximity to State Route (SR) 91 which is located approximately 115 feet north of the proposed project's closest residences. Potential exposures to DPM emissions from the traffic along SR-91 could pose health concerns to the proposed project's future residents. As a consequence, an HRA was prepared to assess the potential health impacts from the traffic along SR-91 on the future residences of the proposed project resulting from SR-91's vehicle's DPM emissions.

DPM Emissions from SR-91

Traffic data from the California Department of Transportation (Caltrans) indicate that the portion of SR-91 that passes near to the proposed project experienced an approximately annual average of 259,000 vehicles per day in 2016, of which about 4 percent consisted of truck traffic. An hour-by-hour profile of traffic along the SR-91 at Serfas Club Drive was developed using measured traffic from the Caltrans Performance Measurement System (PeMS) and other traffic summaries prepared by Caltrans.[18] The PeMS system collects various traffic data in real-time from nearly 40,000 individual detectors spanning the freeway system across all major metropolitan areas of the State of California. For purposes of this HRA, hour-by-hour traffic data consisting of traffic volumes, average vehicle speeds, and truck proportions were collected from detectors near the SR-91 and Serfas Club Drive interchange for the freeway mainline, high occupancy vehicle lanes, and off/onramp vehicle lanes in each direction in 2016. Detailed information is attached in Appendix B.

Additional information derived from other Caltrans freeway summaries[19] and from the ARB 2017 Emissions Factors (EMFAC2017) mobile source emission model[20] were used to break down the traffic data into individual vehicle classes (passenger cars, light-duty trucks, and heavy-duty trucks and gas vs. diesel fuel). The breakdown of traffic by vehicle class is shown in Table 3.3-12.

Table 3.3-12: Vehicle Classes Along SR-91 at Serfas Club Drive

Vehicle Class	Percent of All Vehicles	Percent of Vehicle Class That Are Diesel
Passenger Cars		
Light-Duty Auto	57.7	1.0
Light-Duty Truck	24.3	0.5
Medium-Duty Truck	14.7	2.3
Total	**96.7**	—
Trucks		
Light Heavy-Duty Truck (2 axles)	1.4	54.9
Medium Heavy-Duty Truck (3 axles)	0.2	90.0

[18] California Department of Transportation (Caltrans). 2018. Performance Measurement System (PEMS). Website: https://pems.dot.ca.gov/. Accessed November 3, 2021.
[19] California Department of Transportation (Caltrans). 2016 Annual Average Daily Truck Traffic on the California State Highway System.
[20] California Air Resources Board. 2018. EMFAC2017 Web Database. Website: https://www.arb.ca.gov/emfac/2017/. Accessed October 28, 2021.

Vehicle Class	Percent of All Vehicles	Percent of Vehicle Class That Are Diesel
Heavy-Duty Truck (4+ axles)	1.6	100.0
Total	**3.3**	**—**
Source: Caltrans PeMS data for 2016, Caltrans 2016 Daily Truck Traffic Summary, and EMFAC2017 VMT output for Riverside County		

Using the information collected on traffic volumes, vehicle class and vehicle speed and emission factors for DPM, emissions were extracted from the ARB EMFAC2017 mobile source emission model for each hour of the day. This information was then used to estimate total DPM emissions as a function of time of day along the SR-91 section near the proposed project.

Note that a detailed examination of the daily mean PeMS traffic data for the year 2016 collected at the traffic sensors in the SR-91 eastbound and westbound directions at Serfas Club Drive resulted in a total traffic volume of 208,000 vehicles per day. This mean traffic volume is less than the value of 257,000 vehicles per day reported by Caltrans in their 2016 Traffic Volumes on California State Highways data summary. Therefore, to provide a level of traffic volumes consistent with the Caltrans Traffic Volume Summary, the PeMS traffic volume data were multiplied by a correction factor of 1.25 (257,000/208,000).

As noted above, the traffic data collected from the PeMS system was for the year 2016. The residential component of the proposed project was assumed to be occupied in 2022. In addition, as cancer risks are estimated over a 30-year exposure duration, it is necessary to estimate traffic volumes in future years from the 2016 collection time period. This was accomplished using the projected increase in Riverside County traffic as identified in the SCAG 2016 Regional Transportation Plan (RTP).[21] From the vehicle mile projections shown in the Plan, Riverside County-wide traffic is expected to increase by a factor of 1.05 from 2016 to 2022. Therefore, the corrected traffic volumes measured in 2016 were multiplied by an additional factor of 1.05 to provide representative traffic data for the proposed project opening year of 2022. Future traffic volumes beyond 2022 were estimated from the rate of growth of traffic volumes in Riverside County as derived from the SCAG 2016 RTP.

Figure 3.3-1 provides a summary of the SR-91 traffic volumes applied in this assessment while Figure 3.3-2 and Figure 3.3-3 show the average SR-91 vehicle speeds and truck percentages, respectively.

[21] Southern California Association of Governments (SCAG). 2016. Regional Transportation Plan Appendix Highways and Arterials.

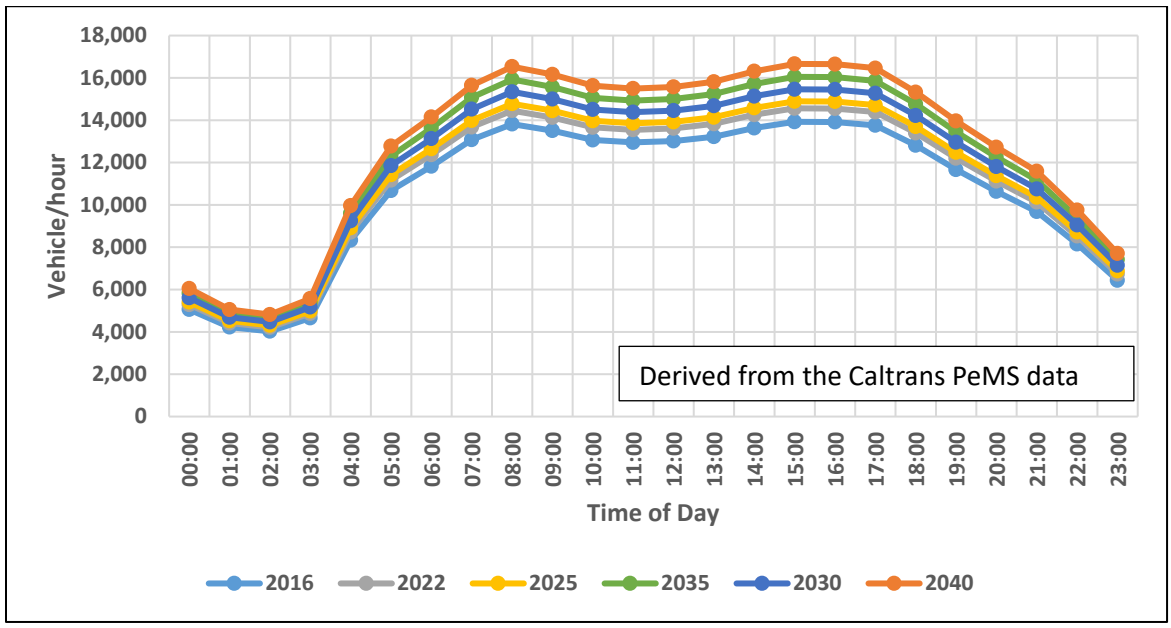

Figure 3.3-1: Estimated Traffic Volumes: SR-91 at Serfas Club Drive (Corrected)

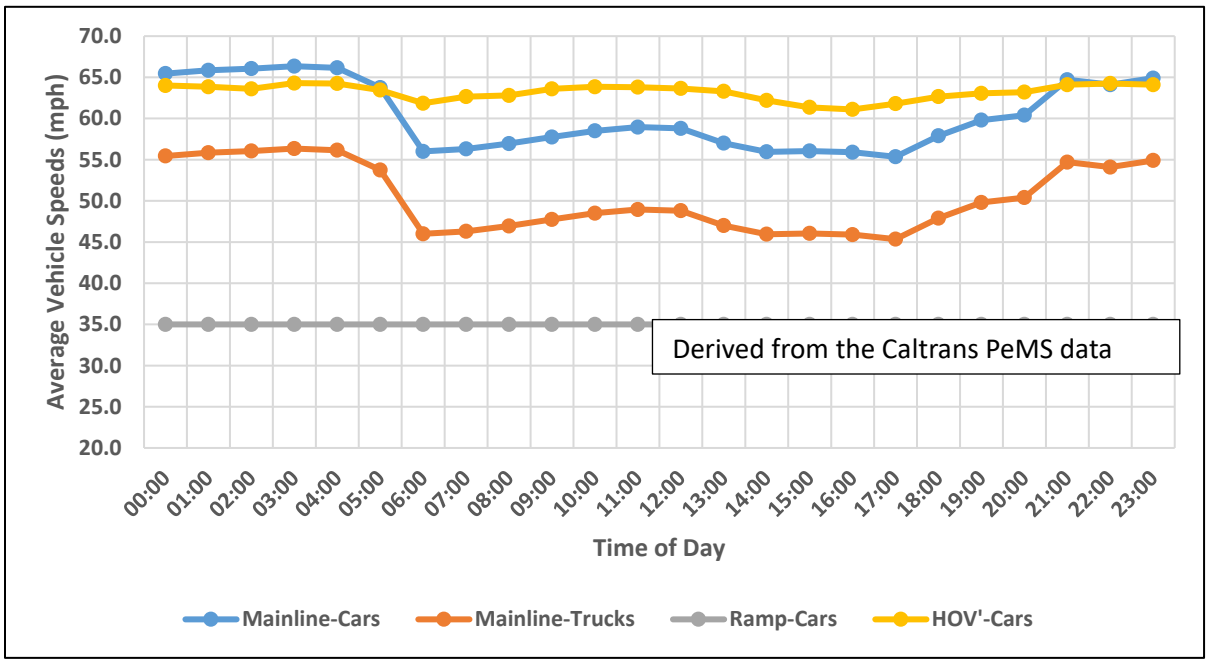

Figure 3.3-2: Estimated Average Vehicle Speeds

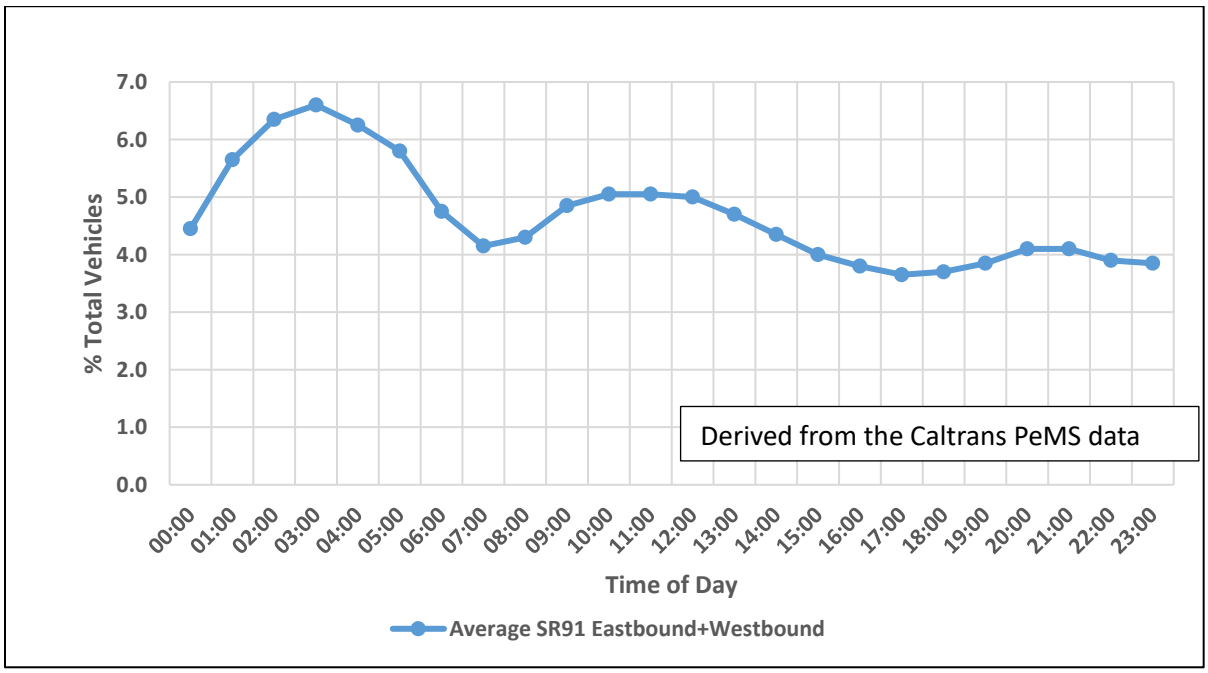

Figure 3.3-3: Truck Percentage: SR-91 at Serfas Club Drive

The process for estimating DPM emissions used year-specific DPM emission factors and future traffic volumes for the future years of 2022, 2025, 2030, 2035, 2040, 2045, and 2050. Because of the cutoff of future year emission factor projections in the EMFAC2017 model (2050 is the last year), and in the SCAG RTP traffic projections (2040 was the last year), the DPM emission rates in 2051 and 2052 were assumed to remain constant after 2050 and the traffic volumes were assumed to remain constant after 2040. Figure 3.3-4 and Figure 3.3-5 provide a sampling of the DPM emission factors for several representative vehicle classes for vehicle speeds of 40 mph and 60 mph, respectively. This analysis methodology was designed to capture not only the changing future DPM motor vehicle emission rates (which will decline in future years—see Figure 3.3-4 and Figure 3.3-5) but also the increases in future traffic volumes (which will increase in future years—see Figure 3.3-1).

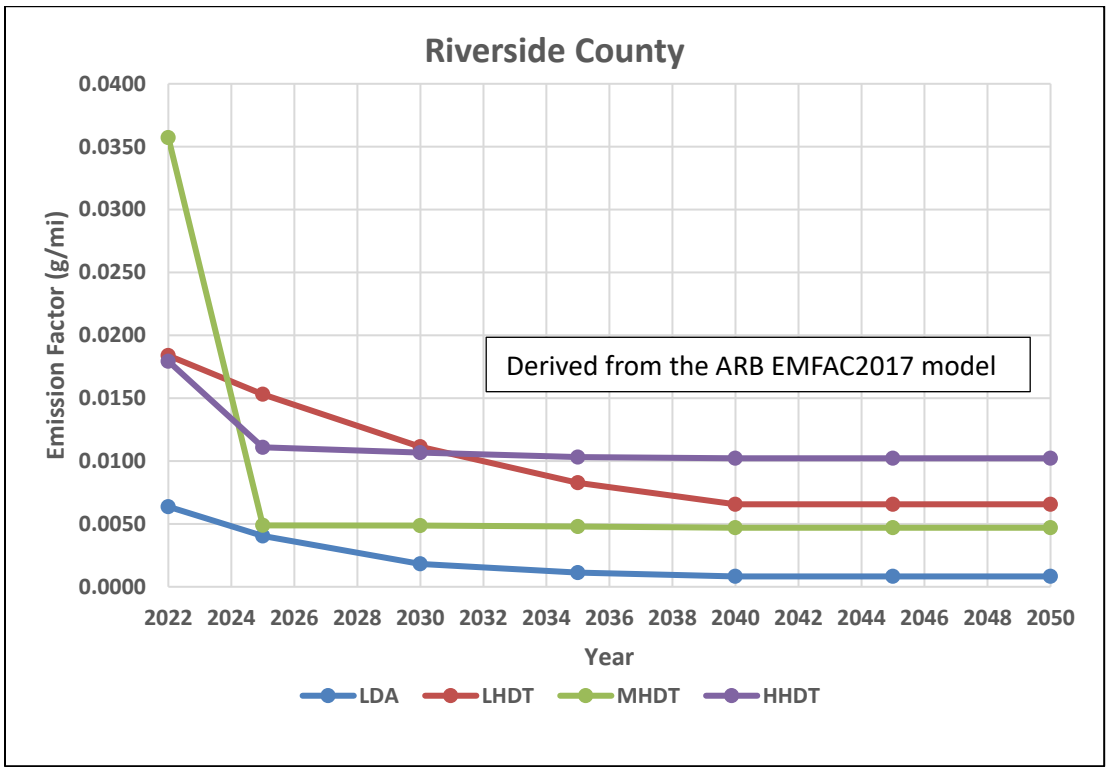

Figure 3.3-4: EMFAC2017 DPM Emission Rates at 40 mph

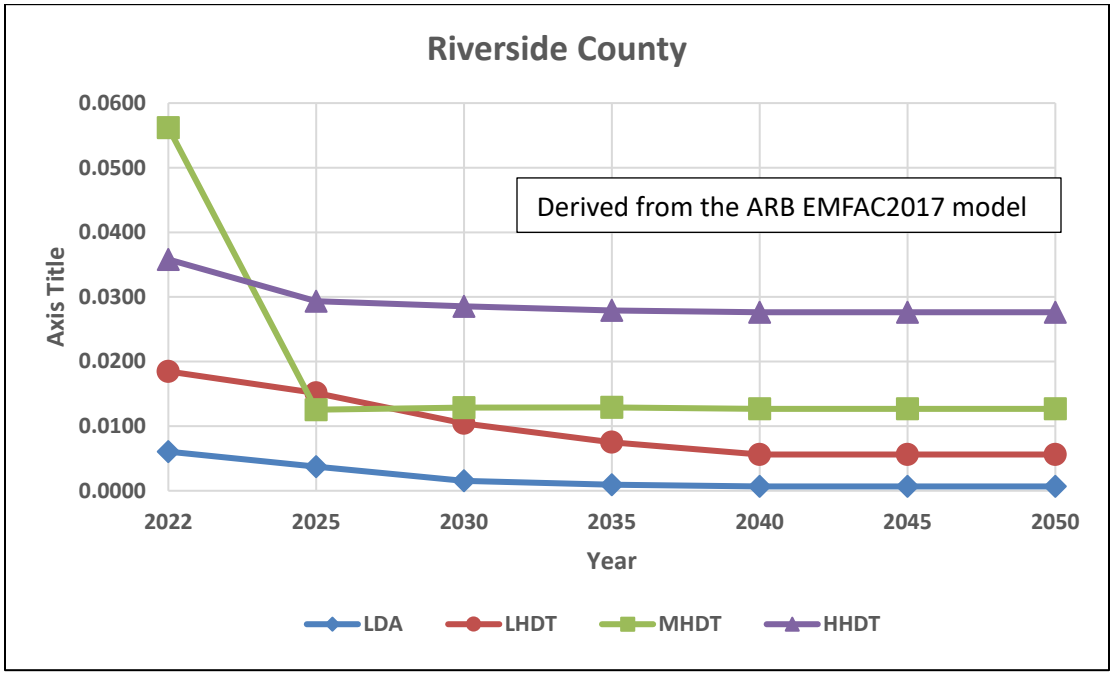

Figure 3.3-5: EMFAC2017 DPM Emission Rates at 60 mph

Combining the traffic volumes, vehicle classes, vehicle speeds, truck percentages, and DPM emission rates resulted in the total daily DPM emission rates along SR-91 at Serfas Club Drive in both directions as shown in Figure 3.3-6.

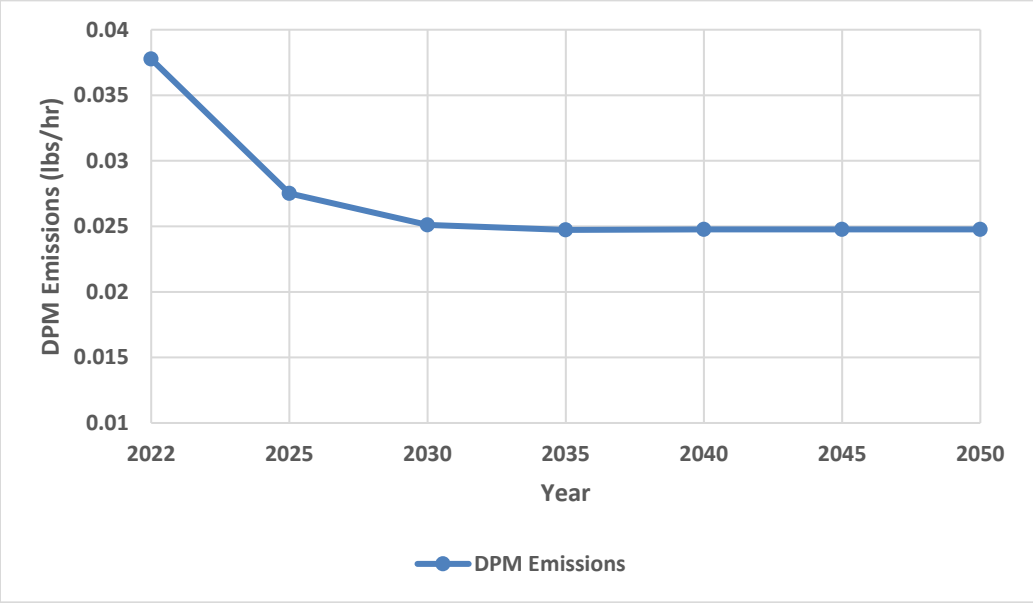

Figure 3.3-6: Daily DPM Emission Rates: SR-91 at Serfas Club Drive

Air Dispersion Modeling

An air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. The air dispersion model applied in this assessment was the EPA American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD, Version 18081) air dispersion model that is approved by the SCAQMD for preparing air dispersion assessments. Specifically, the AERMOD model was used to estimate levels of air emissions at sensitive receptor locations from the proposed project's construction PM_{10} exhaust emissions. The use of the AERMOD model provides a refined methodology for estimating construction impacts by utilizing long-term measured, representative meteorological data for the project site, construction area, and a representative construction schedule.

The air dispersion model assessment used meteorological data from the SCAQMD Riverside Airport monitoring station for the years 2012–2016.[22] All the receptors were placed within the breathing zone at zero meters above ground level.

Air Dispersion Modeling—Construction

Five emission sources were used to represent the proposed project's DPM construction emissions. Three sources represented the generation of on-site construction DPM emissions (as PM_{10} exhaust) from the off-road construction equipment, while the other two sources were used to represent the proposed project's off-site construction DPM emissions generated by construction vehicles. The

[22] South Coast Air Quality Management District (SCAQMD). 2021. AERMOD Table 1. Website: http://www.aqmd.gov/home/air-quality/meteorological-data/aermod-table-1. Accessed November 3, 2021.

emissions from the on-site source were represented in AERMOD as an area source, while the emissions from the two off-site sources were represented in AERMOD as line volume sources. Construction was assumed to take place on an 8-hour-per-day/5-day-per-week basis for the years 2019 to 2024 for Phase I, and 2022 to 2023 for Phase II.

Receptor locations in AERMOD were placed at locations of existing residences and schools surrounding the proposed project.

Air Dispersion Modeling—Operations

Each emission source to be evaluated requires geometrical and emission release specifications for use in the air dispersion model. The emission source configurations applied in this assessment were assumed to be a line volume source to describe the impacts from vehicle travel along the SR-91 segment adjacent to the proposed project. Table 3.3-13 summarizes the emission source details.

Table 3.3-13: General Air Dispersion Model Assumptions

Feature	Assumption
Terrain processing	Complex terrain; elevations were obtained for the proposed project site using the EPA Terrain Preprocessor (AERMAP) terrain data preprocessor
Emission source configuration	See Table 3.3-15 below
Land Use	Urban
Coordinate System	Universal Transverse Mercator
Meteorological Data	SCAQMD Riverside Airport meteorological data for 2012 to 2016
Receptor height	0 meters (ground level)
Source: Appendix B	

Table 3.3-14: Summary of SR-91 Emission Source Configurations

Emission Source	Emission Source Type	Assumption
SR-91	Line Source	• Line emission sources were defined as follows for westbound and eastbound lanes: - Lanes 1 to 4 were defined for passenger cars, light, and medium-duty trucks - Lanes 5 and 6 were defined for heavy-duty truck travel - HOV Lanes 1 and 2 were defined for passenger cars, light, and medium-duty trucks - Exit ramps were defined for passenger cars, and light and medium-duty trucks
Source: Appendix B		

Exhibit 3.3-1 provides the locations of the emission sources included in this analysis. Exhibit 3.3-2 provides the locations of the receptor network included in this analysis.

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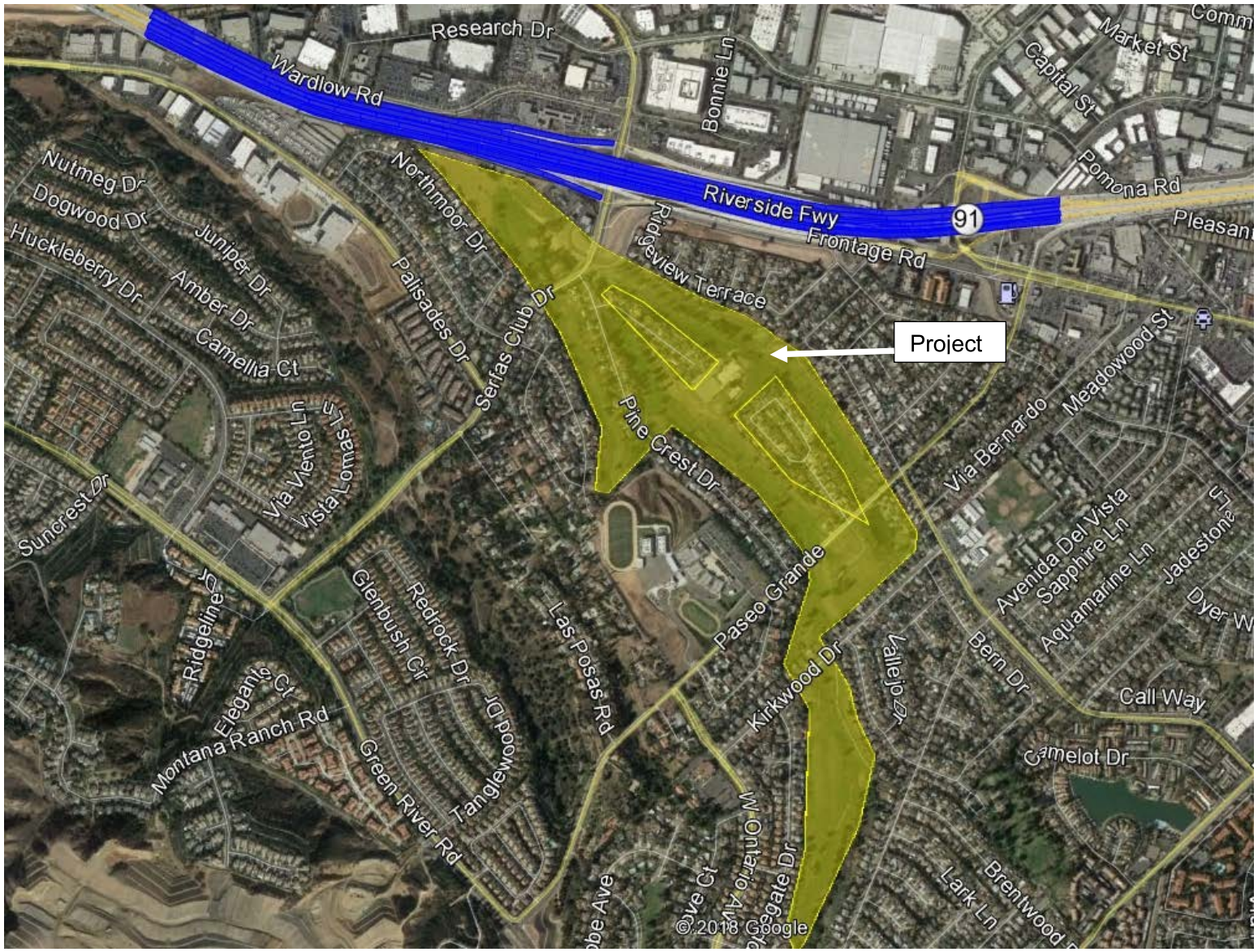

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Exhibit 3.3-1
SR 91 Freeway Emission Sources

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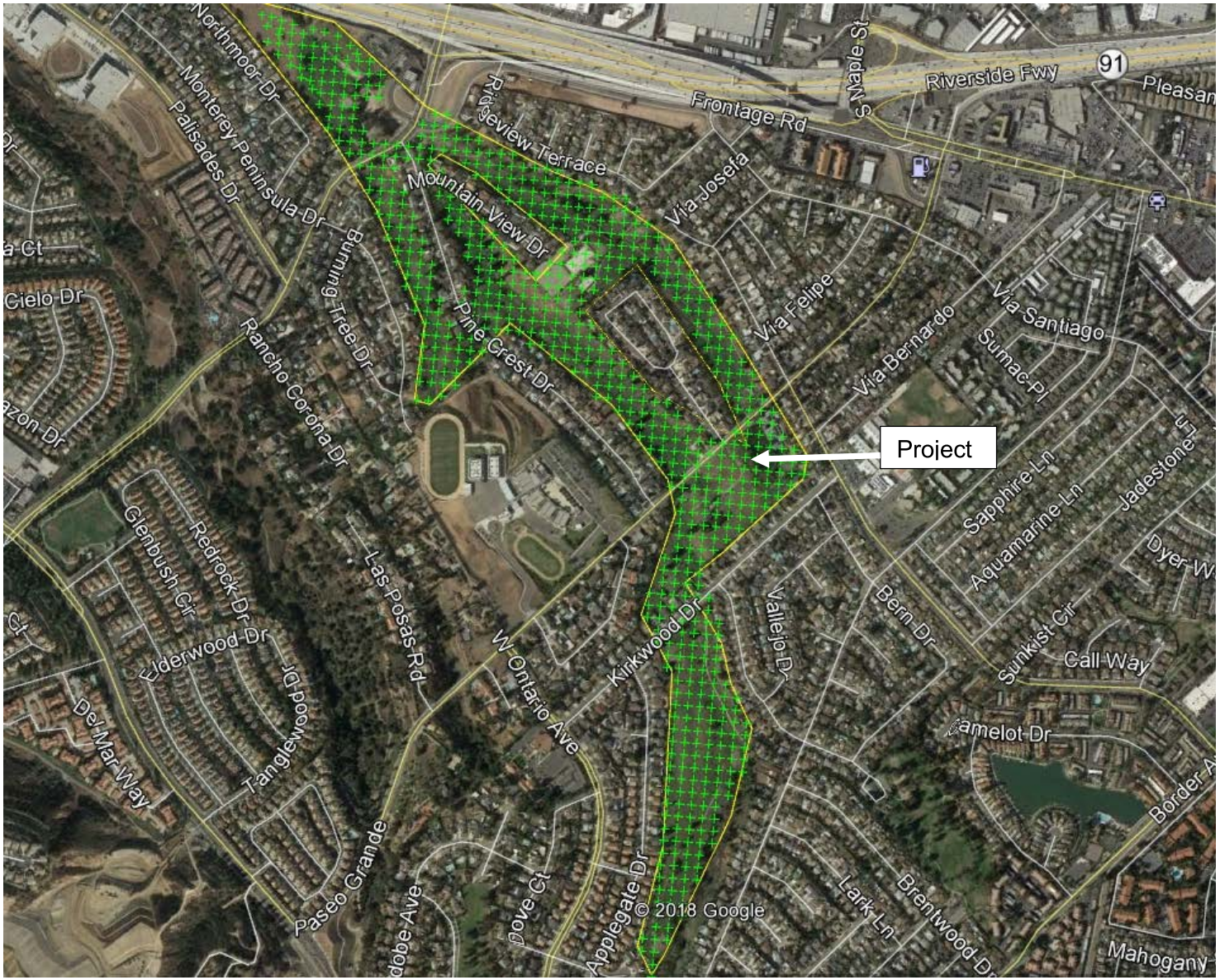

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+ Receptor Location

Exhibit 3.3-2
Air Dispersion Model Receptors

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3.3.7 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Consistency with Air Quality Management Plan

Impact AIR-1:	**Conflict with or obstruct implementation of the applicable air quality plan?**

Source(s): Riverside County General Plan, City of Corona General Plan

Impact Analysis

To evaluate whether a project conflicts with or obstructs the implementation of the applicable air quality plan (2016 AQMP for the SoCAB), the SCAQMD CEQA Air Quality Handbook states that there are two key indicators. These indicators are identified by the criteria discussed below.

1. **Indicator:** Whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
2. **Indicator:** According to Chapter 12 of the SCAQMD CEQA Air Quality Handbook, the purpose of the General Plan consistency findings is to determine whether a project is inconsistent with the growth assumptions incorporated into the air quality plan, and thus, whether it would interfere with the region's ability to comply with the NAAQS and CAAQS.

Considering the recommended criteria in the SCAQMD's 1993 Handbook, this analysis uses the following criteria to address this potential impact:

- **Step 1:** Project's contribution to air quality violations (SCAQMD's first indicator)
- **Step 2:** Assumptions in the AQMP (SCAQMD's second indicator)
- **Step 3:** Compliance with applicable emission control measures in the AQMPs

Step 1: Project's Contribution to Air Quality Violations

Step 1 represents an assessment of the overall impacts associated with the proposed project. As shown in Impacts AIR-2 through AIR-4, the proposed project would not generate regional or localized construction or operational emissions that would exceed SCAQMD's thresholds of significance after implementation of identified mitigation measures.

Step 2: Assumptions in AQMP

Step 2 examines the proposed project's consistency with assumptions made in the AQMP. The AQMP is based on land use patterns and forecasts contained in local general plans and other land use planning documents. Therefore, it is reasonable to conclude that if a project is consistent with the applicable general plan land use designation, and if the general plan was adopted prior to the applicable AQMP, then the growth of VMT and/or population generated by proposed project would be consistent with the growth in VMT and population assumed within the AQMP. The County of Riverside 2020 General Plan Land Use Designation for Planning Areas 1 to 5 is Open Space Recreation (OS-R). However, the County of Riverside has zoned Planning Areas 1 to 5 as One-Family Dwellings (R-1). As a part of the entitlement process, a proposed General Plan Amendment from Open Space Recreation (OS-R) to Medium Density Residential (MDR), as well as a change of zoning from One-Family Dwellings (R-1) to Specific Plan (S-P), for the project site, has been submitted to the County.

Planning Area 6, in the City of Corona, has a General Plan Land Use Designation of Low Density Residential (LDR) and is zoned as Agricultural (A). The proposed project conforms to the City of Corona 2004 General Plan Land Use Designation of LDR; however, the proposed project proposes a Change of Zone from Agriculture (A) to the Specific Plan Zone under the Trails of Corona Specific Plan.

As discussed above, with regard to the increased housing density and in Section 3.15, Population and Housing, the proposed project's dwelling units would have the potential to increase unincorporated Riverside County's population. Since the proposed project would include a General Plan Amendment, the proposed project would not be consistent with the growth assumptions within the current AQMP. The proposed project would be potentially significant under Criteria 2.

Step 3: Control Measures

Step 3 is an analysis of the proposed project's compliance with applicable emission control measures included in the AQMP. A detailed description of rules and regulations that apply to this project is provided in Section 3.3.5, South Coast Air Quality Management District. The proposed project would comply with all applicable SCAQMD rules and regulations. Therefore, the proposed project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

Summary

In summary, the proposed project would comply with all applicable SCAQMD rules and regulations. As discussed above, the proposed land uses and County of Riverside 2020 General Plan Amendment would allow for more emissions-intense land uses relative to the existing land use designations and zoning. As discussed in Impact AIR-2, implementation of Mitigation Measures (MM) AIR-1a through MM AIR-1c would be required to reduce regional and localized emissions to below significance thresholds. Accordingly, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, and, therefore, the impact would be less than significant after mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM AIR-1a As part of a standard building permit submittal, prior to the issuance of building or grading permits, the project applicant shall provide the City of Corona and County of Riverside with documentation demonstrating that project construction will use low-volatile organic compound (VOC) Architectural Coatings with a project-wide average VOC content of 10 grams per liter (g/L) or less.

MM AIR-1b As part of a standard grading permit submittal, the project applicant shall submit documentation to the County of Riverside that demonstrates that all off-road construction equipment in excess of 50 horsepower is equipped with engines meeting the United States Environmental Protection Agency (EPA) Tier IV off-road engine emission standards.

MM AIR-1c As part of a standard grading permit submittal, the project applicant shall include completion and submittal of a dust control plan as part of the construction contract standard specifications to South Coast Air Quality Management District (SCAQMD). The dust control plan shall include measures to meet the requirements of SCAQMD Rules 402 and 403, including, but not limited to, watering actively disturbed areas no less than 3 times per day.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Criteria Pollutant Emissions

Impact AIR-2:	**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?**

Source(s): Riverside County General Plan, SCAQMD CEQA Air Quality Handbook, Appendix B

Impact Analysis

This impact is related to the cumulative effect of a project's regional criteria pollutant emissions.

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

pollutant emissions above those assumed in regional air quality plans would contribute to cumulative air quality impacts.

The cumulative analysis focuses on whether a specific project would result in cumulatively considerable emissions. According to Section 15064(h)(4) of the CEQA Guidelines, the existence of significant cumulative impacts caused by other projects alone does not constitute substantial evidence that the project's incremental effects would be cumulatively considerable.

Rather, the determination of cumulative air quality impacts for construction and operational emissions is based on whether the project would result in regional emissions that exceed the SCAQMD regional thresholds of significance for construction and operations on a project level. Projects that generate emissions below the SCAQMD significance thresholds would be considered consistent with regional air quality planning efforts and would not generate cumulatively considerable emissions.

The nonattainment regional pollutants of concern are ozone, PM_{10} and $PM_{2.5}$. Ozone is a regional pollutant formed by a photochemical reaction in the atmosphere and not directly emitted into the air. Ozone precursors, such as VOC and NO_X, react in the atmosphere in the presence of sunlight to form ozone. Therefore, the SCAQMD ozone threshold is based on the emissions of the ozone precursors VOC and NO_X. This impact section includes analysis of, and significance determinations for, those pollutants. The project's regional construction and operational emissions, which include both on- and off-site emissions, are evaluated separately below. The concentration and operational emissions from the proposed project were estimated using the CalEEMod Version 2020.4.0.

Construction Emissions

Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from the heavy-duty off-road construction equipment, on-site motor vehicle operation, and fugitive dust from disturbed soil. Off-site emissions are caused by motor vehicle exhaust from delivery and haul truck vehicles, work traffic, and road dust (mainly $PM_{2.5}$ and PM_{10}). The majority of this fugitive dust will remain localized and will be limited to the atmosphere around the project site. However, the potential for off-site impacts from fugitive dust exists unless control measures are implemented to reduce the particulate emissions from this source prior to leaving the project site.

Table 3.3-15 shows the unmitigated daily construction emissions for Phase I and Phase II.

Table 3.3-15: Construction Maximum Daily Regional Emissions—Unmitigated

Construction Activity	Dates	Mass Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Demolition (2022)	4/1/2022–5/1/2022	2.70	25.81	21.20	0.04	1.45	1.21
Phase 1 Site Preparation (2022)	5/2/2022–7/30/2022	3.24	33.13	20.41	0.04	10.66	6.08
Phase 2 Site Preparation (2022)	7/31/2022–8/10/2022	3.24	33.13	20.41	0.04	10.66	6.08

Construction Activity	Dates	Mass Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Grading (2022)	7/31/2022–12/31/2022	3.87	43.62	31.63	0.08	6.51	3.37
Overlapping Emissions: 7/31/2022–8/10/2022 Daily Maximum		**7.11**	**76.75**	**52.04**	**0.12**	**17.17**	**9.45**
Phase 2 Grading (2022)	8/11/2022–9/1/2022	3.70	38.90	29.84	0.06	6.00	3.21
Overlapping Emissions: 8/11/2022–9/1/2022 Daily Maximum		**7.57**	**82.52**	**61.46**	**0.14**	**12.51**	**6.58**
Phase 2 Building Construction (2022)	9/2/2022–12/31/2022	5.82	32.55	57.34	0.18	13.31	4.29
Phase 1 Grading (2023)	1/1/2023–1/3/2023	3.53	38.54	30.62	0.08	6.29	3.17
Phase 2 Building Construction (2023)	1/1/2023–4/20/2023	5.26	27.81	53.89	0.17	13.09	4.09
Overlapping Emissions: 1/1/2023–1/3/2023 Daily Maximum		**8.79**	**66.35**	**84.50**	**0.25**	**19.38**	**7.26**
Phase 1 Building Construction (2023)	1/4/2023–12/31/2023	5.26	27.81	53.89	0.17	13.09	4.09
Phase 2 Paving (2023)	4/21/2023–5/11/2023	1.09	10.23	15.13	0.02	0.68	0.51
Overlapping Emissions: 1/4/2023–5/11/2023 Daily Maximum		**11.61**	**65.84**	**122.91**	**0.37**	**26.86**	**8.69**
Phase 2 Architectural Coating (2023)	5/12/2023–6/2/2023	69.44	1.73	8.47	0.02	2.11	0.62
Overlapping Emissions: 5/12/2023–12/31/2023 Daily Maximum		**74.70**	**29.54**	**62.36**	**0.19**	**15.20**	**4.71**
Phase 1 Building Construction (2024)	1/1/2024–9/30/2024	4.93	26.64	51.59	0.17	13.00	4.00
Phase 1 Paving (2024)	10/1/2024–12/31/2024	1.04	9.56	15.14	0.02	0.64	0.48
Phase 1 Paving (2025)	1/1/2022–1/19/2025	0.96	8.61	15.06	0.02	0.59	0.43
Phase 1 Architectural Coating (2025)	1/20/2025–4/4/2025	76.01	1.49	7.60	0.02	2.09	0.60
Maximum Daily Emissions		**76.01**	**82.52**	**122.91**	**0.37**	**26.86**	**9.45**
SCAQMD Air Quality Significance Thresholds		75	100	550	150	150	55
Exceed Threshold?		**Yes**	**No**	**No**	**No**	**No**	**No**

Construction Activity	Dates	Mass Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Notes: CO = carbon monoxide NO_X = oxides of nitrogen PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less. $PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers VOC = Volatile Organic Compounds The PM_{10} and $PM_{2.5}$ emissions reflect the exhaust and "mitigated" fugitive dust emissions in accordance with SCAQMD Rule 403. All emissions are drawn from the greatest amount between the summer and winter modeling output files. Source of emissions: Appendix B.							

As shown above, the proposed project's construction emissions from Phase I and Phase II would exceed the SCAQMD's thresholds for VOC emissions prior to mitigation measures during architectural coating activities in 2025. As such, MM AIR-1a, which stipulates the use of ultra-low VOC products containing no greater than 10 grams of VOC per liter of product, would be required to reduce VOC emissions to below significance thresholds. Mitigated project construction emissions are displayed in Table 3.3-16. As shown therein, MM AIR-1a would ensure that project construction would not exceed SCAQMD regional thresholds of significance. It should be noted that the implementation of MM AIR-1b and MM AIR-1c are also included in the emission estimates provided in Table 3.3-16; however, MM AIR-1b and MM AIR-1c, as explained under Impact AIR-3, would principally affect NO_X, PM_{10}, and $PM_{2.5}$ emissions and, to a lesser degree, VOC emissions.

Table 3.3-16: Construction Maximum Daily Regional Emissions—Mitigated

Construction Activity	Dates	Mass Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Demolition (2022)	4/1/2022–5/1/2022	0.52	2.09	23.89	0.04	0.27	0.11
Phase 1 Site Preparation (2022)	5/2/2022–7/30/2022	0.54	2.07	21.59	0.04	7.93	4.06
Phase 2 Site Preparation (2022)	7/31/2022–8/10/2022	0.54	2.07	21.59	0.04	7.93	4.06
Phase 1 Grading (2022)	7/31/2022–12/31/2022	1.00	8.08	35.58	0.08	4.42	1.75
Overlapping Emissions: 7/31/2022–8/10/2022 Daily Maximum		**1.54**	**10.14**	**57.17**	**0.12**	**12.35**	**5.80**
Phase 2 Grading (2022)	8/11/2022–9/1/2022	0.84	3.35	33.80	0.06	3.92	1.59
Overlapping Emissions: 8/11/2022–9/1/2022 Daily Maximum		**1.84**	**11.43**	**69.38**	**0.14**	**8.34**	**3.33**
Phase 2 Building Construction (2022)	9/2/2022–12/31/2022	4.67	19.63	58.64	0.18	12.60	3.63

Construction Activity	Dates	Mass Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Grading (2023)	1/1/2023–1/3/2023	0.97	7.32	35.56	0.08	4.41	1.74
Phase 2 Building Construction (2023)	1/1/2023–4/20/2023	4.22	16.07	55.28	0.17	12.48	3.52
Overlapping Emissions: 1/1/2023–1/3/2023 Daily Maximum		**5.20**	**23.40**	**90.85**	**0.25**	**16.89**	**5.26**
Phase 1 Building Construction (2023)	1/4/2023–12/31/2023	4.22	16.07	55.28	0.17	12.48	3.52
Phase 2 Paving (2023)	4/21/2023–5/11/2023	0.34	1.25	17.84	0.02	0.21	0.08
Overlapping Emissions: 1/4/2023–5/11/2023 Daily Maximum		**8.79**	**33.40**	**128.41**	**0.37**	**25.17**	**7.13**
Phase 2 Architectural Coating (2023)	5/12/2023–6/2/2023	14.41	0.55	8.49	0.02	2.05	0.55
Overlapping Emissions: 5/12/2023–12/31/2023 Daily Maximum		**18.64**	**16.63**	**63.78**	**0.19**	**14.53**	**4.07**
Phase 1 Building Construction (2024)	1/1/2024–9/30/2024	3.97	15.80	53.05	0.17	12.47	3.51
Phase 1 Paving (2024)	10/1/2024–12/31/2024	0.33	1.25	17.81	0.02	0.21	0.08
Phase 1 Paving (2025)	1/1/2022–1/19/2025	0.33	1.24	17.77	0.02	0.21	0.08
Phase 1 Architectural Coating (2025)	1/20/2025–4/4/2025	15.66	0.47	7.62	0.02	2.05	0.55
Maximum Daily Emissions (lbs/day)		**18.64**	**33.40**	**128.41**	**0.37**	**25.17**	**7.13**
SCAQMD Air Quality Significance Thresholds (lbs/day)		75	100	550	150	150	55
Exceed Threshold?		**No**	**No**	**No**	**No**	**No**	**No**

Notes:
CO = carbon monoxide
lbs = pounds
NO_X = oxides of nitrogen
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less.
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers
VOC = Volatile Organic Compounds
The PM_{10} and $PM_{2.5}$ emissions reflect the exhaust and "mitigated" fugitive dust emissions in accordance with SCAQMD Rule 403. All emissions are drawn from the greatest amount between the summer and winter modeling output files.
Source of emissions: Appendix B.

Operational Emissions

Operational emissions are generated by area, energy, and mobile sources. Area sources would include activities such as landscape maintenance and occasional architectural coatings. Energy

sources would include electricity and natural gas combustion for space and water heating. Mobile sources would include vehicle trips associated with passenger cars. As previously discussed, the SCAQMD regional emission significance thresholds were used to determine the project's impact significance. As the proposed project would become fully operational in 2025, Table 3.3-17 shows the total operational emissions for full buildout of the proposed project, including Phase I and Phase II, in 2025.

Table 3.3-17: Total Operational Emissions (2025)

Emission Sources	Mass Daily Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	13.96	5.49	32.28	0.03	0.58	0.58
Energy	0.36	3.13	1.63	0.02	0.25	0.25
Mobile	6.32	6.94	63.22	0.14	15.84	4.29
Total (lbs/day)	**20.63**	**15.56**	**97.14**	**0.20**	**16.67**	**5.12**
SCAQMD Significance Thresholds (lbs/day)	55	55	550	150	150	55
Exceeding Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
CO = carbon monoxide
lbs = pounds
NO_X = oxides of nitrogen
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers
VOC = Volatile Organic Compounds
For each source, the maximum emissions between summer and winter are shown.
Source of emissions: Appendix B.

As shown above, the total operational emissions from the proposed project in 2025 would not exceed the SCAQMD's thresholds of significance prior to mitigation measures. Therefore, the proposed project would not result in a cumulatively considerable net increase of operational emissions. The project's long-term operation would not result in a cumulatively considerable net increase of any criteria pollutant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of MM AIR-1a.

Level of Significance After Mitigation

Less than significant impact.

Impacts on Sensitive Receptors

Impact AIR-3c: **Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?**

Impact Analysis

To result in a less than significant impact, the following criteria must be true:

- **Criterion 1:** Localized significance threshold assessment: emissions and air quality impacts during project construction must be below the local significance thresholds.
- **Criterion 2:** CO hot spot assessment must demonstrate that the project would not result in the development of a CO hot spot that would result in an exceedance of the CO ambient air quality standards.
- **Criterion 3:** TAC analysis must demonstrate that the project would not result in significant health risk impacts to sensitive receptors during construction.
- **Criterion 4:** TAC analysis must demonstrate that TAC emissions from sources external to the project would not result in significant health risk impacts to the new on-site sensitive receptors.

Criterion 1: Localized Significance Threshold

As mentioned in Section 3.3.7, Thresholds of Significance, the on-site emissions from project construction activities were compared with the LSTs for a 5-acre size in SRAs 22 and 23 at 25 meters to the nearest sensitive receptor. Table 3.3-18 shows the maximum daily on-site construction emissions with and without implementation of MM AIR-1b and MM AIR-2c. All emissions estimates shown here include implementation of MM AIR-1a.

Table 3.3-18: Maximum Daily Construction Localized Significance Emissions—Unmitigated

Construction Activity	Dates	On-Site Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Demolition (2022)	4/1/2022–5/1/2022	2.64	25.72	20.59	0.04	1.28	1.16
Phase 1 Site Preparation (2022)	5/2/2022–7/30/2022	3.17	33.08	19.70	0.04	10.46	6.03
Phase 2 Site Preparation (2022)	7/31/2022–8/10/2022	3.17	33.08	19.70	0.04	10.46	6.03
Phase 1 Grading (2022)	7/31/2022–12/31/2022	3.62	38.84	29.04	0.06	5.82	3.15
Overlapping Emissions: 7/31/2022–8/10/2022 Daily Maximum		**6.79**	**71.93**	**48.74**	**0.10**	**16.27**	**9.18**

Construction Activity	Dates	On-Site Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 2 Grading (2022)	8/11/2022–9/1/2022	3.62	38.84	29.04	0.06	5.78	3.15
Overlapping Emissions: 8/11/2022–9/1/2022 Daily Maximum		**7.25**	**77.69**	**58.08**	**0.12**	**11.59**	**6.30**
Phase 2 Building Construction (2022)	9/2/2022–12/31/2022	1.71	15.62	16.36	0.03	0.81	0.76
Phase 1 Grading (2023)	1/1/2023–1/3/2023	3.32	34.52	28.05	0.06	5.61	2.96
Phase 2 Building Construction (2023)	1/1/2023–4/20/2023	1.57	14.38	16.24	0.03	0.70	0.66
Overlapping Emissions: 1/1/2023–1/3/2023 Daily Maximum		**4.89**	**48.90**	**44.30**	**0.09**	**6.31**	**3.62**
Phase 1 Building Construction (2023)	1/4/2023–12/31/2023	1.57	14.38	16.24	0.03	0.70	0.66
Phase 2 Paving (2023)	4/21/2023–5/11/2023	1.03	10.19	14.58	0.02	0.51	0.47
Overlapping Emissions: 1/4/2023–5/11/2023 Daily Maximum		**4.18**	**38.96**	**47.07**	**0.08**	**1.91**	**1.79**
Phase 2 Architectural Coating (2023)	5/12/2023–6/2/2023	68.78	1.30	1.81	0.00	0.07	0.07
Overlapping Emissions: 5/12/2023–12/31/2023 Daily Maximum		**70.35**	**15.69**	**18.06**	**0.03**	**0.77**	**0.73**
Phase 1 Building Construction (2024)	1/1/2024–9/30/2024	1.47	13.44	16.17	0.03	0.61	0.58
Phase 1 Paving (2024)	10/1/2024–12/31/2024	0.99	9.52	14.63	0.02	0.47	0.43
Phase 1 Paving (2025)	1/1/2022–1/19/2025	0.92	8.58	14.58	0.02	0.42	0.39
Phase 1 Architectural Coating (2025)	1/20/2025–4/4/2025	75.43	1.15	1.81	0.00	0.05	0.05
Maximum Daily Emissions (lbs/day)		**75.43**	**77.69**	**58.08**	**0.12**	**16.27**	**9.18**
SCAQMD SRA 22 LST (lbs/day)		–	270	1,700	–	12	8
SCAQMD SRA 23 LST (lbs/day)		–	270	1,577	–	13	8
Exceed Threshold?		–	**No**	**No**	–	**Yes**	**Yes**

Construction Activity	Dates	On-Site Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Notes: CO = carbon monoxide lbs = pounds NO_X = oxides of nitrogen PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less. $PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers VOC = Volatile Organic Compounds The PM_{10} and $PM_{2.5}$ emissions reflect the exhaust and "mitigated" fugitive dust emissions in accordance with SCAQMD Rule 403. All emissions are drawn from the greatest amount between the summer and winter modeling output files. Source of emissions: Appendix B. Source of thresholds: South Coast Air Quality Management District (SCAQMD). Localized Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2. Accessed October 18, 2021.							

As shown above, the on-site daily construction emissions during unmitigated project construction would exceed the LSTs for PM_{10} and $PM_{2.5}$. As PM emissions consist of both fugitive dust and exhaust emissions, reductions in both sources are necessary to reduce on-site PM emissions to below the applicable significance thresholds. As such, MM AIR-1b and MM AIR-1c would be required, which stipulate the use of Tier IV Final engines for construction equipment 50 horsepower or greater and the development and implementation of a dust control plan which incorporates appropriate measures from District Rules 402 and 403, including watering actively disturbed areas during construction no less than 3 times daily, respectively. As shown in Table 3.3-19, MM AIR-1b and MM AIR-1c would reduce construction emissions generated by the proposed project to less than the applicable significance thresholds.

Table 3.3-19: Maximum Daily Construction Localized Significance Emissions—Mitigated

Construction Activity	Dates	On-Site Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Demolition (2022)	4/1/2022–5/1/2022	0.46	2.00	23.28	0.04	0.09	0.07
Phase 1 Site Preparation (2022)	5/2/2022–7/30/2022	0.47	2.02	20.87	0.04	7.73	4.00
Phase 2 Site Preparation (2022)	7/31/2022–8/10/2022	0.47	2.02	20.87	0.04	7.73	4.00
Phase 1 Grading (2022)	7/31/2022–12/31/2022	0.76	3.30	33.00	0.06	3.73	1.53
Overlapping Emissions: 7/31/2022–8/10/2022 Daily Maximum		**1.23**	**5.32**	**53.87**	**0.10**	**11.45**	**5.53**

Construction Activity	Dates	On-Site Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 2 Grading (2022)	8/11/2022–9/1/2022	0.76	3.30	33.00	0.06	3.69	1.53
Overlapping Emissions: 8/11/2022–9/1/2022 Daily Maximum		**1.52**	**6.60**	**66.00**	**0.12**	**7.42**	**3.06**
Phase 2 Building Construction (2022)	9/2/2022–12/31/2022	0.56	2.69	17.66	0.03	0.10	0.10
Phase 1 Grading (2023)	1/1/2023–1/3/2023	0.76	3.30	33.00	0.06	3.73	1.53
Phase 2 Building Construction (2023)	1/1/2023–4/20/2023	0.54	2.65	17.64	0.03	0.09	0.09
Overlapping Emissions: 1/1/2023–1/3/2023 Daily Maximum		**1.30**	**5.95**	**50.64**	**0.09**	**3.82**	**1.62**
Phase 1 Building Construction (2023)	1/4/2023–12/31/2023	0.54	2.65	17.64	0.03	0.09	0.09
Phase 2 Paving (2023)	4/21/2023–5/11/2023	0.28	1.22	17.30	0.02	0.04	0.04
Overlapping Emissions: 1/4/2023–5/11/2023 Daily Maximum		**1.36**	**6.52**	**52.58**	**0.08**	**0.22**	**0.22**
Phase 2 Architectural Coating (2023)	5/12/2023–6/2/2023	13.75	0.13	1.83	0.00	0.00	0.00
Overlapping Emissions: 5/12/2023–12/31/2023 Daily Maximum		**14.29**	**2.78**	**19.47**	**0.03**	**0.10**	**0.10**
Phase 1 Building Construction (2024)	1/1/2024–9/30/2024	0.52	2.61	17.63	0.03	0.09	0.09
Phase 1 Paving (2024)	10/1/2024–12/31/2024	0.28	1.22	17.30	0.02	0.04	0.04
Phase 1 Paving (2025)	1/1/2022–1/19/2025	0.28	1.22	17.30	0.02	0.04	0.04
Phase 1 Architectural Coating (2025)	1/20/2025–4/4/2025	15.08	0.13	1.83	0.00	0.00	0.00
Maximum Daily Emissions (lbs/day)		**15.08**	**6.60**	**66.00**	**0.12**	**11.45**	**5.53**
SCAQMD SRA 22 LST (lbs/day)		–	270	1,700	–	12	8
SCAQMD SRA 23 LST (lbs/day)		–	270	1,577	–	13	8
Exceed Threshold?		–	**No**	**No**	–	**No**	**No**

Construction Activity	Dates	On-Site Daily Emissions (pounds per day)					
		VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$

Notes:
CO = carbon monoxide
lbs = pounds
NO_X = oxides of nitrogen
PM_{10} = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less.
$PM_{2.5}$ = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers
VOC = Volatile Organic Compounds
The PM_{10} and $PM_{2.5}$ emissions reflect the exhaust and "mitigated" fugitive dust emissions in accordance with SCAQMD Rule 403. All emissions are drawn from the greatest amount between the summer and winter modeling output files.
Source of emissions: Appendix B.
Source of thresholds: South Coast Air Quality Management District (SCAQMD). Localized Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2. Accessed October 18, 2021.

Criterion 2: Carbon Monoxide Hot Spot Analysis

An adverse CO concentration, known as a "hot spot," would occur if an exceedance of the State one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the SCAQMD 1993 Handbook, the SoCAB was designated nonattainment under the CAAQS and NAAQS for CO.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SoCAB is now designated as attainment.

To establish a more accurate record of baseline CO concentrations affecting the SoCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods.

The analysis prepared for CO attainment in the SoCAB by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the SoCAB. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the SoCAB are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of the 1992 CO Plan, subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach

Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the Level of Service (LOS) in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak AM traffic and LOS F at peak PM traffic.

As identified in the TIA prepared for the proposed project, the intersection which would experience the greatest traffic volumes during the 2025 Cumulative Plus Project Scenario would be the intersection of West 6th Street and Paseo Grande, which would see an estimated 77,800 Average Daily Traffic (ADT).

Consequently, at buildout of the proposed project, according to the proposed project TIA, none of the intersections in the vicinity of the proposed project would have daily traffic volumes exceeding those at the intersections modeled in the 2003 AQMP,[23] nor would there be any reason unique to SoCAB meteorology to conclude that this intersection would yield higher CO concentrations if modeled in detail. Therefore, the operation of the proposed project would not be expected to generate CO concentrations that would exceed the CO ambient air quality standards or cause a CO hotspot.

Criterion 3: Construction Toxic Air Pollutants

The results of the HRA prepared for the proposed project's construction to evaluate cancer risk and long-term chronic cancer risk are summarized below. Air dispersion modeling was utilized to assess the proposed project's potential health risks using the current version of AERMOD (Version 18081) air dispersion model, which is the air dispersion model accepted by the EPA and the SCAQMD for preparing HRAs. As previously discussed, this HRA was prepared for the proposed project upon its initial CEQA environmental review in 2018. At that time, the proposed project would have constructed and operated 425 dwelling units compared with the 365 dwelling units now proposed. In addition, as construction estimates move to future years, construction emissions are expected to decrease with compliance with increasingly stringent fuel efficiency and emission control requirements and technologies. Therefore, the proposed project would result in fewer construction emissions than those used in the air dispersion modeling and HRA presented in this analysis. As a result, the emissions generated during project construction which are utilized in this HRA represent a conservative analysis of construction health impacts.

Exhaust emissions of DPM utilized in the air dispersion modeling were estimated using the CalEEMod model (Version 2016.3.2). Table 3.3-20 and Table 3.3-21 summarize the emission rates of unmitigated PM_{10} and PM_{10} and mitigated emission rates with Tier IV Final off-road engines, which were utilized in the air dispersion modeling.

[23] California Air Resources Board (ARB). 2021. 2005 South Coast Carbon Monoxide Plan. Website: https://ww2.arb.ca.gov/resources/documents/2005-south-coast-carbon-monoxide-plan. Accessed October 25, 2021.

Table 3.3-20: Phase I PM_{10} Construction Emissions

Year (From Original Analysis)	On-site DPM (grams/m^2-sec)	Off-site DPM-Serfas Club Drive (grams/sec)	Off-site DPM-Paseo Grande (grams/sec)
Phase I Annual Construction Emissions (Unmitigated)			
2019	1.29E-07	1.87E-06	1.20E-05
2020	6.42E-08	3.13E-05	2.01E-04
2021	5.49E-08	1.43E-05	9.20E-05
2022	4.61E-08	1.29E-05	8.30E-05
2023	3.99E-08	9.31E-06	5.98E-05
2024	4.37E-02	2.31E-05	1.48E-05
Phase I Annual Construction Emissions (Tier IV Mitigation)			
2019	4.80E-09	1.87E-06	1.20E-05
2020	2.34E-09	3.13E-05	2.01E-04
2021	2.33E-09	1.43E-05	9.20E-05
2022	2.32E-09	1.29E-05	8.30E-05
2023	2.32E-09	9.31E-06	5.98E-05
2024	1.43E-09	2.31E-05	1.48E-05

Notes: As construction activities would occur after the dates provided in the above table, similar construction activities would result in fewer emissions than those shown here due to increasingly stringent emission standards and fuel efficiency requirements for construction equipment and vehicles.
Source: Appendix B.

Table 3.3-21: Phase II PM_{10} Construction Emissions

Year	On-site DPM (grams/m^2-sec)	Off-site DPM-Planning Area 4 (grams/sec)	Off-site DPM-Planning Area 5 (grams/sec)
Phase II Annual Construction Emissions (Unmitigated)			
2022	3.06E-07	5.58E-06	1.80E-05
2023	1.01E-08	4.80E-08	1.55E-07
Phase II Annual Construction Emissions (Tier IV Mitigation)			
2022	9.53E-09	5.58E-06	1.80E-05
2023	7.13E-10	4.80E-08	1.55E-07

Notes: As construction activities would occur after the dates provided in the above table, similar construction activities would result in fewer emissions than those shown here due to increasingly stringent emission standards and fuel efficiency requirements for construction equipment and vehicles.
Source: Appendix B.

The sensitive receptor that has the highest cancer risks during Phase I construction is located within 100 feet from the south edge of the project site's Planning Area 3.2 (the Planning Area 3.2 subarea is included within Planning Area 3), at the corner along Cypress Point Drive. As noted in Table 3.3-22, the proposed project's construction DPM emissions from Phase I would exceed the cancer risk significance thresholds prior to mitigation measures. Therefore, during Phase I construction, the proposed project is required to implement MM AIR-1a, and off-road construction equipment would use Tier IV engines. The mitigated health risks are shown in Table 3.3-23.

Table 3.3-22: Estimated Health Risks and Hazards: Phase I Construction—Unmitigated

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[2]
Risks and Hazards at the Maximally Impacted Sensitive Receptor (MIR): Infants[1]	18.5	0.01
Risks and Hazards at the MIR: Child[1]	4	0.01
Risks and Hazards at the MIR: Adult[1]	0.7	0.01
Significance Threshold	10	1
Exceeds Individual Source Threshold?	**YES** (Infants)	No

Notes:
[1] Maximally impacted sensitive receptor is a residence located approximately 100 feet from the south edge of the proposed project's Planning Area 3 along Cypress Point Drive.
[2] Chronic non-cancer hazard index was estimated by dividing the maximum annual DPM concentration (as PM_{10} exhaust) by the REL of 5 $\mu g/m^3$.
Source: Appendix B.

Table 3.3-23: Estimated Health Risks and Hazards: Phase I Construction—Tier IV Mitigation

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[2]
Risks and Hazards at the MIR: Infants[1]	0.7	<0.01
Risks and Hazards at the MIR: Child [1]	0.2	<0.01
Risks and Hazards at the MIR: Adult [1]	<0.1	<0.01
Significance Threshold	10	1
Exceeds Individual Source Threshold?	No	No

Notes:
[1] Maximally impacted sensitive receptor is a residence located approximately 100 feet from the south edge of the proposed project's Planning Area 3.2 along Cypress Point Drive.
[2] Chronic non-cancer hazard index was estimated by dividing the maximum annual DPM concentration (as PM_{10} exhaust) by the REL of 5 $\mu g/m^3$.
Source: Appendix B.

The sensitive receptor that has the highest cancer risks during Phase II construction is located within 72 feet from the east edge of the project site's Planning Area 5, near the intersection of Bern Drive and Kirkwood Drive. As noted in Table 3.3-24, the proposed project's construction DPM emissions from Phase II would exceed the cancer risk significance thresholds prior to mitigation measures. Therefore, Phase II construction is required to implement Tier IV mitigation, as shown in Table 3.3-25.

Table 3.3-24: Estimated Health Risks and Hazards: Phase II Construction—Unmitigated

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[2]
Risks and Hazards at the MIR: Infants[1]	20.4	0.03
Risks and Hazards at the MIR: Child[1]	4	0.03
Risks and Hazards at the MIR: Adult[1]	0.6	0.03
Significance Threshold	10	1
Exceeds Individual Source Threshold?	**YES** (Infants)	No

Notes:
[1] Maximally impacted sensitive receptor is a residence located approximately 100 feet east of the proposed project's Planning Area 5 near the intersection of Bern Drive and Kirkwood Drive.
[2] Chronic non-cancer hazard index was estimated by dividing the maximum annual DPM concentration (as PM_{10} exhaust) by the REL of 5 $\mu g/m^3$.
Source: Appendix B.

Table 3.3-25: Estimated Health Risks and Hazards: Phase II Construction—Tier IV Mitigation

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[2]
Risks and Hazards at the MIR: Infants[1]	0.7	<0.01
Risks and Hazards at the MIR: Child [1]	0.2	<0.01
Risks and Hazards at the MIR: Adult [1]	<0.1	<0.01
Significance Threshold	10	1
Exceeds Individual Source Threshold?	No	No

Notes:
[1] Maximally impacted sensitive receptor is a residence located approximately 100 feet east of the proposed project's Planning Area 5 near the intersection of Bern Drive and Kirkwood Drive.
[2] Chronic non-cancer hazard index was estimated by dividing the maximum annual DPM concentration (as PM_{10} exhaust) by the REL of 5 $\mu g/m^3$.
Source: Appendix B.

In addition, two scenarios were analyzed for health risk impacts in this analysis to address Criteria 3 above. These two scenarios evaluate the potential DPM emissions and subsequent health risk impacts during the overlap of construction activities for Phase I and Phase II.

- **Scenario 1:** Project-specific health risk impacts from 2019 when Phase I starts construction (assesses the impacts from Phase I during 2019-2024, and Phase II during 2022-2024), as shown in Table 3.3-26;

Table 3.3-26: Estimated Health Risks and Hazards at the MIR: 2019-2024—Tier IV Mitigation

Year	Cancer Risk (risk per million)
2019–2020	0.72
2021–2024	0.01
Maximum Cancer Risks[(1)]	0.72
Exceeds Individual Source Threshold?	No

Notes:
(1) Maximally impacted sensitive receptor is a residence located 100 feet from the south edge of the proposed project's Planning Area 3, along Cypress Point Drive.

- **Scenario 2:** project-specific health risk impacts from 2022 when Phase II starts construction (assesses the impacts from Phase I and II during 2022-2024), as shown in Table 3.3-27.

Table 3.3-27: Estimated Health Risks and Hazards at the MIR: 2022-2024—Tier IV Mitigation

Year	Cancer Risk (risk per million)
2022–2023	0.41
2023–2024	0.01
Maximum Cancer Risks[(1)]	0.42
Exceeds Individual Source Threshold?	No

Notes:
(1) Maximally impacted sensitive receptor is a residence located 100 feet from the south edge of the proposed project's Planning Area 3.2, along Cypress Point Drive.

As shown above, the proposed project's construction activities would not exceed SCAQMD's thresholds of significance with implementation of MM AIR-1b. Therefore, impacts would be less than significant.

Criterion 4: Operation Toxic Air Pollutants

The project would locate new sensitive receptors (residents) that could be subject to existing sources of TACs at the project site. However, the California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* concluded that agencies generally subject to CEQA are not required to analyze the impact of existing environmental conditions on a project's future users or residents. Although the Court ruled that impacts from the existing environment on projects

are not required to be addressed under CEQA, the Lead Agency (County of Riverside) has determined, in its discretion, to evaluate cancer risk impacts related to the project's potential to expose future residents to TAC emissions.

Cancer risks were estimated for two exposure durations: 30-year prenatal to adult exposures and 30-year adult exposures. Based on information provided by applicant, the earliest residents were anticipated to move on-site in 2022. Therefore, to estimate the 30-year exposure cancer risks, annual average operational DPM impacts from SR-91 were estimated for the years 2022, 2025, 2030, 2035, 2040, 2045, 2050, and 2052. Operational DPM impacts were then interpolated between these years to provide annual DPM impacts for all years from 2022 to 2052. The exposure parameters specific to the infant to adult and adult only exposure durations were then employed to estimate the cancer risk for the 30-year exposure duration. Total cancer risks were then estimated over the 30-year exposure duration as the sum of the cancer risks for each individual year and then corrected for traffic growth as described above. The results of the operational HRA are summarized in Table 3.3-28.

Table 3.3-28: Summary of the Operational Cancer Risk Impacts from SR 91

Receptor Type	Cancer risk (/million)	Significance Threshold (/million)	Exceeds Threshold?
Sensitive/Residential Receptor (Infant to Adult)	22.7	10	**YES**
Sensitive/Residential Receptor (Adult)	0.1	10	No
Notes: Receptors located within the residential component of the proposed project's Planning Area 1, south of SR-91			

As noted above, the estimated cancer risks for the Infant to Adult receptor that incorporate the increased sensitivity of children to exposures to DPM exceeds the SCAQMD cancer risk significance threshold of 10 in one million. The significant risks were noted in Planning Area 1. However, the risks related to adult exposures do not exceed the significance threshold.

Various types of mitigation are potentially available to reduce the potential impacts to the proposed project. These methods include enhanced air filtration systems, sound walls, and vegetation. Both the SCAQMD[24] and ARB[25] have discussed the merits and effectiveness of various measures designed to reduce near-roadway pollutant levels.

Many heating, ventilation, and air conditioning (HVAC) filters available in the United States are rated for their particle removal efficiency using a laboratory test procedure described in the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Standard 52.2-2012, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size.

[24] South Coast Air Quality Measurement District (SCAQMD). 2009. Pilot Study of High Performance Air Filtration for Classrooms Applications. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/aqmdpilotstudyfinalreport.pdf. Accessed October 25, 2021.

[25] California Air Resources Board (ARB). 2017. Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways. Website: https://ww2.arb.ca.gov/sites/default/files/2017-10/rd_technical_advisory_final.pdf. Accessed October 25, 2021.

The test procedure classifies the single-pass particle removal efficiency of HVAC filters based on their minimum particle removal efficiency in three particle size bins (0.3 µm to 1 µm, 1 µm to 3 µm, and 3 µm to 10 µm) under various loading conditions. Minimum removal efficiency values in these three size bins are used to assign HVAC filters a single efficiency metric called the Minimum Efficiency Reporting Value (MERV). In general, the higher the MERV for a filter, the greater the removal efficiency for one or more particle size bins.

The particle removal efficiency of filters is strongly dependent on particle size. Both larger particles (i.e., greater than ~1 µm) and smaller particles (i.e., less than ~0.1 µm) are removed by typical fibrous media filters with greater efficiency than particle sizes in between ~0.1 µm and ~1 µm. ASHRAE Standard 52.2-2012 evaluates the removal efficiency of a filter on a particle number-basis, albeit only for particle sizes 0.3 µm to 10 µm.

However, the majority of particles (by number) in most outdoor environments are smaller than 0.3 µm, and much of the $PM_{2.5}$ mass is often in the 0.5 µm to 1 µm size range. Thus, the $PM_{2.5}$ mass removal efficiency of a filter will vary depending on the filter's size-resolved removal efficiency for these particle sizes and the particle size distribution that passes through it. Average values for approximated outdoor origin $PM_{2.5}$ removal efficiencies for several MERV-rated filters were derived from Stephens, Brennan, and Harriman.[26] Single-pass outdoor origin $PM_{2.5}$ removal efficiencies range from less than 10 percent for MERV 6 to over 95 percent for MERV 16 and HEPA filters as shown in Figure 10.

In order to demonstrate a reduction in the risk of future residents, the use of air filters has been considered, as required under Title 24, Part 6, Subchapter 7, Section 150.0(m)12.C. Title 24 of the California Building Code, which requires that residential air filters meet a MERV of 13. MERV 13 filters would trap particles at an efficiency rate of 60 percent; however, the use of air filters is only effective when residents keep windows closed and use air passed through the filtration system. The proposed project has no direct control over the resident's operation of windows. Therefore, MM AIR-4a has been included to relay this information to the residents to allow them to make their own informed decisions.

After the installation and maintenance of an air filtration system rated at MERV 13, as required under Title 24, Part 6, Subchapter 7, Section 150.0(m)12.C, all future residents of the proposed project would not be exposed to substantial health risks that would exceed the SCAQMD cancer risk significance threshold. The highest cancer risk after mitigation would be 9.1 in one million. As such, impacts would be less than significant with mitigation.

[26] Stephens, B., Brennan, T. and Harriman, L., 2016. Selecting ventilation air filters to reduce pm2. 5 of outdoor origin response. ASHRAE JOURNAL, 58(11), pp.10-10. Website: http://www.conforlab.com.br/wp-content/uploads/2016/10/2016Sep_012-021_HarrimanFiltersToReducePM2.5.pdf. Accessed October 28, 2021.

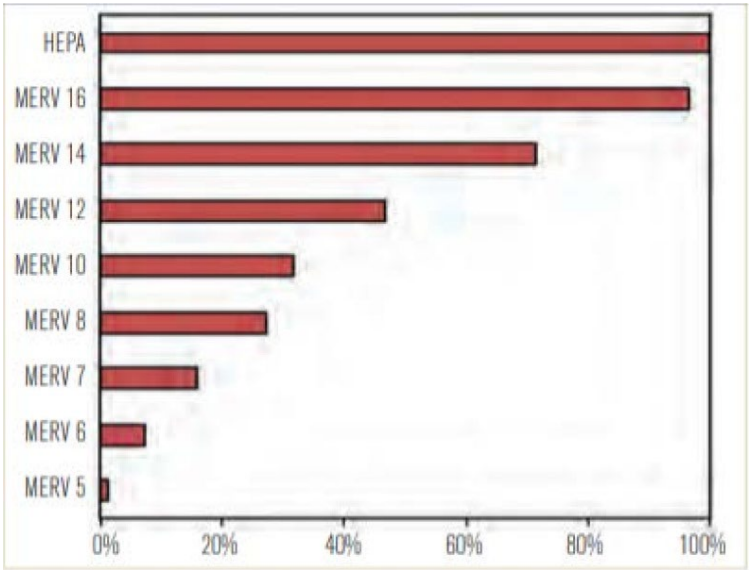

Figure 3.3-7: Estimates of Particle Removal Efficiency for $PM_{2.5}$ of Outdoor Origin for Filters Tested According to ASHRAE Standard 52.2-2012.2

Source: Stephens, B., Brennan, T. and Harriman, L., 2016. Selecting ventilation air filters to reduce $PM_{2.5}$ of outdoor origin response. ASHRAE JOURNAL, 58(11). Website: http://www.conforlab.com.br/wp-content/uploads/2016/10/2016Sep_012-021_HarrimanFiltersToReducePM2.5.pdf. Accessed October 28, 2021.

Level of Significance Before Mitigation

The proposed project's level of significance related to the four sensitive receptor impact considerations are as follows:

- Localized significance threshold: Potentially significant impact.
- CO hotspot: Less than significant impact.
- TAC impacts to sensitive receptors during construction: Potentially significant impact.
- External TAC impacts to future on-site receptors: Potentially significant impact.

Mitigation Measures

The applicability of mitigation for each of the four sensitive receptor impact considerations are as follows:

- Localized significance threshold: Implement MM AIR-1b and MM AIR-1c, full text shown in Impact AIR-1.
- CO hotspot: None required.
- TAC impacts to sensitive receptors during construction: Implement MM AIR-1a, full text shown in Impact AIR-1.
- External TAC impacts to future on-site receptors: Implement MM AIR-4a below.

MM AIR-4a All residents shall be provided with information that describes the potential risk from living near a freeway and that the incorporation of an advanced air filtration system has been provided to reduce that risk. The information shall also indicate that the residents have the option to open windows for circulation; however, that by opening windows, they reduce or eliminate the effectiveness of the air filtration system within their unit for as long as the unit is open to unfiltered air.

Level of Significance After Mitigation

- Localized significance threshold: Less than significant impact with mitigation incorporated.
- CO hotspot: Less than significant impact.
- TAC impacts to sensitive receptors during construction: Less than significant impact with mitigation incorporated.
- External TAC impacts to future on-site receptors: Less than significant impact with mitigation incorporated.
- In summary, the proposed project would result in less than significant impacts to sensitive receptors during construction and operation after implementation of MM AIR-1a through MM AIR-1c and MM AIR-4a.

Objectionable Odors

Impact AIR-1d:	**Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

Impact Analysis

Odors can cause a variety of responses. The impact of an odor is dependent on interacting factors such as frequency (how often), intensity (strength), duration (in time), offensiveness (unpleasantness), location, and sensory perception. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations. The SCAQMD's regulation activity for odor compliance is mandated under California Health & Safety Code Section 41700 and falls under SCAQMD Rule 402. This rule on Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

The SCAQMD does not provide a suggested screening distance for a variety of odor-generating land uses and operations. However, the San Joaquin Valley Air Pollution Control District (Valley Air District) does have a screening distance for odor sources. Those distances are used as a guide to assess whether nearby facilities could be sources of significant odors. Projects that would site a new

receptor farther than the applicable screening distances from an existing odor source would not likely have a significant impact. These screening distances by type of odor generator are listed in Table 3.3-29.

Table 3.3-29: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: Valley Air District 2015.	

Construction-related Odors

Potential sources that may emit odors during construction activities include exhaust from diesel construction equipment. However, because of the temporary nature of these emissions, the intermittent nature of construction activities, and the highly diffusive properties of diesel exhaust, nearby receptors would not be affected by diesel exhaust odors associated with project construction. Odors from these sources would be localized and generally confined to the immediate area surrounding the proposed project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Impacts would be less than significant.

Operational-related Odors

For odor sources listed above, the closest source to the project site would be Western Riverside County Regional Wastewater Authority (WRCWRA), which is located 3.3 miles northeast of the site. It is anticipated that the WRCWRA would include all necessary odor control systems to minimize odor emissions leaving their site operations. However, this potential odor source is also located at a sufficient buffer distance (per Table 3.3-28) to avoid any potential odor impacts. The proposed project would develop different types of residences and a shopping center, which are not typical odor-generating land uses. Land uses typically considered associated with odors include wastewater treatment facilities, waste disposal facilities, or agricultural operations. Minor sources of odors, such

as exhaust from mobile sources, are not typically associated with numerous odor complaints, but are known to have temporary and less concentrated odors. The proposed project's long-term operational activities would not have any substantial odor sources that would expose nearby receptors. Considering the low intensity of potential odor emissions, the proposed project's operational activities would not expose receptors to objectionable odor emissions. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.4 - Biological Resources

This section describes the existing biological conditions on the project site and the surrounding area and potential effects of project implementation on sensitive biological resources. This section also identifies mitigation measures to reduce potential effects to less than significant levels. Descriptions and analysis in this section are based, in part, on a Biological Resources Assessment (BRA) (Appendix C) prepared by Biologist David F. Moskovitz of Glenn Lukos Associates, Inc. (GLA) on February 16, 2016 (2016 GLA BRA), The Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis, prepared by FirstCarbon Solutions (FCS) on March 23, 2022, and MSHCP Riparian-Riverine Assessment Report, prepared by FCS on February 2024. Subsequent field surveys to confirm site conditions were performed by FCS Biologist, Dennis Peterson, on April 27, 2018, by FCS Biologist, Robert Carroll, on May 24, 2018, and by FCS Biologist Kymberly Gibson on October 16, 2021. GLA's BRA included an assessment of sensitive biological resources found on the project site; a detailed discussion of existing conditions on-site, including a list of special-status species, waters, and/or wetlands and their potential for occurrence; and recommendations where appropriate. Comments during the Notice of Preparation (NOP) and Scoping meeting that pertained to biological resources were taken into consideration in the analysis below.

3.4.1 - Methodology

Descriptions and analysis in this section are based, in part, on the BRA prepared by GLA, MSHCP Consistency Analysis, and MSHCP Riparian-Riverine Assessment Report, prepared by FCS, field surveys, and a literature review of relevant existing documentation. The BRA, MSHCP Consistency Analysis, and MSHCP Riparian-Riverine Assessment Report are provided in Appendix C.

Literature Review

FCS began with a thorough review of the 2016 GLA BRA as a baseline for its literature review.

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

Topographic and Hydrologic Maps

An FCS Biologist reviewed current United States Geological Survey (USGS) 7.5-minute topographic quadrangle map(s)and aerial photographs as a preliminary analysis of the existing conditions within the project site and immediate vicinity.[1] Information obtained from the topographic maps included elevation, general watershed information, and potential drainage feature locations using Google Earth in conjunction with the United States Environmental Protection Agency (EPA) Watershed

[1] United States Geological Survey (USGS). 2021. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed August 2, 2021.

Assessment, Tracking, and Environmental Results System (WATERS).[2] Aerial photographs provided a perspective of the current site conditions relative to on-site and off-site land use, plant community locations, and potential locations of wildlife movement corridors.

Soils Survey

The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series (i.e., group of soils with similar profiles) occurring within a particular area.[3] These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information regarding soil characteristics. Many special-status plant species have a limited distribution based exclusively on soil type. Therefore, pertinent USDA soil survey maps were reviewed to determine the existing soil mapping units within the project site and to inform whether the soil conditions on-site are potentially suitable for any special-status plant species. However, Natural Resources Conservation Service (NRCS) soil maps utilize an approximately 1.4-acre minimum mapping unit, and line placement may not be accurate on a large (i.e., parcel-level) scale.

Special-status Species Database Search

FCS Biologists reviewed the special-status species list (Tables 3-1 and 3-2) provided in the 2016 GLA BRA as a baseline for their analysis. An FCS Biologist compiled an updated list of threatened, endangered, and otherwise special-status species previously recorded within the project vicinity. The list was based on queries of the USFWS Information for Planning and Consultation (IPaC) database,[4] the California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California for the *Corona South, California,* USGS 7.5-minute Topographic Quadrangle Map and the eight surrounding quadrangles (Exhibit 3.4-1).[5,6] The CNDDB Biogeographic Information and Observation System (BIOS 5) was used to determine the distance between the known occurrences of special-status species and the project site.[7] The database search results can be found in Appendix C.

Trees

Prior to conducting the reconnaissance-level field survey, an FCS Biologist reviewed applicable City and County ordinances pertaining to tree preservation and protection and ascertained whether tree replacement measures or permits for the removal of protected trees are required.

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2 United States Environmental Protection Agency (EPA). 2021. Watershed Assessment, Tracking and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed August 2, 2021.

3 Natural Resources Conservation Service (NRCS). 2021. Web Soil Survey (WSS). United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed August 2, 2021.

4 United States Fish and Wildlife Service (USFWS). 2021. Information for Planning and Consultation (IPaC). Website: https://ecos.fws.gov/ipac/. Accessed August 2, 2021.

5 California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Database (CNDDB) RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed August 2, 2021.

6 California Native Plant Society (CNPS). 2021. California Native Plant Society Rare and Endangered Plant Inventory (CNPSEI). Website: http://www.rareplants.cnps.org/. Accessed August 2, 2021.

7 California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed August 2, 2021.

Jurisdictional Waters and Wetlands

Prior to conducting the reconnaissance-level survey, an FCS Biologist reviewed EPA WATERS and aerial photography to identify potential drainage features and water bodies.[8] In general, all blue-line streams identified on USGS maps are considered potentially subject to State and federal regulatory authority as waters of the United States and/or State. Preliminary aerial imagery interpretation was conducted to determine the location of potentially existing aquatic resources to support identification of potential aquatic resources in the field.

Field Survey

FCS Biologist, Dennis Peterson, surveyed the project site on April 27, 2018, followed by subsequent surveys conducted by FCS Biologist Robert Carroll on May 24, 2018, and by FCS Biologist Kymberly Gibson on October 16, 2021. The purpose of these surveys was to assess general site conditions, identify vegetation and wildlife habitats and identify any potentially suitable habitat areas for various special-status plant and wildlife species. Special-status species were identified during the literature review and special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

Vegetation

Common plant species observed during the reconnaissance-level survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Uncommon and fewer familiar plants were identified with the use of taxonomical guides, including Jepson eFlora and Calflora.[9,10] Taxonomic nomenclature used in this study follows The Jepson Manual: Vascular Plants of California.[11] Common plant names, when not available from The Jepson Manual, were taken from other regionally specific references. Vegetation types and boundaries were noted on aerial photos, verified through field observation, and digitized using ESRI ArcGIS software® ArcMap 10.8 By incorporating collected field data and interpreting aerial photography, a map of habitat types, land cover types, and other biological resources within the project site was prepared. Vegetation community and land cover types used to help classify habitat types are based on the Manual of California Vegetation (MCV) and cross-referenced with the CDFW Natural Communities List to determine their sensitivity.[12,13]

Wildlife

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded. Notations were made regarding suitable habitat for those special-status species

[8] United States Environmental Protection Agency (EPA). 2021. Watershed Assessment, Tracking and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed August 2, 2021.

[9] Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/. Accessed August 2, 2021.

[10] Calflora. 2021. Calflora: Information on California plants for education, research, and conservation. Website: http://www.calflora.org/. Accessed August 2, 2021.

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

[12] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento.

[13] California Department of Fish and Wildlife (CDFW). 2021. Natural Communities List, Sacramento: California Department of Fish and Wildlife. Website: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities. Accessed August 2, 2021.

determined to have the potential to occur within the project site.[14] Appropriate field guides were used to assist in species identification during surveys, such as Peterson, Reid, and Stebbins.[15,16,17] Online resources such as eBird and California Herps were also consulted, as necessary.[18,19]

3.4.2 - Regulatory Framework

Federal

Endangered Species Act of 1973

The USFWS has jurisdiction over species listed as threatened or endangered under the federal Endangered Species Act of 1973. Section 9 of Endangered Species Act protects listed species from "take," which is broadly defined as actions taken to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." The Endangered Species Act protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. All migratory birds and their nests are protected from take and other impacts under the MBTA (16 United States Code [USC] § 703, *et seq*.).

Bald and Golden Eagle Protection Act

The golden eagle (*Aquila chrysaetos*) and bald eagle (*Haliaeetus leucocephalus*) are afforded additional protection under the Eagle Protection Act, amended in 1973 (16 USC § 669, *et seq*.) and the Bald and Golden Eagle Protection Act (16 USC §§ 668–668d).

Clean Water Act

The United States Army Corps of Engineers (USACE) regulates the discharge of dredge or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA). "Discharges of fill material" is defined as the addition of fill material into waters of the United States, including, but not limited to, the following: placement of fill that is necessary for the construction of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines (33 Code of Federal Regulations [CFR] § 328.2(f)). In addition, Section 401 of the CWA (33 USC § 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of

[14] California Department of Fish and Wildlife (CDFW). 2021. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed August 2, 2021.
[15] Peterson, T.R. 2010. A Field Guide to Birds of Western North America, Fourth Edition. Boston: Houghton Mifflin Harcourt.
[16] Reid, F. 2006. A Field Guide to Mammals of North America, Fourth Edition. Boston: Houghton Mifflin Harcourt.
[17] Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians. Third Edition. Boston: Houghton Mifflin Harcourt.
[18] eBird. 2021. Online bird occurrence database. Website: http://ebird.org/content/ebird/. Accessed August 2, 2021.
[19] California Herps. 2021. A Guide to the Amphibians and Reptiles of California. Website: http://www.californiaherps.com/Accessed August 2, 2021.

the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

The final "Revised Definition of 'Waters of the United States'" rule was published in the Federal Register on January 18, 2023, and took effect on March 20, 2023. However, the final rule is not currently operative in certain states due to litigation.

Waters of the United States include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Boundaries between jurisdictional waters and uplands are determined in a variety of ways, depending on which type of waters is present. Methods for delineating wetlands and non-tidal waters are described below.

- Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR § 328.3(b)). Presently, to be a wetland, a site must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the “normal circumstances” for the site.
- The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) (33 CFR § 328.4(c)(1). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 CFR § 328.3€).

State

California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing California Environmental Quality Act (CEQA) documents to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code [FGC] § 2080). CESA directs agencies to consult with the CDFW on projects or actions that could affect listed species, directs the CDFW to determine whether jeopardy would occur, and allows the CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. CESA allows the CDFW to authorize exceptions to the State’s prohibition against take of a listed species if the “take” of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC § 2081).

California Fish and Game Code

Under CESA, the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC § 2070). Fish and Game Code Sections 2050 through 2098 outline the protection provided to California’s rare, endangered, and threatened species. Fish and Game Code Section 2080

prohibits the taking of plants and animals listed under the CESA. Fish and Game Code Section 2081 established an incidental take permit program for State-listed species. The CDFW maintains a list of "candidate species," which it formally notices as being under review for addition to the list of endangered or threatened species.

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

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

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

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

Under Fish and Game Code Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs

of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. To comply with the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

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

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

California Porter-Cologne Water Quality Control Act

The Regional Water Quality Control Board (RWQCB) regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the State" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)). In 2019, the California State Water Resources Control Board (State Water Board) published the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) to guide wetland/waters of the State determinations and the permitting process.[20]

California Native Plant Society

The CNPS maintains a rank of plant species that are native to California and that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Following are the definitions of the CNPS ranks:

- **Rank 1A:** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B:** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A:** Plants presumed extirpated in California but common elsewhere

[20] California State Water Resources Control Board (State Water Board). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. April 2, 2019.

- **Rank 2B:** Plants rare, threatened, or endangered in California but more common elsewhere
- **Rank 3:** Plants about which more information is needed
- **Rank 4:** Watch List: Plants of limited distribution

Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. All plants appearing on the CNPS List ranked 1 or 2 are considered to meet the CEQA Guidelines Section 15380 criteria. Rank 3 and 4 plants do not automatically meet this definition. Rank 4 plants do not clearly meet CEQA standards and thresholds for impact considerations. Nevertheless, some level of CEQA review is justified for California Rare Plant Rank (CRPR) 4 taxa, and under some circumstances, a full impact analysis is warranted. Taxa that can be shown to meet the criteria for endangered, rare, or threatened status under CEQA Section 15380(d) or that can be shown to be regionally rare or unique as defined in CEQA Section 15125(c) must be fully analyzed in a CEQA document. Some circumstances, such as local rarity, having occurrences peripheral to the taxon's distribution, or having occurrences on unusual substrates or rare and declining habitats, provide justification for treating some CRPR 4 taxa occurrences as regionally rare or unique. One limitation to fully analyzing impacts on CRPR 4 taxa is the difficulty in obtaining current data on the number and condition of the occurrences.[21]

Local

County of Riverside General Plan

The County of Riverside General Plan 2015 Multipurpose Open Space Element sets forth the following applicable policies that are relevant to biological resources:

Policy OS 5.5 Preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses. Prohibit fencing that constricts flow across watercourses and their banks. Incentives shall be utilized to the maximum extent possible.

Policy OS 5.6 Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.

Policy OS 5.7 Where land is prohibited from development due to its retention as natural floodways, floodplains and watercourses, incentives should be available to the owner of the land including density transfer and other mechanisms as may be adopted. These incentives will be provided for the purpose of encouraging the preservation of natural watercourses without creating undue hardship on the owner of properties following these policies.

Policy OS 6.1 During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.

[21] California Native Plant Society (CNPS). 2020. Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis. Sacramento, CA. 21 January 2020.

Policy OS 6.2 Preserve buffer zones around wetlands where feasible and biologically appropriate.

Policy OS 6.3 Consider wetlands for use as natural water treatment areas that will result in improvement of water quality.

Policy OS 9.3 Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes.

Policy OS 9.4 Conserve the oak tree resources in the county.

Policy OS 18.3 Prohibit the planting or introduction of invasive, non-native species to watercourses, their banks, riparian areas, or buffering setbacks.

Riverside County Oak Tree Management Guidelines

A biological study will be required for all applications on properties that contain oak trees, which will address the following:

An inventory of on-site vegetation shall be required, which shall include:

- The location and size of individual oak trees that are two (2) inches DBH or larger within proposed roads, driveways, and homesites including their protected zones as identified by a biologist and mapped by a surveyor or engineer on a map that is the same scale as the project map.
- An accurate depiction of the distance and direction of all proposed grading.
- Identification of boundaries of plant communities.
- Dead or dying trees within proposed roads, driveways, or homesites shall be identified and evaluated for their value to cavity nesting birds.

Impacts of the proposed development shall be identified and quantified.

All possible options for mitigation measures shall be identified, including redesign/clustering, if impacts cannot be avoided by the project as proposed.

The biological report shall include required mitigation, consistent with CEQA and applicable State or County codes and ordinances.

The mitigation program shall be incorporated into the project's conditions of approval.

Habitat Conservation Plan

The project site falls within the boundaries of the Western Riverside MSHCP. As such, the proposed project was assessed for consistency with the MSHCP in the MSHCP Consistency Analysis, prepared by FCS on March 22, 2022. However, as the site consists of a formerly developed golf course, the site is excluded from the MSHCP survey areas, which include Narrow Endemic Plant Species Survey Area,

Criteria Area Species Survey Area, and burrowing owl survey area. Consequently, assessments are not required for these species pursuant to the MSHCP. The MSHCP policies regarding riparian/riverine areas apply to all properties located within the MSCHP's jurisdiction. As such, the project site was assessed for these habitat areas in the MSHCP Riparian-Riverine Assessment Report, prepared on February 28, 2024. Project development would be consistent with the policies set forth in the MSHCP as well as policies related to the MSHCP in the County of Riverside 2015 Multipurpose Open Space Element:

Policy OS 17.1 Enforce the provisions of applicable MSHCP's and implement related Riverside County policies when conducting review of possible legislative actions such as general plan amendments, zoning ordinance amendments, etc. including policies regarding the handling of private and public stand-alone applications for general plan amendments, lot line adjustments and zoning ordinance amendments that are not accompanied by, or associated with, an application to subdivide or other land use development application. Every stand-alone application shall require an initial Habitat Evaluation and Acquisition Negotiation Process (HANS) assessment and such assessment shall be made by the Planning Department's Environmental Programs Division. Habitat assessment and species-specific focused surveys shall not be required as part of this initial HANS assessment for stand-alone applications but will be required when a development proposal or land use application to subsequently subdivide, grade or build on the property is submitted to the County.

Policy OS 17.2 Enforce the provisions of applicable MSHCP's and implement related Riverside County policies when conducting review of development applications.

Policy OS 17.3 Enforce the provisions of applicable MSHCP's and implement related Riverside County policies when developing transportation or other infrastructure projects that have been designated as covered activities in the applicable MSHCP.

Policy OS 18.1 Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCP's and through implementing related Riverside County policies.

City of Corona 2020-2040 General Plan

Biological resources-related goals, policies, and programs of the Corona 2020-2040 General Plan serve to guide the location, design, and quality of development in order to protect important wildlife, plants, and their associated habitats. The following are the applicable policies relevant to biological resources:

ER-6.1 Support the rehabilitation and enhancement of the biological diversity, and integrity of the City's natural resources through such means as vegetation restoration, control of alien plants and animals, landscape buffering, and natural watercourse channel restoration.

ER-6.2 Preserve the wildlife and plant species and habitats listed in Tables 4-12 and 4-13 of the Technical Background Report for the General Plan and EIR and those that may be considered by the City of Corona in the future.

ER-6.3 Ensure that new developments and circulation improvements demonstrate compliance with State and federal regulations concerning the status, location, and condition of significant and sensitive biological species and habitats and riparian and riverine corridors. Biological surveys, as required and defined by the Western Riverside County Multiple Species Habitat Conservation Plan, should identify potential impacts on biological resources and include mitigation measures to protect/replace resources in like kind.

ER-6.4 Ensure that new developments through the development review process adhere to the Western Riverside County Multiple Species Habitat Conservation Plan, the Stephens' Kangaroo Rat Habitat Conservation Plan, and other habitat plans as appropriate to conserve biological diversity through protection of natural communities.

ER-6.5 Preserve wildlife habitat of significant natural open space areas, including expanding habitat ranges, movement corridors, and nesting sites by adhering to and implementing the core biological linkages identified in the MSHCP for parts of the Temescal Canyon Area Plan in the City. Any proposed recreational use of those areas such as trails shall be designed to not interfere with the preservation efforts established in the MSHCP.

ER-7.1 Require that public and private construction activities be conducted in a manner to minimize adverse impacts on natural resources and biological resources in proximity to MSHCP conservation areas and adhere to the MSHCP Guidelines pertaining to Urban/Wildlife Interface for drainage, toxics, lighting, noise, invasive barriers, and grading.

ER-7.2 Allow for publicly accessible sites that facilitate observation of natural resources in Corona and its sphere without compromising environmental quality.

ER-8.4 Maintain and conserve superior examples of native trees (including oak trees), natural vegetation, stands of established trees, and other features for aesthetic and water conservation purposes.

ER-8.5 Conserve the oak tree resources in the City to the extent feasible.

ER-9.1 Protect sensitive biological resources in the Temescal Canyon Area Plan through adherence to policies in the Western Riverside County MSHCP.

ER-9.2 Conserve existing wetlands and wetland functions and values in the Temescal Canyon Wash, Prado Basin, and the Santa Ana River with a focus on conservation of

existing riparian, woodland, coastal sage scrub, alluvial fan scrub, and open water habitats.

ER-9.3 Conserve existing known populations of least Bell's vireo and southwestern willow flycatcher in the Temescal Canyon Area Plan, including at Prado Basin, Santa Ana River, and Temescal Canyon Wash. Maintain existing breeding habitat for these species at Prado Basin, Santa Ana River, and Temescal Wash where applicable to a particular project and location.

ER-9.4 Conserve and manage suitable habitat for species known to exist in the Temescal Canyon Area Plan of Western Riverside County's Multiple Species Habitat Conservation Plan.

ER-9.5 Conserve clay soils supporting sensitive plant species known to occur in the Temescal Canyon area, including Munz's onion, Palmer's grappling hook, small-flowered morning glory, long-spined spineflower, thread-leaved brodiaea, small-flowered microseris, and many-stemmed dudleya.

ER-9.6 Conserve sandy soils co-occurring with chaparral supporting Palomar monkeyflower, known to occur in the Temescal Canyon area.

ER-9.7 Conserve locations supporting California muhly, heart-leaved pitcher sage, Hall's monardella, and other sensitive plant species that may occur in a wide variety of habitat types within the Temescal Canyon Area Plan.

ER-9.9 Conserve upland habitat adjacent to the Temescal Canyon Wash to augment existing upland habitat conservation in the Lake Matthews/Estelle Mountain Reserve areas and provide for contiguous connection of upland habitat blocks from the existing reserve to Temescal Wash. Habitat conservation should focus on blocks of existing upland habitat east of Temescal Canyon Wash connecting to Lake Matthews/Estelle Mountain Reserve.

ER-9.10 Conserve floodplain areas supporting sensitive plant species known to occur in Temescal Canyon, including Parry's spineflower, peninsular spineflower, smooth tarplant, and Coulter's matilija poppy.

ER-9.11 Conserve rocky soils co-occurring with coastal sage scrub, peninsular jumper, or chaparral supporting Payson's jewelflower, known to occur in the Temescal Canyon area.

3.4.3 - Environmental Setting

The proposed project site comprises approximately 104.8 acres, of which 79.9 acres are within the County of Riverside's jurisdiction and 24.9 acres are within the City of Corona's jurisdiction. The property consists of the former Mountain View Golf Course, which is no longer operational. The former golf course is surrounded by residential development such as single-family and multiple-

family housing. The property is located south of State Route (SR) 91 and generally west of Avenida del Vista and east of Serfas Club Drive, and is depicted on the *Corona South, California* USGS 7.5-minute Topographic Quadrangle Map.

As noted above, the site is located within the Western Riverside County MSHCP. As a result of the previously developed golf course, the site is not included in the MSHCP's survey areas for the following: Narrow Endemic Plant Species Survey Area, Criteria Area Species Survey Area, and the burrowing owl survey area; as such, assessments are not mandatory for these species.

As a former golf course, the property consists of remnant fairways, cart paths, a clubhouse foundation slab, and other features, including former golf course ponds. The majority of the site appears to be regularly mowed. Although the City of Corona urban limits surround the site to the north, east, south, and west, the site is also adjacent to the County of Riverside unincorporated communities of Green River and Prado Basin.

The site is entirely surrounded by urban development. Land uses immediately to the west are predominantly residential uses as well as commercial (McDonald's and Arco) and school facilities (Coronita Elementary School). Immediately north of the project site is SR-91, further north is commercial (In-N-Out-Burger, Nissan and Hyundai car dealerships) and light industrial land uses. Land uses immediately to the east are predominantly residential uses as well as school facilities (Cesar Chavez Academy). Land uses immediately to the south are predominantly residential uses as well as vacant parcels (Planning Area 6 within the City of Corona).

Vegetation

As discussed above, the project site consists of a former golf course, and includes ruderal vegetation, native and non-native trees, and a natural drainage feature at the southern end of the property. Two remnant pond features occur on the project site as well as one pond feature with standing water that supports woody vegetation that is typical of riparian areas.

Ruderal and Developed Land

The majority of the project site consists of developed land with remnant turf and various weedy species that have since expanded throughout the former golf course. Characteristic on-site ruderal vegetation includes non-native grasses and other weedy species such as London rocket (*Sisymbrium irio*), Bermuda grass (*Cynodon dactylon*), Russian thistle (*Salsola tragus*), horehound (*Marrubium vulgare*), lamb's quarters (*Chenopodium album*), cheeseweed (*Malva parviflora*), slender wild oat (*Avena barbata*), shortpod mustard (*Hirschfeldia incana*), giant reed (*Arundo donax*), curly dock (*Rumex crispus*), Mediterranean grass (*Schismus barbatus*), foxtail chess (*Bromus madritensis* ssp*. rubens*), prostrate pigweed (*Amaranthus albus*), cultivated radish (*Rhaphanus sativus*), milkvetch (*Astragalus* sp.), English ivy (*Hedera helix*), and smilo grass (*Stipa miliacea* var*. miliacea*).

Trees

The project site contains both native and non-native planted trees scattered throughout the former golf course. The trees within the project boundaries include Peruvian pepper tree (*Schinus molle*), gum tree *(Eucalyptus* sp.), pines (*Pinus* sp.*),* Brazilian pepper tree (*Schinus terebinthifolius*), Acacia

(*Acacia* sp.), evergreen ash (*Fraxinus uhdei*), white alder (*Alnus rhombifolia*), saltcedar (*Tamarix ramosissima*), Mexican fan palm (*Washingtonia robusta*), Canary Island palm (*Phoenix canariensis*), European olive (*Olea europaea*), coast live oaks (*Quercus agrifolia*) and California sycamore (*Platanus racemose*).

Aquatic Resources

A preliminary review of EPA WATERS, aerial photography, and USGS maps indicate that there are several aquatic features that may be under the jurisdiction of USACE, RWQCB, and/or CDFW. A formal jurisdictional delineation would be required to document the full extent of jurisdictional waters, if any, within the project site.

Wildlife

The vegetation community and land cover types discussed above support habitat for a limited number of local wildlife species. The field survey conducted by GLA Biologist, David F. Moskovitz, on December 18, 2015, and subsequent surveys by FCS Biologists Dennis Peterson, Robert Carroll, and Kymberly Gibson in 2018 and 2021, respectively, did not detect any special-status wildlife species, but did detect the following wildlife species:

Birds

- rufous crowned sparrow (*Aimophila ruficeps*)
- northern mockingbird (*Mimus polyglottos*)
- Anna's hummingbird (*Calypte anna*)
- American crow (*Corvus brachyrhynchos*)
- house finch (*Haemorhous mexicanus*)
- black phoebe (*Sayornis nigricans*)
- barn swallow (*Hirundo rustica*)
- ash-throated flycatcher (*Myiarchus cinerascens*)
- American kestrel (*Falco sparverius*)
- dark-eyed junco (*Junco hyemalis*)
- Wilson's warbler (*Cardellina pusilla*)
- western kingbird (*Tyrannus verticalis*)
- mourning dove (*Zenaida macroura*)
- Scott's oriole (*Icterus parisorum*)
- California scrub jay (*Aphelocoma californica*)
- great egret (*Ardea alba*)
- red tailed hawk (*Buteo jamaicensis*)
- common raven (*Corvus corvax*)
- lesser goldfinch (*Spinus psaltria*)

Reptiles

- western fence lizard (*Sceloporus occidentalis*)

Mammals

- California ground squirrel (*Otospermophilus beecheyi*)
- cottontail (*Sylvilagus audubonii*)
- coyote (*Canis latrans*)

3.4.4 - Special-status Species

Special-status species are plant and animal species that have been afforded special recognition by federal, State, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under the Endangered Species Act or CESA.
- Protected under other regulations (e.g., the MBTA).
- CDFW Fully Protected Species, Species of Special Concern, or species on the CDFW's Watch List.
- Plant species Ranked 1 and 2 by the CNPS.
- Receive consideration during environmental review under CEQA.

Special-status Plants

Table 3-1 in the 2016 GLA BRA (Appendix C) identifies 72 special-status plant species that have been recorded to occur within the *Corona South, California* USGS 7.5-minute Topographic Quadrangle Map and its surrounding quadrangles, as recorded by the CNDDB.[22] The table also includes each species' status, required habitat, and potential to occur within the project site.

Of the 72 special-status plant species identified by the 2016 GLA BRA, none of the special-status plant species are expected to be present on the project site due to the lack of suitable habitat, most notably mesic habitat features that include vernal pools or clay soils, as well as previous anthropogenic disturbance which reduce the likelihood of these species occurring. There are no sensitive plant communities recorded on or near the project site.

Special-status Wildlife

Table 3-2 in the 2016 GLA BRA (Appendix C) identifies 44 special-status wildlife species that have been recorded to occur within the *Corona South, California* USGS 7.5-minute Topographic Quadrangle Map and its surrounding quadrangles, as recorded by the CNDDB.[23] The table also includes each species' status, required habitat, and potential to occur within the project site. The project site has the potential to support a number of special-status wildlife species, though the majority species recorded are unlikely to occur due to the lack of suitable habitat, the disturbed

[22] California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Database (CNDDB) RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed August 2, 2021.

[23] Ibid.

nature of the project site as well significant man-made barriers that would impede dispersal to and from the project site.

Listed Special-status Wildlife

The GLA BRA concluded that the following State or federally listed species have at least a low potential to occur on-site:

Birds

Least Bell's Vireo

The least Bell's vireo (*Vireo bellii pusillus*) is a federally and State endangered species. A summer resident of Southern California in well-developed, contiguous riparian scrub habitats in the vicinity of water or in dry river bottoms, the species nests along margins of bushes or in twigs projecting into pathways, usually willows, coyote bush, mule fat, or mesquite. There is marginal habitat for this species located within the riparian vegetation found along the natural drainage feature within Planning Area 6 (PA-6). However, PA-6 would not be developed and would therefore there would be no impact to riparian habitat with the drainage feature. This species has a low potential to occur on the site due to the lack of a developed contiguous riparian corridor that could support this species.

Coastal California Gnatcatcher

The coastal California gnatcatcher (*Polioptila californica californica*) is a federally threatened species as well as a California Species of Special Concern. The species is an obligate, permanent resident of coastal sage scrub below 2,500 feet that requires low, coastal sage scrub in arid washes, on mesas, and slopes. There is marginal habitat for this species located within the sage scrub vegetation adjacent to the natural drainage feature within PA-6. This habitat is located entirely within PA-6, which will be avoided by the project and therefore, there will be no impact.

Southwestern Willow Flycatcher

The southwestern willow flycatcher (*Empidonax traillii extimus*) is a State and federally endangered species. This species occurs in dense riparian woodland habitat along streams and rivers with dense thickets of trees and shrubs. There is marginal habitat for this species located within the riparian vegetation found along the natural drainage feature within (PA-6). However, PA-6 would not be developed and would therefore there would be no impact to riparian habitat with the drainage feature. Additionally, the likelihood of this species occurring is low due to the lack of dense thickets of trees and shrubs.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is listed as threatened under CESA. The species is highly colonial, most numerous in the Central Valley and the surrounding vicinity. The species requires open water, protected nesting substrate, and foraging area with insect prey in the vicinity of the colony. The pond southeast of Paseo Grande may provide marginally suitable habitat for this species; however, it has a very low potential to occur within the project site due to the lack of extensive marsh that is required for supporting a colony.

Mammals

Stephens' Kangaroo Rat

Stephens' kangaroo rat (*Dipodomys stephensi*) is a federally endangered species and is found in open grasslands or sparse shrublands with less than 50 percent vegetation cover during the summer months. This species has low potential to occur on the project site due to past levels of disturbance, most notably in the non-native grasslands found on the project site as well significant man-made barriers that would impede dispersal to and from the project site.

Non-listed Special-status Wildlife

Birds

Southern California Rufous Crowned Sparrow

One special-status wildlife species was observed on-site during the field survey, Southern California rufous crowned sparrow is included on CDFW's Watchlist. It is a Southern California resident that inhabits coastal sage scrub and sparse mixed chaparral, most often frequenting steep, rocky hillsides with grass and forb patches.

Coastal Cactus Wren

Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) is a California Species of Special Concern. This species occurs almost exclusively in coastal sage scrub dominated by cacti species including cholla (*Cylindropuntia* sp.) and prickly pear (*Opuntia* sp.). This species has low potential to occur based on presence of scattered cactus patches on-site.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is listed as a candidate under CESA. In October of 2024, the California Fish and Game Commission voted unanimously that listing the western burrowing owl (*Athene cunicularia hypugaea*) was warranted under CESA and the species was advanced to candidate status. The GLA BRA determined that the project area contains suitable habitat for burrowing owl, a species covered under the MSHCP and protected by the MBTA and Fish and Game Code, and that there was moderate to high potential for the species to occur on-site. The ruderal vegetation and California ground squirrel burrows provide suitable habitat for burrowing owls.

A small population of California ground squirrels was observed on-site by FCS during the October 2021 field survey, but no large, active ground squirrel colonies were observed on-site. The CNDDB shows six records for burrowing owls within 5 miles of the project area. [24]

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) is a California Fully Protected Species. This species nests in rolling foothills and valley margins with scattered oaks, riparian woodlands, or marshes next to deciduous woodland, and forages in open grasslands, meadows, or marshes. White-tailed kites forage for small rodents and insects in agricultural areas, especially alfalfa fields. Nests are typically built-in available trees near hunting grounds. Marginal nesting habitat is available on the project site

[24] California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Database (CNDDB) RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed August 2, 2021.

in the trees on-site. Additionally, the project site also contains available foraging habitat; as such, there is potential for this species to occur, but it is unlikely to nest on the project site.

Yellow Warbler

The yellow warbler is a California Species of Special Concern. The species is found mainly in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, the species forages in woodland, forest, and shrub habitats. There is marginal habitat for this species located within the riparian vegetation found along the natural drainage feature within Planning Area 6 (PA-6), and it is not likely this species nests on the project site. This habitat is located entirely within PA-6, which will be avoided by the project and therefore, there will be no impact.

Yellow-breasted Chat

The yellow-breasted chat is a California Species of Special Concern that inhabits riparian thickets of willow and other bushy tangles near watercourses. It nests in low, dense riparian habitat consisting of willow, blackberry, and wild grape. Very marginal nesting habitat is available on the project site and therefore this species has a low potential to occur on the project site.

Mammals

Special-status Bats

The 2016 GLA BRA determined that the following special-status bat species including big free-tailed bat (*Nyctinomops macrotis*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*) and western yellow bat (*Lasiurus xanthinus*) have at least a low potential to occur on-site. All of these bat species are designated as Species of Special Concern by the CDFW. The project site contains marginal roosting habitat in the form of trees and open, sparsely vegetated grasslands. Based on the lack of suitable roosting habitat and marginal foraging habitat, the potential for occurrence for these bat species is very low.

Special-status Rodents

The 2016 GLA BRA determined that the following special-status rodent species including the northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) and San Diego desert woodrat (*Neotoma lepida intermedia*) have at least a low potential to occur on-site. These species are designated as Species of Special Concern by the CDFW. The project site contains marginal riparian habitat located within the drainage feature in the southeast corner of the site. Based on the lack of suitable roosting habitat and marginal foraging habitat, the potential for occurrence for these species is very low.

Reptiles

Western Pond Turtle

The western pond turtle (*Emys marmorata*) is a California Species of Special Concern. This aquatic species is found in ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation below 6,000 feet. When breeding, the species requires basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 km from water for egg-laying. Because of the

presence of the perennial ponds located southeast of Paseo Grande on the project site, there is potential for this species to occur on-site.

Special-status Snakes

The 2016 GLA BRA determined that the following special-status snakes including coast mountain kingsnake (*Lampropeltis multifasciata*), coast patch-nosed snake (*Salvadora hexalepis virgultea*) and red-diamond rattlesnake (*Crotalus ruber*) have at least a low potential to occur on-site. All of these snake species are designated as Species of Special Concern by the CDFW. The project site contains marginal riparian habitat located within the drainage feature in the southeast corner of the site. Based on the lack of suitable habitat, the potential for occurrence for snake species is very low.

Special-status Lizards

The 2016 GLA BRA determined that the following special-status lizards including Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), coast horned lizard (*Phrynosoma blainvillii*) and San Diegan legless lizard (*Anniella stebbinsi*) have at least a low potential to occur on-site. Coast horned lizard and San Diegan legless lizard are designated as Species of Special Concern by the CDFW, whereas Belding's orange-throated whiptail is included on CDFW's Watchlist. The project site contains marginal riparian habitat located within the drainage feature in the southeast corner of the site. Based on the lack of suitable habitat, the potential for occurrence for lizard species is very low.

3.4.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, biological resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State conservation plan?

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?

c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?

f) 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?

g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Additional guidance on the significance of biological impacts is found in CEQA Guidelines section 15065, subdivision (a)(1), which provides that a lead agency shall find that a project may have a significant effect on the environment if "[t]he project has the potential to: … substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; [or]substantially reduce the number or restrict the range of an endangered, rare or threatened species[.]" The "mandatory findings of significance" are also found in the Appendix G sample Initial Study checklist, though near the end. This guidance is addressed in each of the thresholds as appropriate.

3.4.6 - Potential Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Impact BIO-1:	**Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State conservation plan?**

Impact Analysis

The project site lies within the boundaries of the MSHCP. Therefore, any development within the Plan Area would need to demonstrate consistency with the MSHCP. According to the Riverside Conservation Authority (RCA) MSHCP Information Map, the project site is not a part of, or adjacent to, a criteria area cell,[25] and therefore is not proposed for conservation under the MSHCP.[26] Nor is the project site identified in the MSHCP as being part of a linkage corridor. Additionally, the project site is not included in any of the five species map overlays (amphibians, burrowing owl, criteria area plants, mammals, and narrow endemic plants), which require additional surveys. The project site does not adjoin or abut wildlife corridors, linkages, or identified critical habitats. The proposed project would also be required to pay development mitigation fees through the MSHCP based on the

[25] A Criteria Cell is a roughly 160-acre rectangle overlaid onto parcels within the MSHCP Plan Area and that has areas described for conservation (i.e., reserve assembly).

[26] Riverside Conservation Authority (RCA). 2021. RCA MSHCP Information Map Website: https://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=a73e69d2a64d41c29ebd3acd67467abd. Accessed October 22, 2021.

type of development proposed. However, this analysis is considered preliminary and all necessary processes to prove MSHCP consistency must be carried out, in accordance with MM BIO-1.

The project site contains drainages and artificial ponds (Drainage Feature A, Drainage Feature B, and Pond 1 through Pond 3) that if determined as jurisdictional or qualified as MSHCP Riparian/Riverine features would require demonstration of MSHCP compliance. Consistency with the MSHCP would be accomplished through implementation of Mitigation Measures (MM) BIO-4, which requires completion of a Determination of Biologically Equivalent or Superior Preservation (DBESP) document and approval from the Wildlife Agencies (CDFW and USFWS), as well as the Regional Conservation Authority (RCA), to compensate for any impacts to MSHCP Riparian Riverine habitat and jurisdictional areas before impacts to these resources are implemented. As such, the proposed project would be required to demonstrate consistency with MSHCP as a condition of approval and through implementation of MM BIO-4.

Any future discretionary actions associated with the project as a result of obtaining MSHCP consistency would be subject to PRC 21166 which sets forth standards for additional environmental analysis. With the implementation of standard regulation, MM BIO-1 and MM-BIO-4 impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-1 and MM BIO-4

MM BIO-1 MSHCP Consistency

- All necessary processes to prove MSHCP consistency must be carried out prior to any ground disturbance or issuance of any grading permits. These may include future analysis and surveys and re-submitting the project to the County/Planning Department if MSHCP consistency requires significant changes to the project than what is currently proposed.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Impact BIO-2:	**Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?**

Impact Analysis

An impact on special-status plant and wildlife species would be considered significant if project construction or operation would result in a substantial, adverse change in any of the physical

conditions (such as habitat) within the area affected by the proposed project and could therefore adversely affect a species. Each potential special-status species that has the potential to be impacted by project implementation is discussed in detail below.

Listed Plant Species

As discussed in Section 3.4.3, above, none of the 72 special-status plant species analyzed in the 2016 GLA BRA are expected to be present on the project site. Based on FCS's and GLA's field surveys and due to the lack of suitable habitat coupled with the level of disturbance experienced at the site, no special-status plants are expected to occur on the site and no mitigation measures are recommended.

Listed Wildlife Species

Listed Birds

According the 2016 GLA BRA, the project site has low potential to support listed bird species including least Bell's vireo, coastal California gnatcatcher, southwestern willow flycatcher, and tricolored blackbird. The riparian habitat found along the drainage located in the southeastern portion of PA-6 may provide marginally suitable habitat for least Bell's vireo, southwestern willow flycatcher, and coastal California gnatcatcher. This habitat is located entirely within PA-6, which would be avoided by the project and therefore, there would be no impact. Additionally, the pond southeast of Paseo Grande may provide marginally suitable habitat for tricolored blackbird. Impacts to these listed bird species are covered under the MSHCP.

Construction activities that occur during the avian nesting season (generally February 15 to August 31) could disturb nesting sites for listed bird species on the rare chance that they happen to nest on-site. The removal of trees during the nesting season could result in direct harm to nesting birds, while noise, light, and other man-made disturbances may cause nesting birds to abandon their nests. Therefore, the project applicant shall implement Mitigation Measure (MM) BIO-2 in order to avoid impacts to listed birds. The implementation of MM BIO-2 would reduce impacts to listed bird species to less than significant levels by requiring surveys prior to construction and the implementation of construction exclusion zones if any active nests are found on-site.

Stephens' Kangaroo Rat

The 2016 GLA BRA determined that Stephens' kangaroo rat has low potential to occur on the project site due to marginally suitable habitat being present. FCS's own analysis found that the nearest recorded occurrence of this species is located approximately 3.6 miles northeast of the project site.[27] However, significant man-made barriers exist between the project site and known populations of Stephens' kangaroo rat, which would impede dispersal of this species to the project site. Additionally, the project site is not located within Stephens' kangaroo rat plan area. Therefore, it is the professional opinion of FCS Biologists that Stephens' kangaroo rat is unlikely to occur on-site. As a consequence, this species is unlikely to be impacted by the development of the project site.

[27] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed August 2, 2021.

Special-status Bats

The 2016 GLA BRA determined that the following special-status bat species including big free-tailed bat, pallid bat, western mastiff bat and western yellow bat have at least a low potential to occur on-site. All of these bat species are designated as Species of Special Concern by the CDFW. The project site contains marginal roosting habitat in the form of trees and open, sparsely vegetated grasslands. Based on the lack of suitable roosting habitat and marginal foraging habitat, the potential for occurrence for these bat species is very low. However, with the implementation of MM BIO-2, reduce impacts to special-status bats to less than significant levels by requiring surveys prior to construction and the implementation of construction exclusion zones if any active roosts are found on-site.

Level of Significance Before Mitigation

Potentially significant impact for listed birds.

Mitigation Measures

MM BIO-2 Migratory and Nesting Birds and Bats Avoidance

Implementation of the following avoidance and minimization measures would avoid and/or minimize potential effects to migratory birds and habitat in and adjacent to the project site. These measures shall be implemented for construction work during the nesting season (February 15 through August 31)**:**

A. If construction or tree removal is proposed during the breeding/nesting season for migratory birds (typically February 15 through August 31), a qualified Biologist shall conduct pre-construction surveys for special-status birds, special-status bats, and as well as other migratory birds and roosting bats within the construction area, including a 300-foot survey buffer, no more than 3 days prior to the start of ground-disturbing activities in the construction area.
B. If an active nest is located during pre-construction surveys, the United States Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified Biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 300 feet around an active raptor nest and a 50-foot radius around an active migratory bird nest) or alteration of the construction schedule.
C. A qualified Biologist shall delineate the buffer using nest buffer signs, Environmentally Sensitive Area fencing, pin flags, and/or flagging tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Impact BIO-3: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?

Impact Analysis

An impact on special-status plant and wildlife species would be considered significant if project construction or operation would result in a substantial, adverse change in any of the physical conditions (such as habitat) within the area affected by the proposed project and would therefore adversely affect a species. Each potential special-status species that has the potential to be impacted by project implementation is discussed in detail below.

Non-listed Special-Status Plant Species

As discussed in Section 3.4.3, above, none of the 72 special-status plant species analyzed in the 2016 GLA BRA are expected to be present on the project site. Based on FCS's and GLA's field surveys and due to the lack of suitable habitat coupled with the level of disturbance experienced at the site, no special-status plants are expected to occur on the site and no mitigation measures are recommended.

Non-listed Special-status Wildlife Species

Burrowing Owl

While the property is not located with the MSHCP survey area for burrowing owl, there are at least six recorded occurrences of this species within 5 miles of the project site.[28,29] FCS Biologists observed evidence of active ground squirrel burrows as recently as October 2021. Thus, there is potential for burrowing owl to nest on the project site. This species would represent a seasonal constraint to development since burrowing owl, if found on-site, would need to be relocated pursuant to accepted protocols. If the site were to support nesting owls, then those areas would have to be avoided until the completion of the nesting season (approximately August 31). During the breeding and non-breeding seasons, ground-disturbing construction activities could destroy burrows inhabited by burrowing owls, causing destruction of occupied burrows, including nesting burrows. Implementation of MM BIO-3 would reduce impacts to burrowing owl to a less than significant level by requiring pre-construction surveys to confirm the presence/absence of owls. In the event burrowing owl are discovered during the survey, MM BIO-3 would require avoidance of the burrows and/or relocation, as appropriate.

[28] Riverside Conservation Authority (RCA). 2021. RCA MSHCP Information Map Website: https://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=a73e69d2a64d41c29ebd3acd67467abd. Accessed October 22, 2021.

[29] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed August 2, 2021.

Nesting Birds

Marginal nesting and foraging habitat is available on the project site for Southern California rufous crowned sparrow, coastal cactus wren, white-tailed kite, yellow warbler, and yellow-breasted chat; as such, there is potential for these species to occur. Additionally, the numerous trees, grassland and barren areas present within the project site may provide potential nesting opportunities for species (including ground nesting birds) protected under the Fish and Game Code or MBTA. Construction activities that occur during the avian nesting season (generally February 15 to August 31) could disturb active nests. The removal of trees during the nesting season could result in direct harm to nesting birds, while noise, light, and other man-made disturbances may cause nesting birds to abandon their nests. Implementation of MM BIO-2 would reduce impacts to nesting birds to a less than significant level by requiring pre-construction surveys and, if necessary, buffer zones established by a qualified Biologist.

Special-status Bats

The project site contains marginal nesting habitat and foraging habitat for bats, in the form of trees and open grasslands. The removal of trees could directly harm roosting bats. Additionally, many bat species are sensitive to disturbances such as light and noise that may result from the development of the proposed project. These disturbances could awaken torpid bats (if during winter hibernation period) and cause them to abandon their roosts. Implementation of MM BIO-2 would reduce potential impacts to bat species to a less than significant level by requiring pre-construction surveys and avoidance or protection measures if active roosts are identified.

Western Pond Turtle

The 2016 GLA BRA determined that due to the presence of the pond located southeast of Paseo Grande in PA-5, there is low potential for the western pond turtle to occur. However, FCS observed that the pond was dry as of the most recent field survey on October 14, 2021. FCS's own analysis found that the nearest recorded occurrence of this species is located approximately 3 miles northwest of the project site in Aliso Canyon,[30] and significant man-made barriers exist between the project site and known populations of this species, which would impede their dispersal to the project site. Therefore, it is the professional opinion of FCS Biologists that these species are unlikely to occur on-site. As a consequence, these species are unlikely to be impacted by the development of the project site.

Special-status snakes

The 2016 GLA BRA determined that coast mountain kingsnake, coast patch-nosed snake and red-diamond rattlesnake have low potential to occur on the project site due to the presence of marginally suitable habitat. FCS's own analysis found that the nearest recorded occurrences of coast mountain kingsnake, coast patch-nosed snake and red-diamond rattlesnake are all greater than 5 miles from the project site,[31] and significant man-made barriers exist between the project site and known populations of these species which would impede their dispersal to the project site. Therefore, it is the professional opinion of FCS Biologists that these species are unlikely to occur on-

[30] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed August 2, 2021.

[31] Ibid.

site. As a consequence, these species are unlikely to be impacted by the development of the project site.

Special-status lizards

The 2016 GLA BRA determined that Belding's orange-throated whiptail, coast horned lizard and San Diegan legless lizard have low potential to occur on the project site due to the presence of marginally suitable habitat. CNDDB records show that the nearest recorded occurrence of San Diegan legless lizard is greater than 5 miles from the project site and it is therefore unlikely to occur on-site.[32] The CNDDB records also shows occurrences of orange-throated whiptail and coast horned lizard within a mile southeast of the project site; however, significant man-made barriers exist between the project site and known populations of these species, which would impede their dispersal to the project site. Therefore, it is the professional opinion of FCS Biologists that these species are unlikely to occur on-site. As a consequence, these species are unlikely to be impacted by the development of the project site.

Level of Significance Before Mitigation

Potentially significant impact for burrowing owl, nesting birds, and special-status bats.

Mitigation Measures

Implement MM BIO-2 and MM BIO-3.

MM BIO-3 Burrowing Owl

A. No more than 30 days prior to the first ground-disturbing activities, the project applicant shall retain a qualified Biologist to conduct a pre-construction survey on the project site. The survey shall establish the presence or absence of western burrowing owl and/or habitat features, and evaluate use by owls in accordance with California Department of Fish and Wildlife (CDFW) survey guidelines.
B. On the parcel where the activity is proposed, the Biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership need not be surveyed. The survey shall take place near the sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owl shall be identified and mapped. During the breeding season (February 1–August 31), surveys shall document whether burrowing owl are nesting on or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys shall document whether burrowing owl are using habitat on or directly adjacent to any disturbance area. Survey results will be valid only for the season during which the survey is conducted.
C. If burrowing owl are not discovered, further mitigation is not required. If burrowing owl are observed during the pre-construction surveys, the applicant shall perform the following measures to limit the impact on the burrowing owls:

[32] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed August 2, 2021.

1. Avoidance shall include establishment of a 160-foot non-disturbance buffer zone. Construction may occur during the breeding season if a qualified Biologist monitors the nest and determines that the birds have not begun egg-laying and incubation, or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1-January 31), the project applicant shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a 160-foot non-disturbance buffer zone.
2. If it is not possible to avoid occupied burrows, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent re-occupation. Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Impact BIO-4:	**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?**

Impact Analysis

The project site was evaluated for evidence of a wildlife movement corridor during the reconnaissance-level surveys. The subsequent conclusions are based on the surveys and information compiled during the literature review, including aerial photographs, USGS topographic maps and resource maps for the project vicinity, and professional knowledge of desired topography and resource requirements for wildlife potentially utilizing the project site and vicinity.

The natural drainage feature found in PA-6 could function as a potential corridor for wildlife movement. This feature is not likely not perennial, nor does it sustain seasonal water flows sufficient to support the movement of aquatic wildlife. However, this drainage feature is isolated from other nearby waterbodies and does not connect to other more extensive riparian or other natural habitats and is surround by urban development in all directions. Therefore, this feature likely does not serve as an important wildlife corridor.

As noted in the discussion under Impact BIO-2 and Impact BIO-3, special-status and migratory nesting birds protected under the MBTA have the potential to occur within the project site, and the site may support the movement of these species within the larger area. Implementation of MM BIO-2 and MM BIO-3, along with compliance with federal and State regulations related to the protection of migratory fish and wildlife species would reduce impacts to these species to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-2 and MM BIO-3.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Impact BIO-5:	**Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?**

Impact Analysis

As discussed in Section 3.4.3, above, the vast majority of the project site is made up of ruderal vegetation. However, the project site may contain several aquatic features that may contain riparian vegetation. Riparian vegetation is often considered sensitive by the California Department of Fish and Wildlife (CFDW); however, the project would not involve the development of PA-6 and the pond located in PA-5 would be preserved. Therefore, the riparian vegetation, if any were found in these areas, would not be impacted. Under the project as proposed in the NOP, the proposed project would install a drainage pipe at the northern border of the drainage. The installation of this drainage pipe may necessitate the removal of riparian vegetation which may be considered sensitive by the CDFW. Therefore, MM BIO-4 would be required to compensate for potential impacts to riparian vegetation within the ponded areas and the natural drainages present on-site.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Riparian vegetation is often considered sensitive by CFDW. However, the proposed project would not involve the development of PA-6 and the pond located in PA-5 would be preserved. However, the installation of the drainage pipe could involve removal of riparian vegetation. Therefore, the riparian vegetation found in these areas could be impacted. A formal jurisdictional delineation was not completed for the proposed project and is required to document any riparian habitat on the project site. Therefore, implementation of MM-BIO 4 would be required to compensate for the potential impacts and would reduce impacts to below a level of significance.

MM BIO-4 Compensation for Impacts to Jurisdictional Features and Riparian Habitat

- A formal delineation is required to document the full extent of jurisdictional waters within the project site. Impacts on waters of the United States (i.e., United States Army Corp of Engineers [USACE] jurisdiction) would require a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). Impacts to wetlands under the California Department of Fish and

Wildlife (CDFW) jurisdiction would require a Section 1602 Streambed Alteration Agreement from the CDFW.

- The applicant shall obtain a Section 404 Clean Water Act (CWA) permit from the USACE for impacts to waters of the United States as well as a Section 401 permit from the RWQCB and a Section 1602 Streambed Alteration Agreement from the CDFW for impacts to waters of the State, as necessary. These permits shall be obtained prior to issuance of grading permits and implementation of the proposed project.
- The project applicant shall ensure that the proposed project will result in no net loss of waters of the United States by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined in the CWA Section 404/401 permit requirements.
- The Project will also prepare a Determination of Biologically Equivalent or Superior Preservation (DBESP) document and seek approval from the Wildlife Agencies [(California Department of Fish and Wildlife [CDFW] and United States Fish and Wildlife Service [USFWS]), as well as the Regional Conservation Authority (RCA), to compensate for any impacts to MSHCP Riparian Riverine habitat and jurisdictional areas before impacts to these resources are implemented.
- Compensatory mitigation may consist of (1) obtaining credits from a mitigation bank; (2) making a payment to an in lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; and/or (3) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This final type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project /permit applicant retains responsibility for the implementation and success of the mitigation project.
- Evidence of compliance with this mitigation measure shall be provided prior to initiating construction and grading activities for the proposed project.

Level of Significance After Mitigation

Less than significant with mitigation.

Impact BIO-6:	**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?**

Impact Analysis

As discussed above in Section 3.4.3, the project site contain several potential jurisdictional features. These potential features include drainages and artificial ponds. However, until a formal jurisdictional delineation is completed, the jurisdictional status of these features are unknown and no official determination is provided in this report.

Implementation of MM BIO-4 would require the completion of a jurisdictional delineation and the implementation of appropriate compensatory actions for impacts to features determined as jurisdictional.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

The project would not involve the development of Planning Area 6 and the pond located in Planning Area 5 would be preserved. Therefore, the potential aquatic features found in these areas would not be impacted.

With implementation of MM BIO-4, a formal delineation would be required to compensate for impacts to potentially jurisdictional aquatic features in the project site and would reduce impacts to below a level of significance.

Level of Significance After Mitigation

Less than significant impact with mitigation.

Impact BIO-7: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Analysis

An FCS Biologist reviewed sections of the Corona Municipal Code and Riverside County Code pertaining to biological resources as well as tree preservation and protection.

The project site contains numerous mature trees including a mixture of native and non-native trees that are discussed above in Section 3.4.3. Chapter 12.22 of the Corona Municipal Code defines the criteria for the removal and preservation of Heritage trees, including trees planted on city-owned property, or trees planted along public streets and highways. This chapter does not provide guidance or regulation for any trees planted on private property.[33] Additionally, Chapter 12.24 of the Riverside County Code requires permission from the County for the removal of any living native tree on any parcel or property greater than 0.5 acre in size, located in an area above 5,000 feet in elevation and within the unincorporated area of the county.[34] Therefore, these provisions would not be applicable to the proposed project.

Oak trees are present on the project site. The Riverside County Oak Tree Management Guidelines require a biological study for all applications on properties that contain oak trees. This study will produce an inventory of on-site vegetation, including oak trees. Implementation of MM BIO-5 would

[33] City of Corona Municipal Code. 2021. Website: https://codelibrary.amlegal.com/codes/corona/latest/corona_ca/0-0-0-33686. Updated June 16, 2021.

[34] Riverside County Code. 2021. Website: https://library.municode.com/ca/riverside_county/codes/code_of_ordinances?nodeId=RICOCACOVO1. Updated August 24, 2021.

reduce impacts to oak trees to a less than significant level by requiring an oak tree inventory and analysis be conducted for the project site.

As discussed in Impact BIO-1, the project site lies within the boundaries of the MSHCP. Chapter 16.33 of the Corona Municipal Code and Chapter 4.62 of the Riverside County Code requires all proposed developments within the City of Corona or Riverside County, respectively, to pay development mitigation fees through the MSHCP based on the type of development proposed.[35,36] All necessary processes to prove MSHCP consistency must be carried out, in accordance with MM BIO-1 and MM BIO-4, to prevent conflict with County of Riverside policies.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-1 and MM BIO-4.

MM BIO-5 Oak Tree Inventory

An oak tree inventory and analysis will be conducted for the project site, including proposal of mitigation for any oak trees that are proposed to be impacted. This analysis shall be conducted prior to any ground disturbance, vegetation removal or issuance of a grading permit.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

[35] Riverside County Code. 2021. Website: https://library.municode.com/ca/riverside_county/codes/code_of_ordinances?nodeId=RICOCACOVO1. Updated August 24, 2021.
[36] Ibid.

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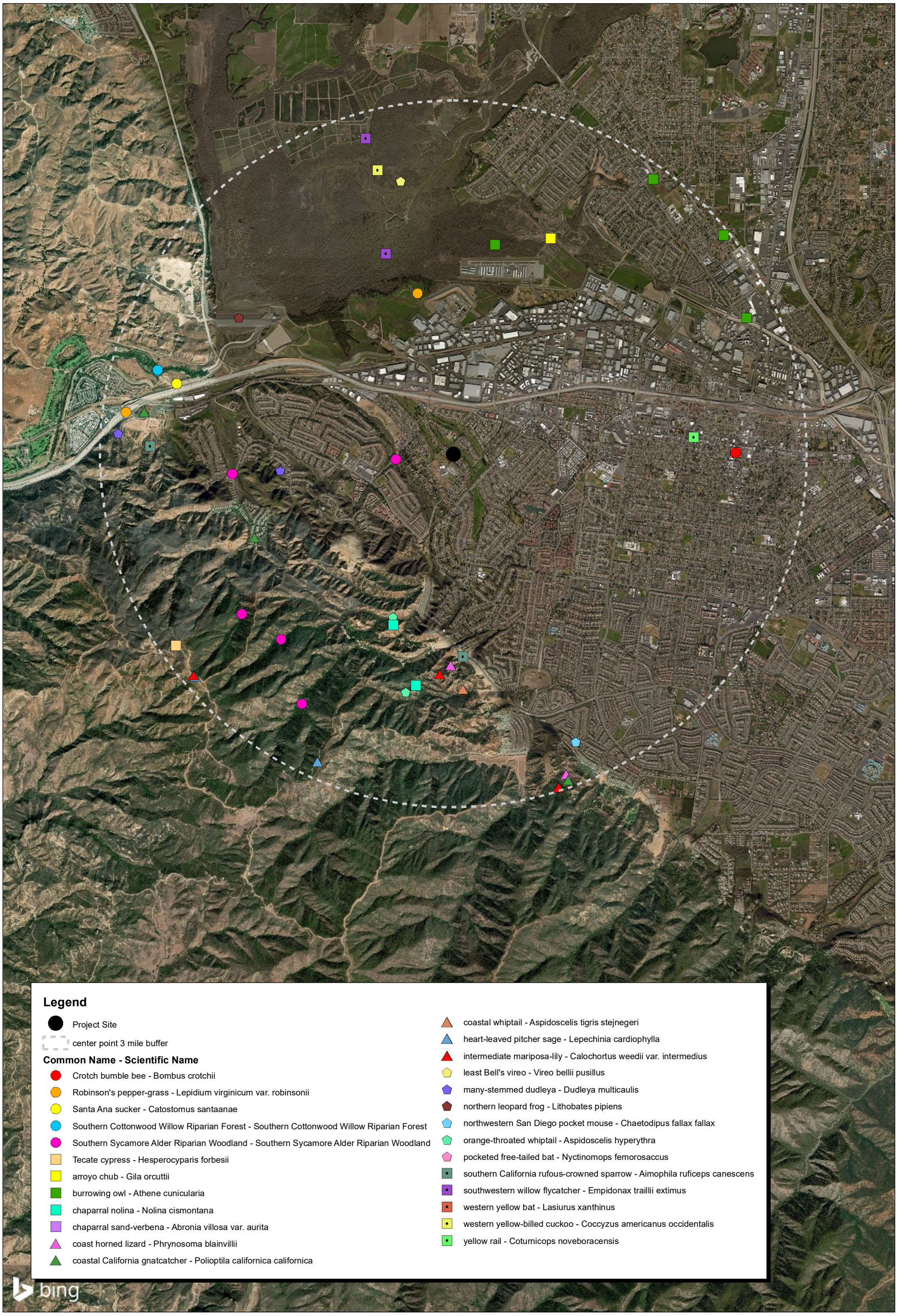

Source: bing Aerial Imagery. CNDDB Data, May 2018.

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Exhibit 3.4-1
Special-Status Species Map

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3.5 - Cultural Resources

This section provides a discussion of the cultural resource and paleontological resource issues for the proposed project, as well as an analysis of potential impacts that may occur as the result of project implementation. Descriptions and analysis in this section are based upon existing site conditions, project site plans/exhibits, the County of Riverside General Plan, the 2004 City of Corona General Plan, and the Phase I Cultural Resources Assessment (Phase I CRA) for the project prepared October 2018 by FirstCarbon Solutions (FCS), included in this Draft Environmental Impact Report (Draft EIR) as Appendix D. The purpose of this section is to describe the existing cultural and to analyze any potential impacts that the proposed project may have on those resources.

3.5.1 - Environmental Setting

Overview

The term "cultural resources" encompasses historic, archaeological and paleontological resources, and burial sites. Below is a brief summary of each component:

- Historic Resources: Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old.
- Archaeological Resources: Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- Paleontological Resources: Paleontology is the study of plant and animal fossils.
- Burial Sites: Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

Cultural Setting

The Cultural Setting below is provided from the Phase I CRA.

Prehistory

Recent overviews of the inland Southern California coast archaeology and historical reviews, among other locales are provided.[1,2,3] The most accepted regional chronology for coastal Southern California is from Wallace's four-part Horizon format,[4] which was later updated and revised by Warren,[5] and most recently by Chartkoff and Chartkoff.[6] The latter modified the term "Period" to "Horizon," a term more common among researchers today. Created to place temporal structure upon materialistic

[1] Fagan, B.M. 2003. Before California: An Archaeologist Looks at Our Earliest Inhabitants. New York: Alta Mira Press.
[2] Moratto, M.J. 1984. California Archaeology. San Diego. Academic Press.
[3] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.
[4] Wallace, W.J. 1955. A Suggested Chronology for Southern California Coastal Archaeology. Southwestern Journal of Anthropology 11(3):214–30.
[5] Warren, C.N. 1968. Cultural Tradition and Ecological Adaptation on the Southern California Coast. Archaic Prehistory in the Western United States, C. Irwin-Will.
[6] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.

phases observed during archaeological syntheses, the advantages and weaknesses of Southern California chronological sequences are reviewed by Warren,[7] Chartkoff and Chartkoff,[8] and Heizer.[9]

Early Man

Spanning the period from approximately 17000 to 9500 Before Present (BP), archaeological assemblages attributed to the Early Man Period are characterized by large projectile points and scrapers. The limited data available suggests that prehistoric populations focused on hunting and gathering, moving about the region in small nomadic groups. Technologies associated with ocean resource gathering would have likely been utilized, but the sea level during this period was lower than today, meaning that sites on the coast are inundated and unavailable for study. Californians of this period are viewed as populations of big game hunters that were mobile enough to pursue herds. The entirety of California may have been occupied near the beginning of the Holocene epoch, about 11,750 years ago. During the Holocene, sea levels rose about 60 meters between 11750 and 7000 BP, due to melting of the Pleistocene ice sheet in the higher latitudes. Although the sea level was about 120 meters lower off the coast of California roughly 22,000 years ago (Milne et al. 2005), sea level stabilization began about 7,000 years ago and only a slight rise has occurred since then.

Pleistocene flora and fauna are regularly uncovered from sediments at the La Brea tar pits, deep construction-related excavations in coastal Orange County and in the Santa Ana watershed. Such studies reinforce the idea that much of Southern California exhibited a climate similar to that of Monterey or the San Francisco Bay Area during this period, with slightly drier conditions away from the coast.[10]

Millingstone

As part of the slow restabilization effect of the melting continental ice sheet, rising sea levels and other environmental changes up to the end of the Early Man Period, the Southern California climate became warmer and drier. Known as the Altithermal, Fagan notes that after 8500 BP, the climate of most of California became warmer and much drier and remained so for 4,000 years.[11]

Native groups altered their subsistence characteristics to compensate. Characterized by the appearance of handstones and millingstones that would have been used to grind seeds, the Millingstone Period tentatively dates to between 9500 and 3000 BP. Artifact assemblages in early Millingstone sites reflect an emphasis on foraging subsistence systems. Because shrubby vegetative communities replaced the temperate forest, native populations would likely have shifted to seasonal rounds to take advantage of new patterns of seed ripening. Little is known about the types of cultural changes that would be needed, but the types of artifacts seen during this Period can infer the subsistence systems.

Artifact assemblages typically included choppers and scraper planes, but there is a general lack of projectile points. Large projectile points began to appear in the late portion of the Millingstone

7 Moratto, M.J. 1984. California Archaeology. San Diego. Academic Press.
8 Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.
9 Heizer, R. F., ed. 1978. Handbook of North American Indians, Vol. 8: California. Washington, D.C. Smithsonian Institution.
10 Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.
11 Fagan, B.M. 2003. Before California: An Archaeologist Looks at Our Earliest Inhabitants. New York: Alta Mira Press.

Period, which suggests the development of a more diverse economy. The distribution of Millingstone sites reflects the theory that aboriginal groups may have followed a modified central-based wandering settlement pattern. In this semisedentary pattern, a base camp would have been occupied for a portion of the year, but small population groups seasonally occupied subsidiary camps in order to exploit resources not generally available near the base camp. Sedentism apparently increased in areas possessing an abundance of resources that were available for longer periods. Arid inland regions would have provided a more dispersed and sporadic resource base, further restricting sedentary occupations to locations near permanent water. The duration and intensity of encampment occupations increased, especially in the latter half of the period in the coastal areas. Huge shell mounds near coastal habitats indicated more intensive sedentism after 5000 BP and suggests an increase in population.[12]

Intermediate

Dating between 3000 and 1250 BP, the Intermediate Period represents a transitional period. Excavated assemblages retain many attributes of the Millingstone Period but with more elaborate and diverse artifact types in these deposits. Additionally, Intermediate Period sites can contain large-stemmed or notched small projectile points suggestive of bow and arrow use, especially near the end of the period, and the use of portable grinding tools continued. Intensive use of mortar and pestles signaled processing of acorns as the primary vegetative staple as opposed to a mixed diet of seeds and acorns. Because of a general lack of data, neither the settlement and subsistence systems nor the cultural evolution of this Period are well understood, but it is very likely that the nomadic ways continued. It has been proposed that sedentism increased with the exploitation of storable food resources, such as acorns, but coastal sites from the period exhibit higher fishing activity than in previous periods. The first permanently occupied villages make their appearance.[13]

Late Prehistoric

Extending from 1250 BP to Spanish Contact in 1769, the Late Prehistoric Period reflects a slight increase in technological sophistication and diversity. Exploitation of marine resources continued to intensify. Assemblages characteristically contain projectile points, and toward the end of the period the size of the points decrease and notched and stemmed bases appear, which imply the use of the bow and arrow. Use of personal ornaments such as shell beads are widely distributed east of the coast, suggesting well-organized and codified trade networks. In addition, assemblages include steatite bowls, asphaltum, grave goods, and elaborate shell ornaments. Use of bedrock milling stations was widespread during this horizon. Increased hunting efficiency and widespread exploitation of acorns provided reliable and storable food resources. Village size increases, and some of these villages may hold 1,500 persons or more.[14] Analyses of skeletons show that the first signs of malnutrition appear in this period, signaling greater competition for food resources.[15]

The earliest part of this Period may have seen an incursion of Cupan-Takic speakers from the Great Basin country (the so-called Shoshonean wedge) who may have replaced the Hokan speakers in the

[12] Fagan, B.M. 2003. Before California: An Archaeologist Looks at Our Earliest Inhabitants. New York: Alta Mira Press.
[13] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.
[14] Ibid.
[15] Fagan, B.M. 2003. Before California: An Archaeologist Looks at Our Earliest Inhabitants. New York: Alta Mira Press.

area.[16] At the time of Spanish conquest, Cupan-Takic speakers were located in Orange County, western Riverside County, and the Los Angeles Basin (Gabrieleño, Juaneño and Cahuilla peoples). Serran-Takic speakers are now represented by the Serranos in the San Bernardino Mountains. Recent work has concluded that the "Shoshonean wedge" is misnamed: the original Los Angeles inhabitants replaced by the incoming Takic speakers may have actually been Yuman speakers (similar to those in the California Delta region of the Colorado River) and not Hokan Salinan-Seri (Chumash) speakers as was suggested by Kroeber.[17]

At the time of Spanish conquest, local Indian groups were composed of constantly moving and shifting clans and cultures. Early ethnographers applied the concept of territorial boundaries to local Indian groups purely as a conceptualization device, and the data was based on fragmented information provided to them from second-hand sources.

Native American Background

According to Heizer, the project area lies in the extreme northeastern portion of an area associated with the Luiseño, as well as the extreme northwestern portion of an area associated with the Cahuilla.[18] However, this area borders traditional use areas identified with various other tribal groups as well, including the Gabrieleño and the Serrano. Documented Gabrieleño territory is located to the northwest, while the Serrano are found to the north and northeast of the project area.[19]

The Cahuilla

The Cahuilla belong to the Shoshonean linguistic family and have had definitive historical relationships with the Hopi of Arizona, the Gabrieleño, and Digueno of the Southern Californian coast and the Luiseño of Riverside County as well as other desert Tribes such as the Kamia, Chemehuevi, Paiute and Serrano. The Cahuilla population prior to Spanish contact could have been as numerous as 6,000 persons, in an area over 2,400 square miles.[20,21,22]

The Cahuilla villages were determined according to their proximity to a defined water source and access to a food-gathering locale. Village sites were usually located near alluvial fans, streams or at the base of the San Jacinto Mountains for protection against the winds. The Cahuilla can be discussed according to their primary village locality: Desert Cahuilla, Mountain Cahuilla, and Valley Cahuilla, while other Desert Cahuilla settlements were located around hand dug wells and watering

[16] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[17] O'Neil, S. 2002. The Acjachemen in the Franciscan Mission System: Demographic Collapse and Social Change. Master Thesis, Department of Anthropology, CSU-Fullerton.
[18] Heizer, R. F., ed. 1978. Handbook of North American Indians, Vol. 8: California. Washington, D.C. Smithsonian Institution.
[19] Ibid.
[20] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[21] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.
[22] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.

holes. Typically, one clan or family occupied several food-gathering locations and guarded these areas against other Cahuilla clans.[23,24,25]

The pottery associated with the Cahuilla has been stylistically and ornamentally compared to that of an ancient Pueblo style, as well as to the Colorado River Indians, the Digueno, Luiseño, and Mohave.[26,27,28] It is constructed in coil form, and then shaped with a polishing stone and wooden paddle to be baked or fired in the sun. In many cases, their pottery was incised for decoration.[29,30] Kroeber and Hooper suggest that the Cahuilla had four definitive pottery forms: an open bowl or dish, a cooking pot, a small-rimmed vessel and a wider opening rimmed vessel; while Bean and Lawton suggest that ladles, trays and pipes were also manufactured.[31,32] Baskets were also an important item to a Cahuilla clan and typically made in a variety of shapes and sizes, but always produced from a coil of mesquite branches, willow, or palm leaves. Grasses were used in the foundation and the only tool used to manufacture these baskets was a needle. These needles were either fashioned from the leg bone a deer or made from a heavy cactus needle set into a wooden handle.[33]

Cahuilla homes were generally constructed with forked posts, which supported wood ceiling beams. These structures were then completely covered in thatch, which was slightly mixed with sand or soil. In some cases, the floor was slightly subterranean and each house was positioned so that a level of privacy was attained.[34,35] Wilke notes that the Cahuilla homes were generally hidden in mesquite groves, which effectively obscured them from plain view.[36]

Ceremony and ritual was of great importance to the Cahuilla.[37] Deep ceremonial ties existed between the Serrano and the Cahuilla, and in many cases the Desert Cahuilla are thought to have

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[23] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.
[24] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[25] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.
[26] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[27] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[28] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[29] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[30] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[31] Ibid.
[32] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[33] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[34] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[35] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[36] Wike, P., 1975. The Cahuilla Indians of the Colorado Desert: Ethnohistory and Prehistory. Website: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiTj8Wmodf-AhVMmWoFHW2gBVkQFnoECA4QAQ&url=https%3A%2F%2Fnrm.dfg.ca.gov%2FFileHandler.ashx%3FDocumentID%3D9510&usg=AOvVaw0MNK2jAwD_cxSGLSVMWFZ6. Accessed May 2, 2023.
[37] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.

adopted certain ceremonial practices from the Serrano.[38] Frequently practiced ceremonies include multiple rituals for the mourning of the dead, the eagle dance, summer and winter solstice celebrations, and separate boys and girls initiation rites.[39]

The first recorded contact between the native Cahuilla and European culture was in 1776. At this time, the Anza expedition was traveling through Los Coyotes Canyon. The next recorded contact does not occur until 1809 through the San Gabriel Mission, when the missionaries were baptizing the Cahuilla.[40] Based on information from the 1823 and 1826 expeditions of José Romero, the Cahuilla could speak Spanish and were running cattle from Palm Springs through the San Gorgonio Pass.[41]

Mission Indians throughout most of Southern California and Northern Baja California began demanding that the missions be turned over to them permanently during 1834 to 1835. When this did not occur, local Indian groups began abandoning and attacking the missions. In 1851, the Cahuilla were extremely hostile toward the Europeans and planned an uprising in Hemet with plans to attack and destroy Los Angeles; however, with the help of Cahuilla Chief Juan Antonio, the uprising was thwarted.

Eventually a state of equilibrium developed in the region and Mexican officials and rancho owners began utilizing local Indians as allies, soldiers, and guardians.[42] According to Forbes, in 1842, a band of Mountain Cahuilla served as an auxiliary force for the Lugo family in the Colton-San Bernardino area. A Desert Cahuilla leader named Cabezon also became a Mexican ally. These Indian forces helped in capturing and killing hostages as well as defending livestock. Cahuilla leaders such as Cabezon functioned as intermediaries between other Cahuilla bands, Europeans, and the Spanish-Mexican people.[43,44]

The Serrano

Kroeber and Bean and Smith form the primary historical references for this group.[45,46] According to Bean and Smith, the project area lies near the southern portion of an area utilized by the Serrano.[47] Spanish diseases decimated all indigenous groups adjacent to the eastern San Bernardino Mountains, especially after an outpost was built in Redlands in 1819, but some Serrano survived

[38] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.
[39] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.
[40] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[41] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.
[42] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.
[43] Ibid.
[44] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[45] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[46] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[47] Ibid.

intact for many years in the far eastern San Bernardino Mountains, due to the ruggedness of the terrain and the dispersed population.

The Serrano spoke a language that belongs to the Cupan group of the Takic subfamily. The Takic subfamily is part of the larger Uto-Aztecan language family, which includes the Shoshonean groups of the Great Basin. The total Serrano population at initial European contact was roughly 2,000 people. Their range is generally thought to have been located in and east of the Cajon Pass area of the San Bernardino Mountains, north of Yucaipa, west of Twentynine Palms, and south of Victorville. The range of this group was limited and restricted by reliable water. Twenty-nine Palms was the origin location of the Maringa Serrano clan, and after 1811, many Serrano were forcibly taken to the Mission San Gabriel.[48] The Mara Oasis, central location for the Maringa Serrano clan, is located in Joshua Tree National Park.

Serrano populations studied in the early part of the last century were a remnant of their cultural form prior to contact with the Spanish missionaries. Nonetheless, the Serrano are viewed as clan- and moiety-oriented, or local lineage-oriented group tied to traditional territories or use areas. The Serrano clans are considered "non-political ethnic nationality," divided among themselves into patrilineal clans with two moieties: Coyote and Wildcat. Typically, a "village" consisted of a collection of families centered about a ceremonial house, with individual families inhabiting willow-framed huts with tule thatching and central fire pit. Considered hunter-gatherers, Serrano exhibited a sophisticated technology devoted to hunting small animals and gathering roots, tubers, and seeds of various kinds. Today, Serrano descendants are found mostly on the Morongo reservation.

Luiseño

Of all the Southern California native groups, the Luiseño have been the most ethnographically studied and the literature is rich in detail. The Luiseño occupational areas encompass over 1,500 square miles of Southern California as well as the Channel Islands.[49,50,51] Luiseño villages were found along the Pacific Ocean from just north of Agua Hedionda to south of Aliso Creek in present-day San Diego County and moved inland from these points to the western base of the San Jacinto River and south to the valley of San José, near Fallbrook.[52] The villages were determined according to their proximity to a defined water source, access to a food-gathering locale, and in good defensive locations.[53] Spatially, these villages were commonly located along valley bottoms, streams, or coastal strands. The Luiseño characteristically lived in sedentary villages; therefore, one clan or family

[48] Bean, Lowell J., and Sylvia B. Vane. 2002. The Native American Ethnography and Ethnohistory of Joshua Tree National Park: An Overview and Assessment Study: Section IV. The Serrano. Website: htttp://www.nps.gov/history/history/online_books/jotr/history4.html. Accessed May 2, 2023.

[49] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.

[50] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.

[51] Phillip Sparkman. 1908. American Archaeology and Ethnology - The Culture of the Luiseño Indians. Website: https://www.sacred-texts.com/nam/ca/coli/coli00.htm. Accessed May 2, 2023.

[52] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.

[53] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.

occupied several food-gathering locations and aggressively guarded these areas against other clans.[54,55]

Luiseño homes were constructed in two forms; one variation was typically constructed with forked posts, which supported the wood ceiling beams, and were completely covered in thatch, which was lightly mixed with sand or soil.[56,57] This form was seen in larger constructions, while the smaller home style had a slightly conical roof made of some locally available brush and the floor was usually excavated two feet below ground surface. All homes were built with a small fire pit in the center, and a slight smoke hole in the roof just above the fire.[58,59,60] Sweat houses were of similar thatch design to that of the smaller home pattern, but varied in its construction in that it stood on two forked posts connected by log and was shaped like an ellipse with an entrance on one of the longer sides of the structure.

The pottery associated with the Luiseño is made for functionality, consequently it is a simple construction and tends to lack in ornamental design, although Bean and Shipek note that if designs were included, "a simple line decoration was either painted or incised with a fingernail or stick."[61] Luiseño made pots from the basis of a coil form, in which pieces of coiled clay are gradually added to the edge of the pot, while it is being shaped with a wooden paddle and finished with a polishing stone. After completion, the pot is sunbaked and fired.[62] Typical uses of pottery were for cooking, water jugs, containers, and a water vessel with two spouts used while members were gathering food. [63] Plant fibers were also commonly used for purposeful household implements, such as brooms, brushes, nets, pouches, twine, and cedar bark skirts for women. The process of creating such items from plant fiber tends to rely on soaking, stretching, and then rolling the fiber.[64,65]

Ceremony and ritual was of great importance to all native peoples, and the Luiseño had their own variety of traditional practices. Frequently practiced ceremonies include multiple rituals for the mourning of the dead, the eagle dance, separate ceremonies for the initiation of boys and girls, and

[54] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[55] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.
[56] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[57] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[58] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[59] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[60] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[61] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[62] Phillip Sparkman. 1908. American Archaeology and Ethnology - The Culture of the Luiseño Indians. Website: https://www.sacred-texts.com/nam/ca/coli/coli00.htm. Accessed May 2, 2023.
[63] Ibid.
[64] Phillip Sparkman. 1908. American Archaeology and Ethnology - The Culture of the Luiseño Indians. Website: https://www.sacred-texts.com/nam/ca/coli/coli00.htm. Accessed May 2, 2023.
[65] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.

a summer and winter solstice celebration.[66,67,68] These ceremonies offered gatherers an opportunity to witness reenactments, songs, and the oral recitation of their history.[69] Important equipment during rituals included blades made of obsidian, stone bowls, clay figurines, and headdresses constructed of eagle-feathers.[70] Ritual dances were limited to only three standard dances such as the fire dance, which was used during the Toloache Cult initiation for boys at puberty. Also of great significance during the boys' initiation were masterfully designed sand paintings, once thought to have originated in the Southwest, though presently culturally identified with the Luiseño.[71,72,73] Although not necessarily limited to ritual, Heizer and Whipple comment that the Luiseño of Riverside County decorate their rock designs in the same form as that of the native peoples of the Great Basin, which appears as pecked abstracts displayed on boulders.[74]

Personal adornment was a common practice among the Luiseño. Ornamental items such as beads and pendants were made of clay, shell, stone, deer hooves, bear claws, and mica sheets. Men would wear ear and nose ornaments, sometimes made of bone or cane with beads attached. Body painting and tattooing was used purely for rituals.[75]

The Gabrieleño

Kroeber and Bean and Smith form the primary historical references for this tribal group.[76,77] The arrival of Spanish explorers and the establishment of missions and outposts during the eighteenth century ended the prehistoric period in California. At this time, traditional Gabrieleño society began to fragment as a result of foreign diseases and the mass removal of local Indian groups to the Mission San Gabriel and Mission San Juan Capistrano.

The Gabrieleño spoke a language that belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family (a language family that includes the Shoshoean groups of the Great Basin). The total Gabrieleño population in about 1770 *anno domini* (AD) was roughly 5,000 persons, based on an estimate of 100 small villages, with approximately 50 to 200 people per village. Their range is generally thought to have been located along the Pacific coast from Malibu to San Pedro Bay, south to Aliso Creek, then east to Temescal Canyon, then north to the headwaters of the San Gabriel River. Also included were several islands, including Catalina. This large area encompasses the City of Los

[66] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[67] Phillip Sparkman. 1908. American Archaeology and Ethnology - The Culture of the Luiseño Indians. Website: https://www.sacred-texts.com/nam/ca/coli/coli00.htm. Accessed May 2, 2023.
[68] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.
[69] Garbarino, Merwyn S.; Sasso, Robert F. 1994. Native American Heritage, Third Edition.
[70] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[71] Ibid.
[72] Garbarino, Merwyn S.; Sasso, Robert F. 1994. Native American Heritage, Third Edition.
[73] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[74] Heizer, R. F., ed. 1978. Handbook of North American Indians, Vol. 8: California. Washington, D.C. Smithsonian Institution.
[75] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[76] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[77] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.

Angeles, much of Rancho Cucamonga, Corona, Glendale, and Long Beach. By 1800, most traditional Gabrieleño had either been killed or subjugated by the Spanish.

The first modern social analyses of Gabrieleño culture took place in the early part of the twentieth century.[78] By this time, acculturation and disease had devastated this group, and the population studied was a remnant of their pre-contact form. Nonetheless, the early ethnographers viewed the Gabrieleño as a chief-oriented society of semisedentary hunter-gatherers. Influenced by coastal and interior environmental settings, their material culture was quite elaborate and consisted of well-made wood, bone, stone, and shell items. Included among these was a hunting stick made to bring down numerous types of game. Located in an area of extreme environmental diversity, large villages may have been permanent (such as that found on or near Red Hill in Rancho Cucamonga), with satellite villages utilized seasonally. Their living structures were large, domed, and circular thatched rooms that may have housed multiple families. The society exhibited ranked individuals, possibly chiefs, who possessed a much higher level of economic power than unranked persons.

Historic Background

The Temescal Rancho

The first Europeans to traverse the territory that comprises modern Riverside County were Spanish soldier Pedro Fages and Father Francisco Garcés. This expedition to locate deserting soldiers eventually brought the group through the foothills of the San Jacinto Mountains, along Coyote Canyon, on the southern edge of Riverside County. They then continued into the Anza Valley, the San Jacinto Valley, Riverside, and eventually into San Bernardino and the Cajon Pass. Later, in 1774, Captain Juan Bautista de Anza would also utilize Coyote Canyon and enter the confines of modern Riverside County as his expedition searched for an overland route from Sonora to coastal Southern California. These expeditions sparked an influx of non-natives to Southern California, and the first of these groups were the Spanish. Associated with the Spanish migration is the establishment of missions and military presidios along the coast of California. Although neither the missions nor presidios were ever located within the confines of modern Riverside County, their influence was far reaching. Lands adjacent to the modern borders of Riverside County were utilized for agriculture and pasturage under the supervision of the Mission San Gabriel and the Mission San Luis Rey.

In the early decades of the nineteenth century, the missions began establishing ranchos for the purpose of expanding their agricultural holdings. While these Mission Rancho lands were never a part of modern Riverside County, their establishment is important to the development of the area as a center of mission activity for inland Southern California, and it encouraged population expansion into modern Riverside County lands. One such rancho was established to the west of the project area and was named the Santiago de Santa Ana. This 75,000-acre grant was awarded by Governor Arrellaga to José Antonio Yorba on July 1, 1810. This grant encompassed the majority of the Santa Ana Canyon of eastern Orange County, as well as much of northern Orange County and Newport Bay, and it is probable that livestock from this rancho grazed at the far western edge of modern Riverside County. By 1818, Don Leandro Serrano had been asked to establish a presence and quell attacks by the indigenous population to the east of the Santiago de Santa Ana, by the Mission San Luis Rey padres. Serrano was

[78] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.

given a permit to graze livestock in the Temescal Valley, and he eventually settled on lands located approximately 1 mile north of Glen Ivy Hot Springs.[79] This first documented residence in modern Riverside County is located approximately 2 miles south of the project area. After Mexico achieved its independence from Spain in 1821, and Alta California became the northern frontier of Mexico, the Mission padres were forced to swear allegiance to Mexico. Secularization of the missions took place over the next decade, and the former mission lands were transferred to Mexican families that had settled in the area.[80] During this period, Don Leandro Serrano petitioned Governor Echeandia for an official title to the Temescal Rancho lands; however, the governor never responded to his request. Thereafter, Serrano abandoned his attempt to file for the unofficial rancho holdings, as an undisputed claim to the land for 30 years would result in the transfer of title under Spanish law. Serrano and his family continued to live on the rancho lands, though he never received an official grant. This situation eventually created problems for the Serrano family when, in the 1850s and 1860s, the Temescal Tin Mining district was established on disputed lands from either the Temescal Rancho or the El Sobrante de San Jacinto Rancho. This led to an 1867 U.S. Supreme Court decision that found the Temescal Rancho holdings to be non-existent, based upon an inability to prove that Dan Leandro Serrano had ever acquired the property.[81]

South Riverside

Originally named South Riverside, the history of the modern City of Corona can be traced to lands once part of a series of ranchos belonging to prominent Spanish-Mexican families. Prior to development of South Riverside, the entire Corona Plain belonged to a variety of families, including the Serranos, the Yorbas, the Sepulvedas, the Cotas, the Bandinis, and the Botillers. In April of 1876, the lands of the original Rancho La Sierra, located between Temescal Wash and the east side of the Santa Ana Mountains, were divided among the many heirs of Don Bernardo Yorba. After this division, the central portion of modern Corona was located in the Rancho La Sierra (Yorba).

In 1886, R.B. Taylor bought a large quantity of land once located within the Yorba rancho and beyond, consisting of acreage from Vincente Yorba, Pulaski & Goodwin, the Cota family, the Pat Harrington ranch, the Barney Lee ranch, as well as acreage in Temescal Canyon. Taylor believed that the acquisition of the Temescal Canyon lands would provide enough water resources to sustain a townsite, and, thereafter, he began to look for investors in his native state of Iowa. Upon his return to Sioux City, Taylor was able to generate $200,000 from business associates, and he returned to California to initiate his business enterprise.[82]

R.B Taylor formed the South Riverside Land and Water Company, and appointed himself as a director, as well as his business partners from Iowa. The consortium decided to name the proposed townsite South Riverside, in an effort to capitalize on the already established Riverside colony, and

[79] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.
[80] Gunther, J.D. 1984. Riverside County, California Place Names. Riverside: Rubidoux Printing Company.
[81] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.
[82] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.

they purchased 12,000 acres of quality agricultural land.[83] Thereafter, Taylor and his investors focused on the development of agricultural enterprises, the establishment of water rights and the sale of smaller parcels to prospective homesteaders.

H.C. Kellogg began surveying the townsite in July of 1886, with the known version of the completed survey map available in 1891.[84] The most notable feature of the Kellogg survey map was a circular drive approximately 3 miles in length. Known as Grand Boulevard, this circular road encompasses 407 acres, divided into 193 town-blocks. This area would eventually serve as a buggy route for the earliest inhabitants of South Riverside, where they could find all the amenities a community had to offer, including stores, residences, churches, and schools.[85] However, prior to the establishment of this envisioned downtown sphere, water would need to be made directly available to the area. To accomplish this, some of the early townspeople formed the Temescal Water Company in 1887. The company built a water pipeline that sent water from the wetlands of Temescal Canyon onto the proposed townsite.

Throughout 1886 and 1887, approximately $275,725 worth of lots had been sold to prospective homesteaders and entrepreneurs, water had been supplied, and the first hotel had been erected.[86] While the early inhabitants began to plant orange and lemon trees upon arriving, it would be several years before any of the groves would yield enough fruit to be profitable. In the meantime, South Riverside began to entice additional residents with its mineral wealth. The Pacific Clay Company was established to produce pottery, tableware, and sewer pipe from the clay available on nearby lands, and the construction of a factory was announced in 1888. About this same time, the Porphyry Paving Company began to bring in equipment and laborers to make use of the porphyry deposits known to the east of the town. These endeavors stimulated an increase in the population of the town; however, it was the arrival of the Santa Ana and Los Angeles Railroad that greatly influenced the population explosion in the area. By June of 1887, the first train arrived at the townsite, and South Riverside became an official stop on the rail line.[87]

In 1896, the name of South Riverside was officially changed to Corona. This followed an election to determine whether the town should incorporate and whether the townspeople wanted to change the name of the townsite. The results of the election revealed that the name Corona was found to be popular. Meaning “crown” in Spanish, the townspeople thought it aptly described and honored circular Grand Boulevard, now located at the center of town.[88] This election also determined that the City of Corona would incorporate as the first city in the newly formed County of Riverside (Lech 2004).

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[83] Freel, G.S. 2007 “The History of Corona.” Online article from the City of Corona Public Library: http://www.coronapubliclibrary.org/index.cfm?go=HistoryOfCorona. Downloaded September 2007.

[84] Kellogg, H.C. 1891. Map of South Riverside and Orange Heights. Map version #2 (mid-1890s) is undated. Map on file, Chino Public Library Heritage Room, Chino.

[85] Freel, G.S. 2007 “The History of Corona.” Online article from the City of Corona Public Library: http://www.coronapubliclibrary.org/index.cfm?go=HistoryOfCorona. Downloaded September 2007.

[86] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.

[87] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.

[88] Freel, G.S. 2007 “The History of Corona.” Online article from the City of Corona Public Library: http://www.coronapubliclibrary.org/index.cfm?go=HistoryOfCorona. Downloaded September 2007.

Since Corona's incorporation, the population has steadily grown, and the agricultural and mineral resources of the area have been profitable. By 1912, there were 5,000 acres of established lemon and orange groves in the City, and by 1913, Corona shipped more citrus than any other town in Southern California. In addition, the lands to the northwest of downtown were planted in alfalfa, sugar beets, tomatoes, beans, and walnuts. This area also served as pasturage for dairy farms, beginning in about 1914.[89]

By the 1960s, citrus continued to gross the most revenue, and, in 1962, the Riverside Freeway (State Route [SR] 91) was constructed through Corona. Thereafter, downtown Corona went through urban renewal and made great efforts to update the area with new buildings. In the 1980s, citrus and dairy farming began to be phased out, due to their decreasing profitability and the increasing value of agricultural lands for residential development. Then, with the construction of Interstate 15 on the east side of Corona in the late 1980s, new commercial and residential developments began, heralding a citywide revitalization. By 1996 (100 years after incorporation), Corona's population had grown to more than 100,000 people, and the City contained 32 parks and 30 schools in the Corona Norco Unified School District.[90]

Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966, as amended, established the National Register of Historic Places (NRHP), which contains an inventory of the nation's significant prehistoric and historic properties. Under 36 Code of Federal Regulations 60, a property is recommended for possible inclusion on the NRHP if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

[89] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.

[90] Freel, G.S. 2007 "The History of Corona." Online article from the City of Corona Public Library: http://www.coronapubliclibrary.org/index.cfm?go=HistoryOfCorona. Downloaded September 2007.

State

Senate Bill 18

California Senate Bill (SB) 18 states that prior to a local (city or county) government's adoption of any general plan or specific plan, or amendment to general and specific plans, or a designation of open space land proposed on or after March 1, 2005, the city or county shall conduct consultations with California Native American Tribes for the purpose of preserving or mitigating impacts to Cultural Places. A Cultural Place is defined as:

> Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine (Public Resources Code [PRC] § 5097.9), or;
>
> Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register of Historic Resources pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, or any archaeological or historic site (PRC § 5097.995).

According to the Government Code Section 65352.4, "consultation" is defined as:

> The meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American Tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the Tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.

While consultation is required to take place on a government-to-government level, the SB 18 process begins with a letter from the local government to the Native American Heritage Commission requesting a list of tribal organizations appropriate to the plan or plan amendment area or proposed open space designation. Once contacted by the local government, the Tribes have up to 90 days to respond and request consultation regarding the preservation and treatment of known cultural place(s), if any have been identified by the Tribe.

California Assembly Bill 52

Assembly Bill (AB) 52 was signed into law on September 25, 2014, and provides that any public or private "project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." Tribal cultural resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources (CRHR) or included in a local register of historical resources."

This law applies to any project that has a Notice of Preparation, a notice of negative declaration, or mitigated negative declaration filed on or after July 1, 2015. Under prior law, tribal cultural resources were typically addressed under the umbrella of "cultural resources," as discussed above. AB 52 formally added the category of "tribal cultural resources" to California Environmental Quality Act

(CEQA) Guidelines and extends the consultation and confidentiality requirements to all projects, rather than just projects subject to SB 18 as discussed above.

The parties must consult in good faith, and consultation is deemed concluded when either (1) the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource (if such a significant effect exists); or (2) when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed upon during consultation must be recommended for inclusion in the environmental document. AB 52 also identifies mitigation measures that may be considered to avoid significant impacts if there is no agreement on appropriate mitigation. Recommended measures include:

- Preservation in place
- Protecting the cultural character and integrity of the resource
- Protecting the traditional use of the resource
- Protecting the confidentiality of the resource
- Permanent conservation easements with culturally appropriate management criteria

California Register of Historical Resources

As defined by Section 15064.5(a)(3)(A-D) of the CEQA Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the CRHR. The CRHR and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model, since the National Historic Preservation Act provides the highest standard for evaluating the significance of historic resources. A resource that meets the NRHP criteria is clearly significant. In addition, a resource that does not meet the NRHP standards may still be considered historically significant at a local or State level.

California Environmental Quality Act

The CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA Guidelines direct lead agencies to evaluate archaeological sites to determine whether they meet the criteria for listing in the CRHR. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the CRHR, potential adverse impacts to it must be considered. If an archaeological site is considered not to be a historical resource but meets the definition of a “unique archaeological resource” as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

Local

County of Riverside

The applicable policies listed below are from the County of Riverside General Plan, and are intended to ensure the preservation of cultural, historical, archaeological, paleontological, geological, and educational resources in the County.

Cultural resources are evidence of past human activity that has become important for scientific, historic, and/or religious reasons to communities, descendant groups, and individuals. They may include objects, buildings, structures, sites (particularly archaeological sites), areas, places, records,

or manuscripts associated with history. Some examples of cultural resources are pioneer homes, buildings, or old wagon roads; structures with unique architecture or designed by a notable architect; prehistoric Native American village sites; pioneering ethnic settlements; historic or prehistoric artifacts or objects; rock inscriptions; human burial sites, battlefields, railroad water towers, prehistoric trails, early mines, or important historic industrial sites.

Cultural resources may also include places that have historic or traditional associations or that are important for their natural resources like places where Native Americans have gathered plants for making baskets or medicines, places where religious or ceremonial activities have occurred, or places where a significant historic event has occurred. Some of these places may not have physical evidence of their use, but rather may only be recognized through oral history or archival documentation. Other such places may include numerous artifacts and/or ruins above or below ground.

Cultural resources are nonrenewable resources and often yield unique information about past societies and environments, and provide answers for modern day social, scientific, and heritage concerns. The consideration and preservation of important examples of history within Riverside County benefits the public by maintaining historic identity and a sense of place and tradition.

The cultural history of Riverside County is divided chronologically into two primary time periods: the prehistoric and historic, which includes ethnohistoric information. Native American cultures may represent approximately 10,000 years of County history, which is evidenced in the numerous archaeological resources across the County. Tribal oral history and heritage preservation efforts supplement the scientific investigation of archaeological resources by providing interpretive and geographical information. Native American cultures continue to flourish in the County and take an increasing interest and role in the documentation and preservation of their history.

The County also has a rich non-Native American history. Early explorers and settlers (Chinese, European, Mexican, Japanese, and many others) established communities, infrastructure (railroads, canals, etc.), and industries (ranching, mining, agriculture, forestry, recreation, etc.) that shaped the development and identity of the County. The vestiges of their many historic “marks on our land” can still be found today. An initial inventory of Historical Resources in the County was completed and mapped in the 1980s, but many more historic resources are known to exist that have not yet been documented. As objects, buildings, and structures continue to age, they may be considered historical resources under local, state, or national laws.

Technical studies prepared by professionally qualified individuals are often required to identify and evaluate cultural resources as part of the environmental review process associated with proposed development and public project review. These studies have contributed a wealth of knowledge about the prehistory and history of Riverside County and assist the County in identifying cultural resources worthy of preservation.

OS 19.2 The County of Riverside shall establish a cultural resources program in consultation with Tribes and the professional cultural resources consulting community. Such a program shall, at a minimum, address each of the following: application processing requirements; information database(s); confidentiality of site locations; content and

review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques and methods; and the descendant community consultation requirements of local, state, and federal law.

A Phase I CRA and a Paleontological Resources Assessment have been prepared to address potential impacts of the proposed project. Consultation with local tribal authorities occurred as part of the preparation of these assessments.

OS 19.3 Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

OS 19.5 Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

Paleontological resources are the fossilized biotic remains of ancient environments. They are valued for the information they yield about the history of the earth and its past geologic formations known to potentially contain paleontological resources. Lands with high, low, or undetermined potential for finding paleontological resources are mapped in Figure OS-7, the Paleontological Sensitivity Resources Map of the General Plan. This map is used in the environmental assessment of development proposals and the determination of required impact mitigation. The following policies are intended to ensure that paleontological resources are appropriately considered:

OS 19.6 Whenever existing information indicates that a site proposed for development has high paleontological sensitivity, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist. The PRIMP shall specify steps to be taken to mitigate impacts to paleontological resources.

OS 19.9 Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

A Biological Technical Report, a Phase I CRA and a Paleontological Resources Assessment have been prepared to address potential impacts of the proposed project.

City of Corona

The applicable policies listed below are from the City of Corona 2004 General Plan, and are intended to ensure the preservation of cultural, historical, archaeological, paleontological, geological, and educational resources in the City.

Historic Resources 4.3.2 Incorporate specific measures to identify, protect, and preserve cultural resources in the planning, environmental review, and development process.

Historic Resources 4.3.3 Archaeological resources found prior to or during construction shall be evaluated by a qualified Archaeologist, and appropriate mitigation

measures applied, pursuant to Section 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the appropriate California Historical Resources Information Center information center.

Historic Resources 4.3.4 Any project that involves earth-disturbing activities within previously undisturbed soils in an area determined to be archaeologically or culturally sensitive, shall require evaluation of the site by a qualified Archaeologist retained by the project applicant. The applicant shall implement the recommendations of the Archaeologist, subject to the approval of the City Planning Department.

Historic Resources 4.3.5 Any project that involves earth-disturbing activities in previously undisturbed soils that have been determined to be archaeologically or culturally sensitive shall require consultation by the applicant with interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, for the purposes of determining archaeological and cultural resources impacts and creating appropriate mitigation to address such impacts. The applicant shall also arrange for monitoring of earth-disturbing activities by interested federally recognized American Indian Tribe(s) that have a traditional cultural affiliation with the project area and/or the resources affected by the project, if requested.

Historic Resources 4.3.6 Any project that involves earth-disturbing activities in soil or rock units known or reasonably suspected to be fossil bearing shall require monitoring by a qualified Paleontologist retained by the project applicant for the duration of excavation or trenching.

Historic Resources 4.3.7 Paleontological resources found prior to or during construction shall be evaluated by a qualified Paleontologist, and appropriate mitigation measures applied, pursuant to Section 21083.2 of CEQA, before the resumption of development activities. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the Riverside County Museum of Natural History.

Historic Resources 4.3.8 In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the project applicant immediately shall notify the Riverside County Coroner of the find and comply with the provisions of the California Health and Safety Code Section 7050.5, including Public Resource Code Section 5097.98, if applicable. In the event that human remains are determined to be

Native American human remains, the applicant shall consult with the Most Likely Descendant (MLD) to determine the appropriate treatment for the Native American human remains.

A Phase I CRA and a Paleontological Resources Assessment have been prepared to address potential impacts of the proposed project. Consultation with local tribal authorities occurred as part of the preparation of these assessments.

3.5.2 - Methodology

Phase I Cultural Resources Assessment and Paleontological Records Review

FCS prepared a Phase I CRA and Paleontological Records Review, dated October 2018. The Paleontological Records Review is appended to this Draft EIR as Appendix D.

Record Search

Information Center Search

FCS conducted a records search for the project area at the Eastern Information Center (EIC) at the University of California, Riverside. The EIC is one of nine information centers that make up the California Historical Resources Information Center (CHRIS). The EIC maintains site records and relevant documents regarding the cultural resources within Riverside County.

The records search identified 37 cultural resources studies that have been conducted within the 0.5-mile search radius (Table 3.5-1). Of those, one included a small portion of the project area. That study was conducted by Glover and Gust in 2011 (Appendix A of the Phase I CRA). The study encompassed 22 acres adjacent to the southern boundary of the subject property and included a narrow swath of the property. No cultural resources were recorded within the project area during that survey.

According to the records on file at the EIC, the remainder of the project area has never been the subject of a cultural resources investigation.

Table 3.5-1: Cultural Resources Reports Within a 1-mile Radius of the Project Area

Report Number	Author/Date	Title
RI-00060	Leonard III, N. Nelson and Matthew C. Hall. 1975	Santa Ana River Project Description and Evaluation of Cultural Resources.
RI-00061	Langenwalter II, Paul E. and James Brock. 1985	Phase II Archaeological Studies Prado Basin and The Lower Santa Ana River.
RI-00062	Tobey, Ronald C., Terry D. Suss, and Larry Burgess. 1977	Historical Resource Survey of the Prado Flood Control Basin.
RI-01111	Schwartz, Steven. 1980	Cultural Resources Survey, Prado Fix.
RI-01112	Schwartz, Steven. 1981	Cultural Resources Survey, Prado Fix.
RI-01517	Bowles, Larry L. 1982	Archaeological Assessment for TPM 18721.

Report Number	Author/Date	Title
RI-01873	Cottrell, Marie. 1984	A Cultural Resources Assessment Conducted for TT 20060, City of Corona, Riverside County, California.
RI-01914	Gallegos, Dennis and Richard Carrico. 1985	Cultural Resources Survey for the Proposed Sierra Del Oro Project, Corona, California.
RI-02194	Ecos Management Criteria, Inc. 1985	Phase II Archaeological Studies Prado Basin and the Lower Santa Ana River: Basic Data Report for the Rincon and Spillway Cemetery Sites, Prado Basin.
RI-02195	Brock, James. 1985	Preliminary Investigation of the Rincon and Spillway Cemetery Sites in the Prado Basin.
RI-02197	Brock, James. 987	A Re-Analysis of Proton Magnetometer Data from Rincon Cemetery.
RI-02881	Greenwood, Roberta and J. Foster. 1990	Context Evaluation of Historical Sites in the Prado Basin.
RI-02980	Digregorio, Lee A. 1990	An Archaeological Reconnaissance Report (Trabuco Land Exchange).
RI-03138	Scientific Resource Surveys, Inc.	Cultural and Paleontological Survey Report on the Nastonero Property, Riverside County, California.
RI-03322	The Keith Companies. 1988	State Route 91 Improvements Project: Historic Property Survey Report.
RI-03578	W&S Consultants. 1992	Limited Phase I Archaeological Survey and Cultural resources Overview of the Rancho La Sierra Specific Plan Area, City of Riverside, Riverside County, California.
RI-04359	Duke, Curt. 2000	Cultural Resource Assessment for Modifications to Pacific Bell Wireless Facility CM 107-01, County of Riverside, California.
RI-04713	Smith, Brooks and Deborah Mclean. 2004	Cultural Resource Assessment, Far West Housing, LLC, Sierra Bella Project, Riverside County, California.
RI-04891	Wlodarski, Robert J. 2002	A Phase I Archaeological Study for the Proposed Corona Senior Housing Project Located at 701, 733, 735, and 777 Sherman Avenue (APN# 110-040-013, -014, -015, and -016), City of Corona, County of Riverside, California.
RI-05153	Holmes, Amy and J.D. Stewart. 2005	Results of a Cultural and Paleontological Assessment of the Approximately 4 Acre Smith Avenue.
RI-05194	Jackson, Adrianna L. 2001	Letter Report: Records Search Results for Sprint PCS Facility RV54XC473C (Shopping Center Site), Corona, Riverside County, California.
RI-06082	Lorna Billat. 2004	Letter Report: Proposed Cellular Tower Project in Riverside County, California, Site Name/Number: CA-8873A/MWAD.

Report Number	Author/Date	Title
RI-06085	Sterner, Mathew., et al. 2004	Ranching, Rails, and Clay: The Development and Demise of the Town of Rincon/Prado, Archaeological Data Recovery at CA-RIV-1039H and CA-RIV-1044H, Riverside County, California.
RI-06973	Harper, Caprice D. 2006	Cultural Resource Assessment for the Foothill Parkway Westerly Extension Project, City of Corona, Riverside County, California.
RI-07345	Bonner, Wayne H. and Marnie Aislin-Kay. 2006	Letter Report: Cultural Resource Records Search and Site Visit Results for T-Mobile Telecommunications Facility Candidate IE24051E (Sierra Del Oro), 2721 Green River Road, Corona, Riverside County, California.
RI-07425	McLean, Deborah. 2007	Historic Property Survey Report (First Supplemental Historic Property Survey Report: 08/12-Riv/ORA-91-PM 15.9-19.9/0.0-2.9 KP25.6-32.0/0.0/4.7 Eastbound Lane Addition EA: 0E800/0G040).
RI-07453	Bonner, Wayne H. and Marnie Aislin-Kay. 2007	Cultural Resource Records Search Results and Site Visit for Royal Street Communications, LLC Facility Candidate LA2231A (Serfas Club), 2575 Green River Road, Corona, Riverside County, California.
RI-07731	Harper, Caprice D. 2008	Letter Report: revised Addendum to Cultural Resources Assessment for the Foothill Parkway Westerly Extension Project, City of Corona, Riverside County, California.
RI-08047	Glover, Amy, Veronica Harper, and Sherri Gust. 2008	Phase I Cultural Resources Assessment Report For The Corona High School Project In Corona, California.
RI-08048	Glover Amy, Veronica Harper, and Sherri Gust. 2008	Phase I Cultural Resources Assessment Report For The Coronita Elementary School Project in Corona, California.
RI-08157	Wlodarski, Robert. 2008	Letter Report: Record Search and Field Reconnaissance Phase for the Proposed Bechtel Wireless Telecommunications Site ES0198.
RI-08605	Goldberg, Susan. 2010	Archaeological Survey Report for State Route 91/71 Interchange Project, Riverside County, California (08-Riv-91-P.M. R0.6/R2.6; 08-Riv-71-P.M. 1.6/3.0) EA 0F541.
RI-08806	Bonner, Wayne H. and Sarah A. Williams. 2011	Letter Report: Cultural Resource Records Search and Site Visit Results for Verizon Wireless Candidate 'Rising Sun.'
RI-08905	Allred, Carla. 2012	Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Number(s)/Name(s): LA5343A/Tanka Enterprises TMO Colo, TCNS# 85966.
RI-09106	Stropes, Tracy A. and Brian F. Smith. 2013	A Class III Cultural Resources Study For The Sierra Bella Project For Section 106 Compliance Riverside County, California.

Report Number	Author/Date	Title
RI-09278	Tang, Bai, Ben Kerridge, Daniel Ballester, and Nina Gallardo, 2015	Phase I Archaeological Resources Survey Report: Tentative Tract Map No. 36701 City of Corona, Riverside County, California.
RI-10166*	**Glover, Amy and Sherri Gust. 2011**	**Phase I Cultural Resources Assessment Report for the Cesar Chavez Elementary School Expansion Project In Corona, California.**
Note: * Includes a small portion of the subject property.		

The records search indicates that there are no recorded archaeological or historical resources on or within a 0.5-mile radius of the project area (Table 3.5-2). There are five recorded historic resources recorded between 0.5 mile and 1 mile of the project area. There is no record on file at the EIC of any prehistoric sites recorded within a 1-mile radius of the property.

Table 3.5-2: Cultural Resources Within a 1-mile Radius of the Project Area

Report Number	Prehistoric/historic	Description
CA-RIV-001039	0.5-mile	Historic
CA-RIV-001044	0.75-mile	Historic
CA-RIV-002802	1.mile	Historic
CA-RIV-003372	0.5-mile	Historic
CA-RIV-005523H	0.5-mile	Historic

Native American Heritage Commission Record Search

FCS sent a request to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project area. The response from the NAHC was negative. A list of Native American tribal members affiliated with the project area who may have additional knowledge of the project area was included with the results. These tribal members were sent letters on April 30, 2018, requesting any additional information they might have concerning cultural resources and the project area. To date, no responses have been received (Appendix B of the Phase I CRA).

Paleontological Records Search

The Natural History Museum of Los Angeles County was requested to conduct a search of their records to determine the relative sensitivity of the project area for paleontological resources (Appendix C of the Phase I CRA). According to the Natural History Museum:

> In the slightly less elevated terrain in most of the proposed project area the surface deposits are composed of younger Quaternary Alluvium, derived as alluvial fan deposits from the surrounding more elevated terrain. In the slightly more elevated

> terrain in the remainder of the proposed project area, particularly in the south and southwest, the surface deposits are composed of older Quaternary Alluvium, derived as alluvial fan deposits from the hills to the south. The younger Quaternary deposits usually do not contain significant vertebrate fossils in the uppermost layers but may contain significant vertebrate fossils in older Quaternary deposits at relatively shallow depth. Our closest vertebrate fossil locality from these deposits is LACM 1207, east-northeast of the proposed project area north of the Riverside Freeway (Highway 91) on the west side of Cota Street in the Temescal Wash area, that produced a fossil specimen of deer, Odocoileus, at unknown depth. Our next closest fossil vertebrate locality from older Quaternary deposits is LACM 7811, north-northeast of the proposed project area west of Mira Loma along Sumner Avenue north of Cloverdale Road, which produced a fossil specimen of whipsnake, *Masticophis*, at a depth of 9 to 11 feet below the surface. Northwest of the proposed project area, in the hills just south of Los Serranos, our older Quaternary localities LACM 7268 and 7271 both produced fossil specimens of horse, Equus. Further west and south of localities LACM 7268 and 7271, up Soquel Canyon east of Sleepy Hollow, we have another locality in older Quaternary deposits, LACM 7508, that produced fossil specimens of ground sloth, *Nothrotheriops*, and horse, *Equus giganteus*.

Given the relative sensitivity for fossils at depth on the subject property, the following recommendations were made:

> Shallow excavations in the younger Quaternary Alluvium exposed in the slightly less elevated terrain in most of the proposed project area are unlikely to uncover significant fossil vertebrate remains. Deeper excavations there that extend down into older Quaternary deposits, and any excavations in the older Quaternary deposits exposed in slightly more elevated terrain of the proposed project area, however, may well encounter significant vertebrate fossils. Any substantial excavations in the proposed project area, therefore, should be closely monitored to quickly and professionally recover any potential vertebrate fossils without impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

Pedestrian Survey

Two FCS archaeologists conducted a pedestrian survey for the property on April 23 and 24, 2018. Grass, weeds, and imported sand and topsoils covered most of the property, limiting the observable surface soils to less than 20 percent. Those areas were inspected closely for any evidence of archaeological remains, either historic or prehistoric. None were observed.

3.5.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Historic Resources

a) Alter or destroy a historic site?
b) Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?

Archaeological Resources

a) Alter or destroy an archaeological site?
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?
c) Disturb any human remains, including those interred outside of formal cemeteries?

3.5.4 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Historic Resources

Impact CUL 1a: Alter or destroy a historic site?

Source(s): On-Site Inspection, Project Application Materials, existing site conditions, project site plans/exhibits, the 2015 County of Riverside General Plan, the 2004 City of Corona General Plan, and the Phase I Cultural Resources Assessment

The records search indicates that there are no recorded archaeological or historical resources on or within a 0.5-mile radius of the project area (Table 3.5-2). There are five recorded historic resources recorded between 0.5 mile and 1 mile of the project area. There is no record on file at the EIC of any prehistoric sites recorded within a 1-mile radius of the property.

Based on the findings of the Phase I CRA and previous assessments completed within 0.5 mile of the project site, the project will not alter or destroy cultural resources or historic sites. As such, there would be no impacts to cultural or historic resources and no impacts are identified.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Historic Resources

Impact CUL-1b:	**Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?**

Source(s): On-Site Inspection, Project Application Materials, existing site conditions, project site plans/exhibits, the 2015 County of Riverside General Plan, the 2004 City of Corona General Plan, and the Phase I Cultural Resources Assessment

Impact Analysis

In accordance with CEQA and County of Riverside Archaeological Guidelines, FCS has assessed the effects of potential future development within the project area. A cultural resource record search was conducted on May 4, 2018, by FCS staff at the EIC, which is located at the University of California, Riverside. The search included the project area and a 1-mile radius. To identify any historic properties, the current inventories of the NRHP, CRHR, California Historical Landmark, and California Point of Historical Interest were examined. Historic era structural resources were not expected to be present since no structures or structural remains were observed on the historical aerials or topographic maps. In addition, no structures or structural remains were observed during the course of the field survey; including the golf course and associated uses. The lack of structures or structural remains suggests that the potential for impacting historic era resources should be considered "none." The results of the cultural resource record search indicate that the potential for impacting buried historic era resources is negligible. In addition, the project site is not used for existing religious or sacred uses. As indicated in the Cultural Resource Report, FCS archaeologists conducted a pedestrian survey of the project area on April 23 and April 24, 2018. No cultural resources, including existing religious or sacred sites, were located as part of this detailed survey, and none of the tribal representatives contacted identified the existence of such sites within the project area.

Although there are no observable historic cultural resources within the project area, the potential exists for encountering unknown buried historic resources during project construction. As such, Mitigation Measure (MM) CUL-1 is proposed to reduce impacts related to potential inadvertent discovery of historic resources to a level of less than significant. Note that MM CUL-1 also applies to archaeological resources, as they would be expected to be found during the same type of earthwork activities and would involve the same evaluation and recovery methods.

As such, impacts would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-1 Inadvertent Discovery of Cultural Resources

In the event that significant archaeological resources are discovered during construction activities, operations shall stop within a 100-foot radius of the find and an Archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology shall be consulted to evaluate the potential resource, and determine whether it requires further study. The lead agency shall require the standard inadvertent discovery clause to be included on the grading plans to inform contractors of this requirement. Potentially significant archaeological resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. The qualified Archaeologist shall make recommendations to the lead agency concerning appropriate measures that shall be implemented to protect the discovered resources, including but not limited to excavation and evaluation of the finds in accordance with CEQA Guidelines, Section 15064.5. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA Guidelines.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Archaeological Resources

Impact CUL-2a Alter or destroy an archaeological site?

Source(s): On-Site Inspection, Project Application Materials, existing site conditions, project site plans/exhibits, the 2015 County of Riverside General Plan, the 2004 City of Corona General Plan, and the Phase I Cultural Resources Assessment

Research on the project area shows that as of the earliest aerial of the area, dated 1948, the project site was undeveloped. By 1966, graded residential pads were made ready for construction surrounding the proposed site, with streets, curbs, and gutters already having been built. By 1967 forward, the golf course fairways were in place, as well as a golf course club. The construction of the golf course has greatly disturbed soils throughout the project site by plowing or disking related to vegetation abatement, and likely from the construction of the nearby modern residences, and concrete culvert and drainages. The development of the golf course would have entailed extensive grading to reach the desired shape and depth and then finished with an unknown amount of imported topsoil to support grass once the course design was completed.

Examination of topsoil during the field survey of the project area determined that much of the property was obscured by weeds, imported fill materials, and refuse, and had limited visibility. No cultural resources were observed during the survey.

However, to ensure that the proposed project has a less than significant impact on archaeological sites, MM CUL-1 shall be implemented in the event that any resources are found on-site. MM CUL-1 would ensure that any previously unknown cultural resources inadvertently discovered during construction are subject to proper evaluation by a qualified Archaeologist to determine appropriate mitigation as necessary.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of MM CUL-1.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Archaeological Resources

Impact CUL-2b:	**Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?**

Source(s): On-Site Inspection, Project Application Materials, existing site conditions, project site plans/exhibits, the 2015 County of Riverside General Plan, the 2004 City of Corona General Plan, and the Phase I Cultural Resources Assessment

Impact Analysis

Research on the project area shows that as of the earliest aerial of the area, dated 1948, the project site was undeveloped. By 1966, graded residential pads were made ready for construction surrounding the proposed site, with streets, curbs, and gutters already having been built. By 1967 forward, the golf course fairways were in place, as well as a golf course club. The construction of the golf course has greatly disturbed soils throughout the project site by plowing or disking related to vegetation abatement, and likely from the construction of the nearby modern residences, and concrete culvert and drainages. The development of the golf course would have entailed extensive grading to reach the desired shape and depth and then finished with an unknown amount of imported topsoil to support grass once the course design was completed.

Examination of topsoil during the field survey of the project area determined that much of the property was obscured by weeds, imported fill materials, and refuse, and had limited visibility. No cultural resources were observed during the survey.

However, to ensure that the proposed project has a less than significant impact on archaeological sites, MM CUL-1 and MM CUL-2 shall be implemented in the event that any resources are found on-site. MM CUL-1 and MM CUL-2 will ensure that any previously unknown cultural resources

inadvertently discovered during construction are subject to proper evaluation by a qualified Archaeologist to determine appropriate mitigation as necessary.

As such, impacts would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of MM CUL-1 and CUL-2.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Burial Sites

Impact CUL-2c:	**Disturb any human remains, including those interred outside of formal cemeteries?**

Source(s): On-Site Inspection, Project Application Materials, Phase I Cultural Resources Assessment

Impact Analysis

No human remains are known to exist within the project area. The project site is not currently utilized for cemetery uses and based on a records search, is not known to contain human remains. As indicated in the Cultural Resources Assessment, FCS Archaeologists conducted a pedestrian survey of the project area on April 23 and April 24, 2018. No archaeological resources, including human remains or burial plots, were located as part of this detailed survey. However, there is always the possibility that subsurface construction activities associated with the proposed project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. However, if human remains are discovered, implementation of MM CUL-2 would reduce this potential impact to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-2 Accidental Discovery of Human Remains

In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. During the course of project development, if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

- There shall be no further excavation or disturbance within 100 feet of the remains until the County Coroner is contacted to determine whether the remains are

Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the Most Likely Descendant (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for appropriate treatment and disposition of, with appropriate dignity, the human remains, and any associated grave goods as provided in Public Resources Code Section 5097.98.

- Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the MLD or on the project site in a location not subject to further subsurface disturbance:
  - The NAHC is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being notified by the commission.
  - The descendant identified fails to make a recommendation.
  - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

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3.6 - Energy

3.6.1 - Introduction

This section describes the existing energy setting in the project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to energy that could result from implementation of the proposed project. Information in this section is based on project-specific energy calculation outputs included in Appendix B.

3.6.2 - Existing Setting

Energy Basics

Energy is generally transmitted either in the form of electricity, measured in kilowatts (kW)[1] or megawatts (MW),[2] or natural gas measured in British thermal units (Btu), or cubic feet.[3] Fuel, such as gasoline or diesel, is measured in gallons or liters. Electricity is used primarily for lighting and appliances. Natural gas is used primarily for heating, water heating, and cooking purposes, and is typically associated with commercial and residential uses. Fuel is used primarily for powering off-road equipment, trucks, and passenger vehicles. The typical fuel types used are diesel and gasoline.

Electricity Generation, Distribution, and Use

State of California

According to the California Energy Commission (CEC), in 2020 the State of California generated approximately 272,576 gigawatt-hours (GWh) of electricity.[4] Approximately 37.1 percent of this energy generation was sourced from natural gas, 33.1 percent from renewable sources (i.e., solar, wind, and geothermal), 12.2 percent from large hydroelectric sources, and the remaining 17.6 percent was sourced from coal, nuclear, oil, and other nonrenewable sources.

According to the United States Energy Information Administration (EIA),[5] in 2019, California ranked second in the nation in conventional hydroelectric generation, fourth in electricity production, and first as a producer of electricity from solar, geothermal, and biomass resources. California leads the nation in solar thermal electricity capacity and generation.

Electricity and natural gas are distributed through the various electric load serving entities (LSEs) in California. These entities include investor-owned utilities (IOUs), publicly owned LSEs, rural electric cooperatives, community choice aggregators, and electric service providers.

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1 1 kW = 1.000 watts; A watt is a derived unit of power that measure rate of energy conversion. 1 watt is equivalent to work being done at a rate of 1 joule of energy per second. In electrical terms, 1 watt is the power dissipated by a current of 1 ampere flowing across a resistance of 1 volt.

2 1 MW = 1 million watts

3 A unit for quantity of heat that equals 100,000 British thermal units. A British thermal unit is the quantity of heat required to raise the temperature of 1 pound of liquid water 1 degree Fahrenheit at a constant pressure of 1 atmosphere.

4 California Energy Commission (CEC). 2020 Total System Electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation. Accessed October 27, 2021.

5 United States Energy Information Administration (EIA). California State Profile and Energy Estimates. Website: https://www.eia.gov/state/?sid=CA. Accessed October 27, 2021.

County of Riverside

Southern California Edison (SCE) provides electricity to the Riverside County area.

City of Corona

SCE provides electricity to the City of Corona.

Project Site

As noted in the Project Description, the project site was formerly occupied by the Mountain View Golf Course but has been vacant since the golf course closed in 2009. As such, the project site does not currently consume electricity.

Natural Gas Generation, Distribution, and Use

State of California

Natural gas is used for everything from generating electricity to cooking and space heating to an alternative transportation fuel. According to the CEC, in 2012 total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (BCF/year), up from 2,196 BCF/year in 2010.[6] Demand in all sectors except electric power generation remained relatively flat for the last decade due in large part to energy efficiency measures, but demand for power generation rose about 30 percent between 2011 and 2012. In 2019, it was estimated that California consumed 2,217.2 trillion Btu of natural gas, which is approximately 2,138.1 billion cubic feet.[7]

Natural gas-fired generation has become the dominant source of electricity in California, as it fuels about 43 percent of electricity consumption followed by hydroelectric power. Because natural gas is a resource that provides load when the availability of hydroelectric power generation and/or other sources decrease, use varies greatly from year to year. The availability of hydroelectric resources, the emergence of renewable resources for electricity generation, and overall consumer demand are the variables that shape natural gas use in electric generation. Because of above average precipitation in 2011, natural gas used for electricity generation was 617 BCF, compared to lower precipitation years in 2010 and 2012 when gas use for electric generation was 736 BCF and 855 BCF, respectively.

County of Riverside

Southern California Gas Company (SoCalGas) provides natural gas service to the Riverside County area. SoCalGas is a subsidiary of Sempra Energy. SoCalGas is the nation's largest natural gas distribution utility and provides energy to 20.9 million consumers through 5.8 million meters in more than 500 communities. The company's service territory encompasses approximately 20,000 square miles throughout Central and Southern California.

[6] California Energy Commission (CEC). 2021. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california. Accessed October 27, 2021.

[7] United States Energy information Administration (EIA). 2019. California Energy Consumption Estimates. Website: https://www.eia.gov/state/print.php?sid=CA. Accessed October 27, 2021.

City of Corona

SoCalGas provides natural gas service to the City of Corona.

Project Site

SoCalGas provides natural gas service to the project area. The project site is currently vacant and does not consume natural gas.

Fuel Use

State of California

The main category of fuel use in California is transportation fuel, specifically gasoline and diesel. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline sold in California being consumed by light-duty cars, pickup trucks, and sport utility vehicles. In 2019, 15.4 billion gallons of gasoline were sold, which represents the largest transportation fuel used in California.[8] Diesel is the second largest transportation fuel used in California. In 2019, 1.8 billion gallons of retail diesel was sold in 2015. Nearly all heavy duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm, construction and heavy duty military vehicles and equipment have diesel engines.

County of Riverside

The main category of fuel use in the County of Riverside is transportation fuel (gasoline and diesel).[9]

Project Site

The project site is currently vacant and does not consume any vehicle fuel.

3.6.3 - Regulatory Framework

Federal Regulations

Energy Independence and Security Act

The Energy Policy Act of 2005 created the Renewable Fuel Standard program. The Energy Independence and Security Act of 2007 expanded this program by:

- Expanding the Renewable Fuel Standard program to include diesel in addition to gasoline;
- Increasing the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- Establishing new categories of renewable fuel, and setting separate volume requirements for each one; and
- Requiring the United States Environmental Protection Agency (EPA) to apply lifecycle greenhouse gas (GHG) emissions performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

[8] California Energy Commission (CEC). 2019. California Gasoline, Data, Facts, and Statistics. Website: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics. Accessed October 29, 2021.

[9] Riverside County Planning Department. 2019. Riverside County Climate Action Plan. Website: https://planning.rctlma.org/CAP. Accessed October 27, 2021.

This expanded Renewable Fuel Standard program lays the foundation for achieving substantial reductions of GHG emissions from the use of renewable fuels, reducing the use of imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector.

Signed on December 19, 2007, the Energy Independence and Security Act (EISA) of 2007 aims to:

- Move the United States toward greater energy independence and security.
- Increase the production of clean renewable fuels.
- Protect consumers.
- Increase the efficiency of products, buildings, and vehicles.
- Promote research on and deploy GHG capture and storage options.
- Improve the energy performance of the federal government.
- Increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy.

EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards.

The EPA is committed to developing, implementing, and revising both regulations and voluntary programs under the following subtitles in EISA, among others:[10]

- Increased Corporate Average Fuel Economy Standards
- Federal Vehicle Fleets
- Renewable Fuel Standard
- Biofuels Infrastructure
- Carbon Capture and Sequestration

EPA and National Highway Traffic Safety Administration Light-Duty Vehicle GHG Emission Standards and Corporate Average Fuel Economy Standards Final Rule

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, the President put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They required these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to

[10] United States Environment Protection Agency (EPA). Summary of the Energy Independence and Security Act. Website: https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act. Accessed October 27, 2021.

35.5 miles per gallon if the automobile industry met this CO_2 level solely through fuel economy improvements. Together, these standards would have cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

The EPA and the NHTSA issued final rules on a second phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012.[11] The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles. The final standards are projected to result in an average industry fleet wide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and NHTSA issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies proposed engine and vehicle standards that began in the 2014 model year and would have achieved up to a 20 percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy duty pickup trucks and vans, the agencies proposed separate gasoline and diesel truck standards, which were to be phased in starting in the 2014 model year and would achieve up to a 10 percent reduction for gasoline vehicles, and a 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would have achieved up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

The State of California has received a waiver from the EPA to have separate, stricter Corporate Average Fuel Economy Standards. Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the incidental reduction of GHG emissions. In order to manage the State's energy needs and promote energy efficiency, Assembly Bill (AB) 1575 created the CEC in 1975.

State Regulations

California Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

California Assembly Bill (AB) 1493, enacted on July 22, 2002, required the California Air Resources Board (ARB) to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.[12]

[11] United States Environmental Protection Agency (EPA). 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks. Website: http://www.epa.gov/otaq/climate/documents/420f12051.pdf. Accessed October 27, 2021.

[12] California Legislative Information. 2002. Clean Car Standards—Pavley, Assembly Bill 1493. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020AB1493. Accessed October 27, 2021.

The standards were to be phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards were to result in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards were to result in about a 30 percent reduction.

The second phase of the implementation for the Pavley Bill was incorporated into amendments to the Low-Emission Vehicle (LEV) Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.[13]

California Code of Regulations Title 13: Motor Vehicles

California Code of Regulations, Title 13: Division 3, Chapter 10, Article 1, Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. This measure seeks to reduce public exposure to diesel particulate matter and other air contaminants by establishing idling restrictions, emission standards, and other requirements for heavy duty diesel engines and alternative idle reduction technologies to limit the idling of diesel-fueled commercial motor vehicles. Any person that owns, operates, or causes to operate any diesel-fueled commercial motor vehicle must not allow a vehicle to idle for more than 5 consecutive minutes at any location, or operate a diesel-fueled auxiliary power system for greater than 5 minutes at any location when within 100 feet of a restricted area.

California Code of Regulations, Title 13: Division 3, Chapter 9, Article 4.8, Section 2449: General Requirements for In-Use Off-Road Diesel-Fueled Fleets. This measure regulates oxides of nitrogen (NO_X), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. This measure also requires each fleet to meet fleet average requirements or demonstrate that it has met “best available control technology” requirements. Additionally, this measure requires medium and large fleets to have a written idling policy that is made available to operators of the vehicles informing them that idling is limited to 5 consecutive minutes or less.

California Senate Bill 1078: Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed Senate Bill (SB) 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010,

[13] California Air Resources Board (ARB). 2013. Final 2017 Scoping Plan and Appendices. Website: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents. Accessed October 27, 2021.

requiring the State's LSEs to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010, by Resolution 10-23.

California Senate Bill 350: Clean Energy and Pollution Reduction Act

In 2015, the State legislature approved and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the Renewables Portfolio Standard (RPS), higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the bill due to opposition and concern that it would prevent the bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:[14]

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

California Senate Bill 100: Renewable Portfolio Standard Program

On September 10, 2018, Governor Newsom signed SB 100, requiring California electricity utility providers to supply all in-state end users with electricity sourced from renewable sources. Specifically, SB 100 accelerates the goals expressed under SB 1078 and requires that the program achieve 50 percent of electricity sourced from renewables by December 31, 2026, 60 percent by December 31, 2030, and 100 percent of electricity sourced from carbon-free sources by December 31, 2045. For clarification, renewable sources, as described herein, includes all renewable sources (e.g., solar, small hydro, wind) but notably omits large-scale hydroelectric and nuclear electricity generation; carbon-free sources include all renewable sources as well as large-scale hydroelectric and nuclear electricity generation.

California Code of Regulations Title 24

Part 6 (Energy Efficiency Standards for Residential and Nonresidential Buildings)

California Code of Regulations Title 24 Part 6 (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.[15]

[14] California Legislative Information. 2015. Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed October 27, 2021.

[15] California Energy Commission (CEC). 2019. Building Energy Efficiency Standards. https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency. Accessed October 27, 2021.

Part 11 (California Green Building Standards Code)

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings. Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50 percent diversion requirement. The Code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State Building Code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

California Public Utilities Code

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

Local Regulations

Riverside County General Plan

The Riverside County General Plan contains policies related to energy efficiency, energy conservation, and renewable energy in its Air Quality Element, Land Use Element, and Multipurpose Open Space Element.[16]

Air Quality Element

The following policies from the County's Air Quality Element are relevant to the proposed project and support energy conservation through promoting recycling efforts, reducing Vehicle Miles Traveled (VMT), improving energy efficiency of homes and businesses, conserving water, and increasing alternative energy sources.

AQ 5.1 Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

AQ 5.2 Adopt incentives and/or regulations to enact energy conservation requirements for private and public developments.

AQ 5.3 Update, when necessary, the County's Policy Manual for Energy Conservation to reflect revisions to the County Energy Conservation Program.

AQ 5.4 Encourage the incorporation of energy efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

[16] Riverside County Planning Department. 2018. Riverside County General Plan, Air Quality Element. Website: https://planning.rctlma.org/General-Plan-Zoning/General-Plan. Accessed October 27, 2021.

AQ 20.1 Reduce VMT by requiring expanded multimodal facilities and services that provide transportation alternatives, such as transit, bicycle, and pedestrian modes. Improve connectivity of the multimodal facilities by providing linkages between various uses in the developments.

AQ 20.2 Reduce VMT by facilitating an increase in transit options. In particular, coordinate with adjacent municipalities, transit providers and regional transportation planning agencies to develop mutual policies and funding mechanisms to increase the use of alternative transportation.

AQ 20.3 Reduce VMT and GHG emissions by improving circulation network efficiency.

AQ 20.4 Reduce VMT and traffic through programs that increase carpooling and public transit use, decrease trips and commute times, and increase use of alternative-fuel vehicles.

AQ 20.5 Reduce emissions from standard gasoline vehicles, through VMT, by requiring all new residential units to install circuits and provide capacity for electric vehicle charging stations.

AQ 20.6 Reduce emissions from commercial vehicles, through VMT, by requiring all new commercial buildings, in excess of 162,000 square feet, to install circuits and provide capacity for electric vehicle charging stations.

AQ 20.7 Reduce VMT through increased densities in urban centers and encouraging emphasis on mixed use to provide residential, commercial and employment opportunities in closer proximity to each other. Such measures will also support achieving the appropriate jobs-housing balance within the communities.

AQ 20.8 Reduce VMT by increasing options for non-vehicular access through urban design principles that promote higher residential densities with easily accessible parks and recreation opportunities nearby.

AQ 20.9 Reduce urban sprawl in order to minimize energy costs associated with infrastructure construction and transmission to distant locations, and to maximize protection of open space.

AQ 20.10 Reduce energy consumption of the new developments (residential, commercial, and industrial) through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design.

AQ 20.11 Increase energy efficiency of the new developments through efficient use of utilities (water, electricity, natural gas) and infrastructure design. Also, increase energy efficiency through use of energy efficient mechanical systems and equipment.

AQ 20.12 Support programs to assist in the energy efficient retrofitting of older affordable housing units to improve their energy efficiency, particularly residential units built prior to 1978 when California Code of Regulations Title 24 energy efficiency requirements went into effect.

AQ 20.13 Reduce water use and wastewater generation in both new and existing housing, commercial and industrial uses. Encourage increased efficiency of water use for agricultural activities.

AQ 20.14 Reduce the amount of water used for landscaping irrigation through implementation of County Ordinance 859 and increase use of nonpotable water.

AQ 20.15 Decrease energy costs associated with treatment of urban runoff water through greater use of bioswales and other biological systems.

AQ 20.18 Encourage the installation of solar panels and other energy efficient improvements and facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.).

AQ 20.19 Facilitate development and sitting of renewable energy facilities and transmission lines in appropriate locations.

AQ 20.21 Provide homeowner education programs on the various voluntary ways in which they may reduce their homes' GHG emissions, e.g., improving home insulation, adding solar energy capabilities, and providing information on energy saving landscaping techniques.

Land Use Element

The following policy from the County's Land Use Element is relevant to the proposed project and supports energy conservation through promoting renewable energy resources.

LU 17.1 Permit and encourage solar energy systems as an accessory use to any residential, commercial, industrial, mining, agricultural or public use.

LU 17.2 Permit and encourage, in an environmentally and fiscally responsible manner, the development of renewable energy resources and related infrastructure, including but not limited to, the development of solar power plants in the County of Riverside.

Multipurpose Open Space Element

The following policies from the County's Multipurpose Open Space Element are relevant to the proposed project and support energy conservation through promoting renewable energy resources.

OS 10.1 Provide for orderly and efficient wind energy development in a manner that maximizes beneficial uses of the wind resource and minimizes detrimental effects to the residents and the environment of the county.

OS 10.2 Continue the County's Wind Implementation Monitoring Program (WIMP) in order to study the evolution of wind energy technology, identify means to solve environmental and community impacts, and provide for an ability to respond with changes in the County's regulatory structure.

OS 11.1 Enforce the State Solar Shade Control Act, which promotes all feasible means of energy conservation and all feasible uses of alternative energy supply sources.

OS 11.2 Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.

OS 11.3 Permit and encourage the use of passive solar devices and other state-of-the-art energy resources.

OS 11.4 Encourage site-planning and building design that maximizes solar energy use/potential in future development applications.

OS 16.2 Specify energy efficient materials and systems, including shade design technologies, for county buildings.

Riverside County Climate Action Plan

The Riverside County Climate Action Plan (CAP) contains reduction measures designed to conserve energy and reduce GHG emissions. Several of these reduction measures reinforce the State regulations described above, including energy efficiency standards for lighting, electricity, and natural gas energy efficiency, increased combined heat and power, and industrial energy efficiency measures. Other reduction measures in the Riverside County CAP would implement policies from the County's General Plan, listed above, related to building energy efficiency, energy conservation, and renewable energy production. The Riverside County CAP also contains measures that support energy efficiency and renewable energy through education, training, and financing programs. Other measures in the Riverside County CAP support substituting traditional gas-powered landscaping equipment with electric equipment, expanding tree planting, and reducing the heat island effect by promoting cool roofs, cool pavements, and parking lot shading.[17]

City of Corona General Plan

The City of Corona General Plan contains policies related to energy conservation in the Infrastructure and Utilities (IU) chapter, Land Use (LU) chapter, and Environmental Resources (ER) chapter. These policies are aimed at ensuring sustainable use of finite energy and water resources for the long-term use of residents and visitors of Corona.[18]

IU-7.1 Require that new development is approved contingent upon its ability to be served with adequate natural gas, energy facilities, and other critical infrastructure.

[17] Riverside County Planning Department. 2019. Riverside County Climate Action Plan. Website: https://planning.rctlma.org/CAP. Accessed on October 27, 2021.

[18] City of Corona. 2019. General Plan 2020 – 2040. Website: https://www.coronaca.gov/government/departments-divisions/community- development/cdbg/general-plan-update. Accessed October 25, 2021.

IU-7.2 Coordinate with energy providers and the City Department of Power and Water to ensure that adequate services and facilities will meet SB 100 guidelines and the demand of existing and future developments, and be compatible with adjacent uses in Corona.

IU-7.3 Encourage energy providers and regulators to evaluate and maintain the safety and efficiency of utility facilities such as gas pipelines, electric lines, and transformers.

IU-7.4 Consider adopting a Community Choice Aggregation Ordinance or work with utility providers to offer renewable energy purchasing at a reduced cost to consumers.

IU-7.5 Continue to require and regulate the undergrounding of electrical poles and wires in accordance with the Corona Municipal Code.

IU-7.6 Continue to expand the supply of rooftop solar energy systems at public facilities and improve energy efficiency in City operations and capital improvements.

IU-7.7 Encourage the reduction of energy consumption through passive solar building orientation as well as the installation of rooftop solar energy systems and energy efficient technologies.

IU-7.8 Continue to inform the community of rebates and other supportive programs for energy efficient building improvements, appliances, and alternative energy systems.

LU-15.7 Strive to incorporate best practices in sustainability (including water conservation, energy conservation, groundwater filtration, and other similar techniques) into the design and development of public and institutional buildings.

ER-12.14 Reduce energy consumed by commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects.

A wide range of other policies relating to water conservation and reducing VMT further support the General Plan's goal of energy conservation. The General Plan policies provide for expanded opportunities for "green building" techniques that have not been traditionally used in the City, such as nontraditional construction materials, the capture and reuse rainwater on-site, gray water recycling plumbing, solar and wind-generated energy, location of heating, ventilation, and air conditioning ducts in the exposed "conditioned" space, and orientation of building elevations or incorporation of architectural design features to maximize heat gain in winter and minimize it in summer.

City of Corona Climate Action Plan

The City of Corona CAP contains measures related to energy conservation, energy efficiency, and renewable energy. Several of these reduction measures reinforce the State regulations described above, including energy efficiency standards for lighting, electricity and natural gas energy efficiency, increased combined heat and power, and industrial energy efficiency measures. The City of Corona CAP contains reduction measures related to energy efficiency requirements and renewable energy

for new residential construction. The City of Corona CAP also contains measures that support energy efficiency and renewable energy through education, training, and financing programs. Other measures in the City of Corona CAP support the expansion of tree planting within the City and reducing the heat island effect by promoting cool roofs, cool pavements, and parking lot shading.[19]

3.6.4 - Methodology

For the purposes of this Draft EIR, the approach to analysis for energy use is based on the 2019 CEQA Guidelines Appendix F (Energy Conservation). CEQA Guidelines Appendix F is focused on energy conservation through the efficient use of energy resources. Estimates of energy consumption associated with the proposed project are based, in part, on information provided by the CalEEMod output included in this Draft EIR as Appendix B. CalEEMod contains energy intensity rates for the various land uses selected (see Section 3.8, Greenhouse Gas Emissions, for detailed information on how energy estimates are determined).

The proposed project is assessed for whether the project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency. To achieve this, the proposed project is assessed for its consistency with State goals and plans related to energy efficiency and renewable energy.

3.6.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, energy impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

3.6.6 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

[19] City of Corona. 2012. Climate Action Plan. Website: https://www.coronaca.gov/home/showdocument?id=1186. Accessed October 25, 2021.

Energy Consumption Impacts

Impact ENER-1: Would the proposed project result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Source(s): Riverside County General Plan, Riverside County Climate Action Plan, City of Corona General Plan, City of Corona Climate Action Plan, Appendix B

Impact Analysis

A significant impact would occur if the project would result in the inefficient, wasteful, or unnecessary use of energy.

Construction

During construction, the proposed project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other sources. It is not anticipated that natural gas would be consumed as part of project construction. Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during site clearing, grading, paving, and building construction. The types of equipment could include gasoline- and diesel-powered construction and transportation equipment, including trucks, bulldozers, frontend loaders, forklifts, and cranes.

Based on California Emissions Estimator Model (CalEEMod) estimations within the modeling output files used to estimate GHG emissions associated with the proposed project, construction-related vehicle trips would result in approximately 13.99 million VMT, and consume an estimated 573,854 gallons of gasoline and diesel combined during the proposed project's construction phases (Appendix B).[20] Additionally, on-site construction equipment would consume an estimated 190,057 gallons of diesel fuel (Appendix B).[21] Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. California Code of Regulations, Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. Additionally, given the cost of fuel, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Other equipment could include construction lighting, field services (office trailers), and electrically driven equipment such as pumps and other tools. Single-wide mobile office trailers, which are commonly used in construction staging areas, generally range in size from 160 square feet to 720 square feet. A typical 720-square-foot office trailer would consume approximately 19,923 kilowatt-

[20] Construction-related vehicle fuel was calculated by dividing the VMT for each phase of construction by the corresponding fuel efficiencies. The EMFAC2014 web database was used to calculate fuel efficiencies based on worker, vendor, and hauling fleet mixes, and VMT was calculated by multiplying trip length by number of trips for each phase of construction. These calculations and assumptions can be found in the Energy appendix.

[21] On-site construction fuel consumption is the sum of diesel fuel usage of each type of equipment during each phase of construction. Diesel fuel usage was calculated for each type of construction equipment by multiplying the number of pieces of equipment by usage hours by horsepower by load factor by number of days and by an estimated fuel usage value of 0.05 gallons of diesel fuel per horsepower-hour. These calculations and assumptions can be found in the Energy appendix.

hour (kWh) during the approximately 3-year construction period (Appendix B).[22] Because of the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the proposed project would not result in wasteful, inefficient, and unnecessary consumption of energy. Therefore, the construction-related impacts related to electricity and fuel consumption would be less than significant.

Operation

Electricity and Natural Gas

Operation of the proposed project would consume energy as part of building operations and transportation activities. Building operations for the proposed project would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, and electronics. Based on CalEEMod energy use estimations, operations (for both the residential and commercial buildings) would consume approximately 3.02 million kWh of electricity and an estimated 12.2 million British thermal unit (MBtu) of natural gas on an annual basis (Appendix B).

The proposed project would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the State's Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 additionally requires new low-rise residential developments to include rooftop solar systems meeting a minimum system capacity consistent with calculations contained in Title 24, Part 6, Subchapter 8. Title 24 standards, widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

The Riverside County CAP and City of Corona CAP reinforce these State standards. The Riverside County General Plan additionally includes energy conservation policies designed to reduce energy demand through improving energy efficiency of homes and businesses, facilitating residential and commercial renewable energy, and promoting recycling and water conservation efforts. Furthermore, Policy 10.2.4 of the City of Corona General Plan encourages the use of water and energy conservation features and materials in the design and construction of all projects, Policy 10.21.2 requires the use and installation of energy conservation features in all new construction projects, Policy 10.21.1 reduces the amount of energy consumed by commercial and residential uses, as recommended by the Southern California Air Quality Management District, and Policy 10.2.3 implements energy and water conservation through various regulatory, educational, and fiscal techniques. The proposed project would be required to comply with stipulations originating from these local general plan and CAP policies; however, when these policies do not stipulate requirements for individual development projects, they focus on actions to be taken by the City or

[22] Electricity use for field services was calculated by multiplying the estimated annual electricity use for a single-wide mobile office trailer by the number of years of construction for the proposed project. These calculations and assumptions can be found in the Energy appendix.

County and would not be applicable to the proposed project. As such, compliance with the applicable local general plan and CAP policies would help avoid building energy consumption that would be considered wasteful, inefficient, or unnecessary. Therefore, the operational impact related to building electricity and natural gas consumption would be less than significant.

Fuel

Operational energy would also be consumed during vehicle trips associated with the proposed project. Fuel consumption would be primarily related to vehicle use by residents, visitors, and employees associated with the proposed project. Based on CalEEMod energy use estimations, project-related vehicle trips in its first fully operational year of 2025 would result in approximately 6.88 million VMT and consume an estimated 229,374 gallons of gasoline and diesel combined, annually (see Appendix B).

Planning Areas 1, 3, and 4 of the proposed project would have direct access to the State Route (SR) 91 Serfas Club Drive interchange. As such, these areas of the project site would be in proximity to a regional route of travel. Planning areas 5 and 6 of the project site are located within 0.2 and 0.3 mile, respectively, from the South Avenida Del Vista at Via Del Rio bus stop, which is within what is typically considered walking distance. Planning Areas 1 and 3 are located within approximately 0.5 mile of the West Coast Metrolink train station. The existing transportation facilities in the area would provide future residents, visitors, and employees associated with the proposed project with access to public transportation, thus further reducing fuel consumption demand. For these reasons, operational-related transportation fuel consumption would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the operational impact related to vehicle fuel consumption would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Consistency with Energy Plans Impacts

Impact ENER-2:	**Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?**

Source(s): Riverside County General Plan, Riverside County Climate Action Plan, City of Corona General Plan, City of Corona Climate Action Plan, Appendix B

Impact Analysis

A significant impact would occur if the proposed project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Construction

As discussed under Impact ENER-1, the proposed project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other sources. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. The proposed project would comply with these regulations. There are no policies at the local level applicable to energy conservation specific to the construction phase. Thus, it is anticipated that construction of the proposed plan would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, construction-related energy efficiency and renewable energy standards consistency impacts would be less than significant.

Operation

California's RPS requires that 33 percent of electricity retail sales be served by renewable energy sources by 2020. The proposed project would be served with gas provided by Southern California Gas (SoCalGas). SoCalGas offers renewable natural gas captured from sources like dairies, wastewater treatment plants and landfills.[23] The proposed project would be served with electricity provided by SCE. In 2019, SCE's power mix included 35 percent eligible renewable (biomass and biowaste, geothermal, eligible hydroelectric, solar, and wind), 33 percent unspecified sources of power, 16 percent natural gas, 8 percent large hydroelectric, and 8 percent nuclear. SCE also offers a Green Rate 50 percent option that sources 68 percent of its power mix from eligible renewable energy sources, and a Green Rate 100 percent option that sources 100 percent of its power mix from eligible renewable energy sources.[24] SCE is on track to meet the California RPS of 33 percent by 2020 mandate.

The State's Title 24 energy efficiency standards establishes mandatory measures for residential buildings, including material conservation and resource efficiency. The proposed project would be required to comply with these mandatory measures. The proposed project would also comply with the California Building Codes Standards requiring proposed low-rise residential buildings to include rooftop solar systems. In addition, per California Building Codes Standards, the proposed building would be required to provide wiring that would allow installation of electric vehicle (EV) charging equipment in any private garages or carports. Policies AQ 20.5 and AQ 20.8 of the Riverside County General Plan support conservation of transportation fuel by requiring all new residential units to install circuits and provide capacity for EV charging stations, and by increasing options for non-vehicular access through urban design principles that promote higher residential densities with easily accessible parks and recreation opportunities nearby. Policies AQ 20.10 and AQ 20.11 of the Riverside County General Plan are aimed at reducing the energy consumption of new developments through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design, and through efficient use of utilities (water, electricity, natural gas) and infrastructure design, as well as increasing energy efficiency through the use of energy efficient

[23] Southern California Gas Company (SoCalGas). Renewable Gas. Website: https://www.socalgas.com/sustainability/renewable-gas. Accessed October 27, 2021.

[24] Southern California Edison (SCE). 2019 Power Content Label. https://www.sce.com/sites/default/files/inline-files/SCE_2019PowerContentLabel.pdf. Accessed October 27, 2021.

mechanical systems and equipment.[25] Planning Areas 1-5 of the proposed project would be required to comply with these County-mandated policies. Policies 15.7 and 12.14 of the City of Corona General Plan require implementation of energy conservation through various regulatory, educational, and fiscal techniques, and the use and installation of energy conservation features in all new construction projects.[26] Planning Area 6 of the proposed project would be required to comply with these City-mandated policies. Other policies that promote energy conservation at the local level are voluntary. Compliance with the aforementioned mandatory measures would ensure that the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

[25] Riverside County Planning Department. 2021. Riverside County General Plan. Website: https://planning.rctlma.org/General-Plan-Zoning/General-Plan.

[26] City of Corona. 2019. General Plan 2020 – 2040. Website: https://www.coronaca.gov/government/departments-divisions/community- development/cdbg/general-plan-update. Accessed October 25, 2021.

3.7 - Geology and Soils

This section addresses geologic properties of the land and soils on the project site. Descriptions and analyses in this section are based, in part, on existing site conditions, project site plans/exhibits, the County of Riverside 2020 General Plan, and the City of Corona 2020-2040 General Plan. The project-specific Geotechnical Investigation and Fault Investigation are included as Appendix E.

3.7.1 - Existing Conditions

This section describes the regional and local setting for geology and soils.

Regional Geology

The project site is located within the Chino Basin, at the southeastern end of the northeastern block of the Los Angeles Basin. The Los Angeles Basin is a large northwest-trending synclinal depression at the northwestern end of the Peninsular Ranges, also called the Lower California province. The southwest portion of Planning Area 6 is located within the Chino Fault segment of the Elsinore/Chino Fault. The northeastern block is southwesterly bounded by the Whittier Fault Zone, located approximately 1.9 to 2.2 miles from the project site. The Cucamonga Fault Zone is located approximately 18.1 to 19.3 miles from the site.

Geologic Structure

The Riverside County Map My County Geographic Information System (GIS) shows that the southwestern portion of Planning Area 6 is located within the Elsinore/Chino Fault Zone; however, as outlined in the project-specific Geotechnical Investigation, the project site is surrounded by existing residential dwellings and, therefore, a Fault Evaluation and Investigation Report within the Fault Rupture Hazard Zone (FRHZ) that contains the project area was prepared on May 31, 2019, and is included as Appendix E.

As shown on the Temescal Canyon Area Plan (TCAP) Figure 13, Steep Slope, the proposed project contains some slopes with 15 to 25 percent slope angles. Figure 14, Slope Instability, shows that the project site has a small area, near Planning Area 1 and 3.1, which has low to locally moderate susceptibility to seismically induced landslides and rockfalls.

The dominant geologic structure near the project site is the Elsinore/Chino Fault, which is located approximately 0.0–0.1 mile to the east of the project site. The Chino reverse-separation fault branches from the Elsinore Fault, south of Corona, and extends northward through the Chino Hills, terminating in the Los Serranos suburb of the City of Chino Hills. Associated Soils Engineering, Inc. (ASE) completed a Geologic Fault Investigation to examine the existence of active fault ruptures that could impact the proposed project. No evidence of active or potentially active faulting was observed on the project site.

Site Geology

The project area previously operated as the Mountain View Golf Course from the 1960s until its closure in 2009. Therefore, the site currently has an abundance of artificial fill to approximate depths of 1 foot throughout the majority of the site.

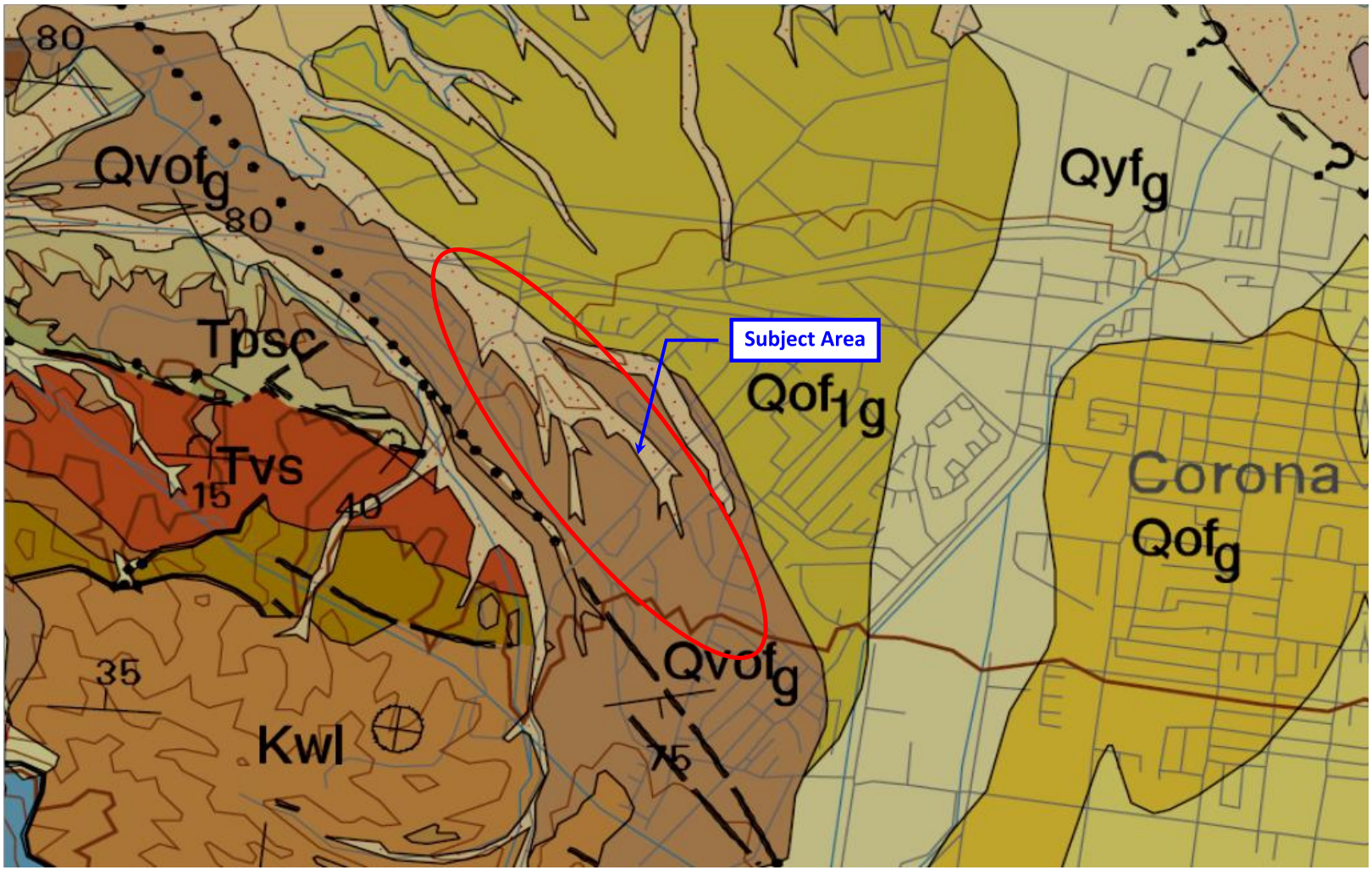
According to the Geotechnical Investigation (Appendix E), native site soils consisting of early Pleistocene-age very old alluvial fan deposits and Holocene to late Pleistocene young alluvial channel deposits (shown in Exhibit 3.7-1) were encountered both at-grade and below the pavement/artificial fill areas.

Additionally, the project area includes Drainage Feature A in the southern portion of TTM 37500, south of Kirkwood Drive; and Drainage Feature B in the northern portion of the project site (TTM 37501) northwest of Paseo Grande and east of Serfas Club Drive. The drainage features consist of erosion gullies in areas of alluvial soils and some fill soils, these areas are subject to remedial removals of up to 10 feet.

Groundwater

As part of the Geotechnical Investigation, borings were conducted on the site to a maximum explored depth of 46 feet, 6 inches, and no groundwater was encountered. According to the State of California Department of Water Resources hydrographs, the depth to the regional groundwater in the vicinity of the site is approximately 94.31 to 111.7 feet below the ground surface based on measurements taken at two different wells close to the site on March 7, 2006, and March 16, 2015, respectively.

Generally, seasonal and long-term fluctuations in the groundwater may occur as a result of variations in subsurface conditions, rainfall, runoff conditions, and other factors. Therefore, variations from the limited observations made in exploratory borings during the time of field investigation cannot be ruled out.



(Partial Excerpt of the Preliminary Digital Geologic Map of the Santa Ana 30' x 60' Quadrangle, Southern California, California Geologic Survey Open-File Report 99-172, Version 2.0, 2004)

LEGEND

Approximate Site Location

Q_{vof}/Q_{ya} Very Old Alluvial Fan Deposits (Qvofg)/Young Alluvial Channel Deposits (Qyaa)

Source: Associated Soils Engineering, Inc. March 2016.

FIRSTCARBON SOLUTIONS™

Exhibit 3.7-1
Native Site Soils

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3.7.2 - Regulatory Framework

Federal Regulation

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program (NEHRP) was established by the United States Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95–124. In establishing the NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic goals remain unchanged:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods and their use.
- Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary NEHRP agencies:

- National Institute of Standards and Technology (NIST) of the Department of Commerce
- National Science Foundation (NSF)
- United States Geological Survey (USGS) of the Department of the Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

In response to the severe fault rupture damage of structures by the 1971 San Fernando earthquake, the State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972. This act required the State Geologist to delineate earthquake fault zones along known active faults that have a relatively high potential for ground rupture. An “active fault” is defined as a fault that has experienced movement in the last 11,000 years (i.e., Holocene Epoch). Faults that are zoned under the Alquist-Priolo Act must meet the strict definition of being “sufficiently active” and “well-defined” for inclusion as an Earthquake Fault Zone. The earthquake fault zones are revised periodically. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in an Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

Under the Act, the California State Geologist identifies areas in the State that are at risk from surface fault rupture. The main purpose of the Act is to prevent construction of buildings used for human occupancy where traces of active faults are evident on Earth's surface. Fault rupture generally occurs within 50 feet of an active fault line and is limited to the immediate area of the fault zone where the fault breaks along the surface. Such a rupture could potentially displace and/or deform the ground surface.

California Building Standards Code (Seismic Hazards Mapping Act of 1990)

The California Building Standards Code (CBC) establishes building requirements for construction and renovation. The CBC is based on the International Code Council's Building and Fire Codes. Included in the CBC are the Electrical Code, Mechanical Code, Plumbing Code, Energy Code, and Fire Code.

In the context of earthquake hazards, the CBC design standards have a primary objective of assuring public safety and a secondary goal of minimizing property damage and maintaining function during and following a seismic event. Recognizing that the risk of severe seismic ground motion varies from place to place, the CBC seismic code provisions vary depending on location—Seismic Zones 0, 1, 2, 3, and 4, with 0 being the least stringent and 4 being the most stringent.

Local Regulations

County of Riverside 2020 General Plan

Code Conformance and Development Regulation

The County of Riverside (County) has zoned fault systems and requires special studies prior to development. These are referred to as County Fault Zones. They generally represent zones that have been identified from groundwater studies. Until solid field evidence is generated to prove or disprove their existence, they should continue to be considered a hazard.

The County Department of Building and Safety provides technical expertise in reviewing and enforcing the County Building and Fire Codes. These codes establish site-specific investigation requirements, construction standards, and inspection procedures to ensure that development does not pose a threat to the health, safety, and welfare of the public. Every 3 years, the County Building and Fire Codes are adapted from the Uniform Building and Fire Codes. They contain baseline minimum standards to guard against unsafe development.

At a minimum, it is imperative to enforce the most recently adopted regulatory codes for new development and significant redevelopment, including the County's Land Use Ordinance and Land Division Ordinance, which support the Building and Fire Codes. Additional guidelines and standards are introduced through the County of Riverside 2020 General Plan Safety Element.

Special development regulations can reinforce and augment existing code standards by raising the level of hazard-conscious project design and mitigation engineering. Examples include additional geologic/geotechnical investigation and additional reinforcement of foundations in areas of potential ground failure. While foundation investigations are required by the County's Building Code, it is important to emphasize expected levels of investigation and protection. Furthermore, some requirements that may only apply to critical facilities, such as detailed seismic analyses, could be

expanded to include other structures and lifelines. Where engineering methods cannot mitigate the hazards, avoidance of the hazard is appropriate, such as where ground rupture along active or potentially active fault traces are identified during project investigation. Special minimum setbacks away from active faults, which are already required for critical facilities, can also be defined for other structures and lifeline.

Below are policies regarding seismic hazards and hazard reduction from the Safety Element of the County of Riverside 2020 General Plan.

S 1.1 Mitigate hazard impacts through adoption and strict enforcement of current building codes, which will be amended as necessary when local deficiencies are identified.

S 1.3 Continue to enforce penalties against grading without permits and ensure the restoration of land thus damaged. Continue to educate the public about the benefits of grading with permits and the penalties for grading without them. If the penalties are later determined to not be effective, explore whether the levying of greater penalties would be more effective in deterring illegal grading and ensuring the proper restoration of damaged lands.

Hazard Reduction

Primary ground damage due to earthquake fault rupture typically results in a relatively small percentage of the total damage in an earthquake, but proximity to a rupturing fault can cause profound damage. It is difficult to reduce this hazard through structural design. The primary mitigative technique is to set back from, and avoid, active faults. The challenge comes in identifying all active faults. Faults throughout Southern California have formed over millions of years. Some of these faults are generally considered inactive under the present geologic conditions; that is, they are unlikely to generate further earthquakes. Other faults are known to be active. Such faults have either generated earthquakes in historical times (within the last 200 years) or show geologic and geomorphic indications of relatively recent movement. Faults that have moved in the relatively recent geological past are generally presumed to be the most likely candidates to generate damaging earthquakes in the lifetimes of residents, buildings, or communities.

The State Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting. Surface rupture is the most easily avoided seismic hazard. The main purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Alquist-Priolo Earthquake Fault Zoning Act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. Alquist-Priolo Earthquake Fault Zones have been designated by the California Division of Mines and Geology for the Elsinore, San Jacinto, and San Andreas Fault Zones in Riverside County.

Within the rapidly growing County, State Alquist-Priolo mapping has not kept pace with development. The County of Riverside has zoned fault systems and required similar special studies prior to development. These are referred to as County Fault Zones in Figure S-2. They generally represent zones that have been identified from groundwater studies and should be viewed as

doubtful. However, until solid field evidence is generated to prove or disprove their existence, they should continue to be considered a hazard.

Within Alquist-Priolo and County Fault Zones, proposed tracts of four or more dwelling units must investigate the potential for and setback from ground rupture hazards. This is typically accomplished by excavation of a trench across the site, determining the location of faulting, and establishing building setbacks.

As there are many active faults in Riverside County, with new fault strands being continually discovered, all proposed structures designed for human occupancy should be required to investigate the potential for and setback from ground rupture. Also of concern are structures not for human occupancy that can cause harm if damaged by an earthquake, such as utility, communications, and transportation lifelines.

The County regulates development projects within earthquake fault zones. Projects include all land divisions and structures for human occupancy. Exempted projects include single-family wood frame and steel-frame dwellings that are one or two stories, are not part of a development of four units or more, and are not located within 50 feet of a fault.

Before a project can be permitted within an Alquist-Priolo Earthquake Fault Zone, County Fault Zone, or within 150 feet of any other potentially active or active fault mapped in published USGS or California Division of Mining and Geology reports, a geologic investigation must demonstrate that proposed buildings would not be constructed across active faults. A site-specific evaluation and written report must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy must be set back 50 feet from the fault, unless adequate evidence, as determined and accepted by the County Engineering Geologist, is presented to support a different setback.

S 2.1 Minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following policies:

a. Require geologic studies or analyses for critical structures, and lifeline, high-occupancy, schools, and high-risk structures, within 0.5 mile of all Quaternary to historic faults shown on the Earthquake Fault Studies Zones map.
b. Require geologic trenching studies within all designated Earthquake Fault Studies Zones, unless adequate evidence, as determined and accepted by the County Engineering Geologist, is presented. The County may require geologic trenching of non-zoned faults for especially critical or vulnerable structures or lifelines.
c. Require that lifelines be designed to resist, without failure, their crossing of a fault, should fault rupture occur.
d. Support efforts by the California Department of Conservation, Division of Mining and Geology to develop geologic and engineering solutions in areas of disseminated ground deformation due to faulting, in those areas where a through-going fault cannot be reliably located.

e. Encourage and support efforts by the geologic research community to define better the locations and risks of County faults. Such efforts could include data sharing and database development with regional entities, other local governments, private organizations, utility agencies or companies, and local universities.

The proposed project would comply with this policy, as the majority of the surrounding site that is on the FRHZ has been built-up, and as such a Fault Evaluation and Investigation Report of the FRHZ has already been done and included the project site. Additionally, the proposed project would incorporate the geotechnical recommendations of the Geotechnical Investigation and Fault Investigation.

Hillside Development and Slope

Natural slopes are one of Riverside County's primary aesthetic resources. Foothill and mountain areas, which are visible throughout the County, create a dramatic backdrop for local communities and help to define the character of the County.

Hillside areas also provide an important location for wildlife habitat, as well as various recreational activities. In addition, there are public safety issues, such as slope failures, landslides, and mudslides that occur naturally or as a result of development, grading, and landscaping.

The severity of these slopes, the ability to provide infrastructure and services (such as transportation, water, sewer, etc.), and safety considerations can drastically alter the use and development potential of individual properties. Development on hillsides within the County, where land use designations permit, would require careful siting, grading, and design in order to minimize exposure to hazards and to maintain and enhance the scenic quality of the County.

The following County of Riverside 2020 General Plan policy addresses hillside development and slopes:

LU 12.1 Apply the following policies to areas where development is allowed and that contain natural slopes, canyons, or other significant elevation changes, regardless of land use designation:

a. Require that hillside development minimize alteration of the natural landforms and natural vegetation.
b. Allow development clustering to retain slopes in natural open space whenever possible.
c. Require that areas with slope be developed in a manner to minimize the hazards from erosion and slope failures.
d. Restrict development on visually significant ridgelines, canyon edges and hilltops through sensitive siting and appropriate landscaping to ensure development is visually unobtrusive.

e. Require hillside adaptive construction techniques, such as post and beam construction, and special foundations for development when the need is identified in a soils and geology report, which has been accepted by the County of Riverside.
f. In areas at risk of flooding, limit grading, cut, and fill to the amount necessary to provide stable areas for structural foundations, street rights-of-way, parking facilities, and other intended uses.

The proposed project complies with this policy, as the proposed project would incorporate geotechnical recommendations from the Geotechnical Investigation and Fault Investigation. Additionally, the slopes on Planning Area 6 would be retained as natural open space.

Additional policies from the County of Riverside 2020 General Plan that address geology and soils and could apply to the proposed project include:

S 2.2 Request geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landslides, or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory structures/buildings, as determined by County officials. Any studies or surveys should be prepared/completed by a State licensed professional.

S 2.6 Request structures in liquefaction and slope instability hazard zones to mitigate the potential of seismically induced differential settlement through appropriate techniques as determined by geotechnical studies, including a 100 percent maximum variation of fill depths as warranted.

S 2.8 Request the following in landslide potential hazard management zones, or when deemed necessary for compliance with the California Environmental Quality Act (CEQA), prior to the issuance of development permits or approval of project designs:

a. Preliminary geotechnical and geologic investigations, including certification regarding the stability of the site against adverse effects of earthquake and subsidence.
b. Evaluations of site stability, including any possible impact on adjacent properties.
c. Consultant reports, investigations, and design recommendations required for grading permits, building permits, and subdivision applications, shall be prepared by State licensed professionals.

S 2.9 Require new development in areas prone to geologic hazards (e.g., landslides, steep topography, slope instability) to be adequately mitigated against these hazards, as feasible. Any development in hillside areas should prepare drainage plans to direct runoff and drainage away from potentially unstable slopes. New developments should incorporate hillside design techniques and features to mitigate and support slope stability.

S 2.10 Identify and request mitigation of on-site slope instability, debris flow, and erosion hazards on lots undergoing substantial improvements, particularly during the entitlement or permitting process.

S 2.11 Request grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, to ensure the adequate demonstration of a project's ability to mitigate the potential impacts of slope and erosion hazards and loss of native vegetation.

S 2.18 Request studies that assess the potential of this hazard on proposed development within "High" and "Very High" wind erosion hazard zones and request appropriate mitigation to wind erosion hazards prior to the issuance of development permits.

S 2.19 Request a disclosure about wind erosion susceptibility on property title for those properties located within "High" and "Very High" wind erosion hazard zones, in connection with entitlement requests.

The proposed project complies with these policies, as the proposed project would incorporate geotechnical recommendations from the Geotechnical Investigation and Fault Investigation.

Temescal Canyon Area Plan

Seismic

A number of seismically related hazards are present in Temescal Canyon. The most significant seismic hazard is the Elsinore Fault, which runs along the canyon floor. Threats from seismic events include ground shaking, fault rupture, liquefaction, and landslides. The use of specialized building techniques, the enforcement of setbacks from faults, and practical avoidance measures would help to mitigate the potentially dangerous circumstances. Figure 12, Seismic Hazards, of the TCAP depicts the location of faults and liquefaction areas within Temescal Canyon. The project area is not within the vicinity of seismic hazards.

Below is the policy from the TCAP related to geology/seismicity.

TCAP 22.1 Protect life and property from seismic-related incidents through adherence to the Seismic Hazards section of the General Plan Safety Element.

The proposed project complies with this policy as it would incorporate recommendations from associated geotechnical studies, which would include design and construction measures that would stabilize the on-site soils and reduce the proposed project's exposure to landslide risk. Additionally, compliance with the Grading Development Standards of the County of Riverside would be assured through County review of grading plans. The proposed project would be required to conform to County design standards for grading and site design, which would result in a safe design of stable slopes for the proposed project.

Riverside County Municipal Code

Ordinance 457- Building Codes & Fee Ordinance

Riverside County Ordinance No. 457 requires the adoption of the 2022 CBC, California Code of Regulations, Title 24, including any errata and supplements, with local amendments to establish minimum requirements for building standards of buildings, structures, and improvements, which are necessary to protect the public health, safety and general welfare.

City of Corona 2020-2040 General Plan

The City of Corona's location and underlying geology make it susceptible to seismic and geologic hazards. The City of Corona (City) is situated between two active fault zones—the Whittier-Elsinore Fault Zone and the San Jacinto Fault Zone. The Elsinore Fault is the dominant active fault and is capable of producing a 6.8 to 7.0 magnitude earthquake. The greatest severity of ground shaking would occur in the northern and central portions of the City and in Temescal Valley. Additionally, liquefication is a concern for the City. Areas at moderate-to-high risk run the entire length of Corona in areas north of State Route (SR) 91. Landslides can also be caused by seismic activity. In the City, landslides have occurred along the northeastern front of the Santa Ana Mountains in the Gavilan Hills, Eagle Valley, and Sierra Del Oro area, in northern Corona, and in other areas.

The City of Corona 2020-2040 General Plan includes the following policies related to geology and solids:

PS-1.2 In areas subject to seismic and geologic hazards, require development proposals to include a geotechnical hazard analysis and specific mitigations to reduce risks to acceptable levels as a condition of approval.

PS-1.3 Enforce development requirements, such as seismic study analyses, project siting, setbacks, and project design features for proposed developments near the Elsinore Fault Zone and other active faults in accordance with the Alquist-Priolo Act.

PS-1.4 Require adherence to the latest California Building Standards Code and associated regulations in the City's Municipal Code; update local codes and development requirements periodically for the latest best practices.

PS-1.7 Require geotechnical analysis for projects proposed in areas subject to corrosive soils. Where found, require appropriate cathodic protections and other best practices to minimize damage to buildings, structures, and infrastructure.

PS-1.8 Limit grading for developments to the minimum needed to preserve natural topography, preserve vegetation, and maintain soil and slope stability. Require appropriate grading plans and slope stability to minimize soil instability.

PS-2.2 Evaluate, on a project-by-project basis, whether new development should be located in a flood hazard zone and identify and require construction methods or other appropriate methods to minimize the risks of damage for projects located in flood zones.

PS-2.3 Require adherence to the California Building Standards Code, Municipal Codes, FEMA flood control guidelines, and Corona Floodplain Management Ordinance for the purposes of avoiding or minimizing the risk of damages to structures, injury, or loss of life.

The proposed project complies with these policies as it would adhere to all applicable building requirements, including the CBC, Municipal Code, FEMA flood control guidelines, and applicable City and County Ordinances. The proposed project would include siting, design, and construction measures that would stabilize the on-site soils and reduce the proposed project's exposure to seismic and flood risk.

3.7.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, geology and soils impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones

a) Be subject to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Liquefaction Potential Zone

a) Be subject to seismic-related ground failure, including liquefaction?

Ground Shaking Zone

a) Be subject to strong seismic ground shaking?

Landslide Risk

a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?

Ground Subsidence

a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?

Other Geologic Hazards

a) Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?

Slopes

a) Change topography or ground surface relief features?
b) Create cut or fill slopes greater than 2:1 or higher than 10 feet?
c) Result in grading that affects or negates subsurface sewage disposal systems?

Soils

a) Result in substantial soil erosion or the loss of topsoil?
b) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Standards Code (2022), creating substantial direct or indirect risks to life or property?
c) Have soils incapable of adequately supporting use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Wind Erosion and Blowsand From Project Either On or Off-site.

a) Be impacted by or result in an increase in wind erosion and blowsand, either on or off-site?

3.7.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary. Descriptions and analyses in this section are based, in part, on existing site conditions, project site plans/exhibits, the County of Riverside 2015 General Plan, the City of Corona 2004 General Plan, and the project-specific Geotechnical Investigation (Appendix E).

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick-service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones

Impact GEO-1:	**Be subject to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**

Source(s): Riverside County 2020 General Plan, including Figure S-2 “Earthquake Fault Study Zones,” City of Corona 2020-2040 General Plan, GIS database, Fault Investigation, and the project-specific Geotechnical Investigation contained in Appendix E.

Impact Analysis

Fault or Ground Rupture

Although the proposed project is in a seismically active area, the majority of the project site, with the exception of the southernmost portion of Planning Area 6 described below, is not located within an Alquist-Priolo Earthquake Fault Zone, within an Earthquake Fault Zone boundary, or within a County designated fault zone. Consistent with the majority of Southern California, in the event of an earthquake strong ground shaking may be expected to occur on the project site. Design and construction would comply with current building codes and standards which would reduce the risk of loss, injury, or death resulting from strong ground shaking from a known fault.

Planning Area 6

The southwestern most portion of Planning Area 6 is identified within an Alquist-Priolo Earthquake Fault Zone and is also referenced within an Earthquake Fault Zone by Riverside County, based on the Riverside County Map My County GIS. Specifically, the active Elsinore/Chino Fault is adjacent to Planning Area 6 of the project site and crosses the site in the southern portion. A Fault Investigation was conducted by ASE in May 2019 that included a geologic evaluation of the project site's surface rupture potential in accordance with the Alquist-Priolo Earthquake Fault Zoning Act.

The Fault Investigation concluded that there are no known faults that would adversely impact construction of the proposed project. During the project site reconnaissance and investigation of the fault trench, it was determined that there were no indicators of earth movement. However, since the fault trench did not extend beyond the south tract boundary that lies within the Chino Earthquake Fault Zone, the existence of active faulting beyond the southern extent of the fault trench cannot be ruled out. Therefore, ASE recommended a restricted use zone for non-critical human occupancy structures only within 50 feet from the southern end of the fault trench in Planning Area 6. Planning Area 6 would be preserved as open space; therefore, the project does not propose any critical human occupancy structures in Planning Area 6. Additionally, the application of the latest building standards related to the siting of structures within the vicinity of an active fault would apply to the proposed project, such as the current CBC and Riverside County's and City of Corona's Building and Fire Codes. The proposed project complies with General Plan policies as it would adhere to all applicable building requirements, including the CBC, Municipal Code, FEMA flood control guidelines, and applicable City and County Ordinances. The proposed project would include siting, design, and construction measures that would stabilize the on-site soils and reduce the proposed project's exposure to seismic and flood risk. Compliance with applicable local, State, and federal regulations would provide adequate attenuation for any ground-shaking hazards associated with a known fault and would reduce impacts associated with development in Planning Area 6 to below a level of significance. Moreover, as previously mentioned, development on Planning Area 6 is not contemplated as part of the proposed project and Planning Area 6 would remain in its current undeveloped condition.

Therefore, impacts would be less than significant in all Planning Areas, and no mitigation would be required.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Liquefaction Potential Zone

Impact GEO-2: Be subject to seismic-related ground failure, including liquefaction?

Source(s): Riverside County 2020 General Plan, including Figure S-3 "Generalized Liquefaction," City of Corona 2020-2040 General Plan, GIS database, and Fault Investigation, and project-specific Geotechnical Investigation contained in Appendix E.

Impact Analysis

The Riverside County Map My County GIS shows that the project site is located in an area with moderate susceptibility to liquefaction. The term "liquefaction" describes a phenomenon in which a saturated, cohesionless soil loses strength and acquires a degree of mobility as a result of strong ground shaking during an earthquake. The factors known to influence liquefaction potential include soil type and depth, grain size, relative density, groundwater level, degree of saturation, and both the intensity and duration of ground shaking.

A Geotechnical Investigation and Grading Plan Review Report was prepared by ASE in November 2018. As part of the Geotechnical Investigation, borings were conducted on the site and no groundwater was encountered. The depth to the regional groundwater in the vicinity of the site is approximately 94.31 to 111.7 feet below the ground surface. In addition, groundwater was not encountered on the project site at any depth up to the maximum explored depth of 46 feet 6 inches below existing grade.

As a result, the Geotechnical Investigation determined that liquefaction potential would be negligible due to the following conditions: groundwater was not encountered to a maximum explored depth, the historic high groundwater level from the groundwater monitoring wells located near the project site is 94.31 feet deep, the as-graded soil condition of the site is anticipated to result in soils exhibiting dense to very dense consistency in the upper 10 feet, and the subsurface soils to the maximum explored depths generally consist of loose to very dense granular soils and firm to hard fine-grained soils. The proposed project complies with General Plan policies as it would adhere to all applicable building requirements, including the CBC, Municipal Code, FEMA flood control guidelines and applicable City and County Ordinances. The proposed project would include siting, design, and construction measures that would stabilize the on-site soils and reduce the proposed project's exposure to seismic and flood risk. Furthermore, the proposed project would be designed and constructed in accordance with the latest applicable seismic safety guidelines, including standard requirements of the CBC and project-specific recommendations contained in the Geotechnical Investigation. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Ground Shaking Zone

Impact GEO-3: Be subject to strong seismic ground shaking?

Source(s): Riverside County 2020 General, including Plan Figure S-4 "Earthquake-Induced Slope Instability Map," and Figures S-13 through S-21 (showing General Ground Shaking Risk), City of Corona 2020-2040 General Plan, and project-specific Geotechnical Investigation, and Fault Investigation contained in Appendix E.

Impact Analysis

As discussed previously, the project site and its residential occupants could experience strong to violent ground shaking due to an earthquake occurring along the Elsinore/Chino Fault and other regional faults located in proximity of the project site. The intensity of ground shaking would vary with the distance and magnitude of the earthquake causing the ground shaking. This would represent a potentially significant impact related to strong seismic ground shaking.

As outlined previously, the Fault Investigation conducted in May 2019 found that there are no faults that are known to exist on-site that would adversely impact construction of the proposed project and there were no indicators of earth movement. However, since the fault trench did not extend beyond the south tract boundary that lies within the Chino Earthquake Fault Zone, the existence of active faulting beyond the southern extent of the fault trench cannot be ruled out. Therefore, ASE recommended a restricted use zone for non-critical human occupancy structures only comprising the area within 50 feet from the southern end of the fault trench in Planning Area 6. The Tentative Tract Map for development of Planning Area 6 as proposed in the NOP illustrates that a proposed internal road and a small portion of two residential lots are located within the area identified by the Fault Investigation. The current project proposal would not develop Planning Area 6, and thus the project does not propose any critical human occupancy structures within the recommended setback. Therefore, impacts would be less than significant, and no mitigation measures are required.

Additionally, design requirements contained in the current CBC, Riverside County Building and Fire Codes, and the City of Corona Building and Fire Codes would be included in the proposed project development plans. The proposed project complies with General Plan policies as it would adhere to all applicable building requirements, including the CBC, Municipal Code, FEMA flood control guidelines, and applicable City and County Ordinances. The proposed project would include siting, design, and construction measures that would stabilize the on-site soils and reduce the proposed project's exposure to seismic and flood risk. Compliance with applicable local, State, and federal regulations would ensure impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Landslide Risk

Impact GEO-4:	**Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?**

Source(s): On-site Inspection, Riverside County 2020 General Plan, including Figure S-5 "Regions Underlain by Steep Slope," City of Corona 2020-2040 General Plan, and Geotechnical Investigation Report contained in Appendix E.

Impact Analysis

According to the Geotechnical Investigation, there is no indication that recent landslides or unstable slope conditions exist on or adjacent to the project site that would otherwise result in an obvious landslide hazard to the proposed development or adjacent properties. Because of the significant relief on or adjacent to the project site, the potential for earthquake-induced landslides in the future is deemed low but cannot be totally ruled out, especially when the site is impacted by prolonged torrential rains. However, subsequent to the recommended grading, as shown on the Tentative Tract Maps, and following the recommendations presented herein and in the attached General Earthwork and Grading Specifications, the potential for earthquake-induced landslides is deemed to be very low.

Lateral spreading, a phenomenon associated with seismically induced soil liquefaction, is a display of lateral displacement of soils due to inertial motion and lack of lateral support during or post liquefaction. It is typically exemplified by the formation of vertical cracks on the surface of liquefied soils and usually takes place on gently sloping ground or level ground with nearby free surface, such as drainage or stream channel. Since there is no presence of "free surface" (unlined slopes, excavations, channels, etc.) on or near by the project site, and since the potential for liquefaction at the project site is low, the potential for the occurrence of seismically induced lateral spreading is unlikely on the project site. Additionally, the Geotechnical Investigation indicates that recent landslides or unstable slope conditions do not exist on or adjacent to the project site that would otherwise result in an obvious landslide hazard to the proposed development or adjacent properties and the landslide potential is very low.

Based on the grading plan, the proposed project includes permanent cut and fill slopes that would be formed across the project site. Pursuant to MM GEO-1, these permanent slopes would require construction of a keyway at the toe of the fill slope. Slopes constructed in this manner are considered unstable and would be inspected and verified by the Geotechnical Consultant for the possible presence of loose sands, weak rock, fractures, adverse bedding, groundwater seepage, or

other forms of weakness that may affect slope stability. The proposed project would also comply with the recommendations and guidelines adopted during hillside grading.

Although the project site would not contain unstable slope conditions, it could still experience landslides due to seismic shaking and/or extreme storm events. To address this, the proposed project would be designed and constructed in accordance with the latest applicable landslide safety guidelines, including the standard requirements of the current Structural Engineers Association of California (SEAOC), the CBC, and/or other local governing agencies' codes or requirements. The project would also include the earthwork and grading specifications included in the Geotechnical Investigation (MM GEO-1). All grading activities would be required to comply with to Riverside County Standards and meet the requirements of the currently adopted California Building Code, Riverside County General Plan, Riverside County Ordinance 457 and all other laws, rules and regulations governing grading in Riverside County. This has the purpose of promoting safety in the event of a landslide, lateral spreading, collapse, or rockfall hazard and minimizing damage. Therefore, impacts related to landslides would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-1 Development constructed on slopes or unstable soil shall be reduced through conformance with the following:

- The permanent slopes shall have a slope ratio not greater than 2:1 (horizontal: vertical).
- Fill slopes constructed in natural ground with a gradient greater than 20 percent shall require construction of a keyway at the toe of the fill slope. Upon fill slope grading, the slope faces shall be overbuilt, cut to grade, and compacted by back-rolling with a loaded sheepsfoot roller at vertical intervals not to exceed 4 feet and track-walked upon completion.
- The outer surface of the slope shall be compacted to at least 90 percent relative compaction.
- To enhance the surficial stability of the fill slopes, slopes shall be planted or otherwise covered as soon as feasible after grading before construction of any structures begins. The use of purely Non-Plastic (NP) artificial earth materials, such as poorly graded sand, on slope faces shall be prohibited.

Slopes constructed in this manner shall be inspected and verified by a Geotechnical Consultant after grading for the possible presence of loose sands, weak rock, fractures, adverse bedding, groundwater seepage, or other forms of weakness that may affect slope stability.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Ground Subsidence

Impact GEO-5:	**Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?**

Source(s): Riverside County 2020 General Plan, including the Figure S-7 "Documented Subsidence Areas Map," City of Corona 2020-2040 General Plan, and project-specific Geotechnical Investigation, and Fault Investigation contained in Appendix E.

Impact Analysis

Subsidence refers to the sudden sinking or gradual downward settling and compaction of soil and other surface material with little or no horizontal motion. It may be caused by a variety of human and natural activities, including earthquakes. The Geotechnical Investigation determined that the project site could experience uneven subsidence resulting in distress to project structure foundations, a potentially significant impact. As such, the proposed project would implement the recommendations included in the Geotechnical Investigation as MM GEO-2, which would ensure site remedial grading is conducted to prevent subsidence impacts. As such, impacts would be less than significant.

Seismic Design Considerations

The site, as with all of Southern California, is within a zone of seismic activity. Strong ground motion from an earthquake generated along active faults should therefore be anticipated at this site. However, the Fault Investigation concluded that there are no faults that are known to exist that would adversely impact construction of the proposed project. The Fault Investigation recommended a restricted use zone for non-critical human occupancy structures only comprising the area within 50 feet from the southern end of the fault trench in Planning Area 6. Consistent with the NOP, the Tentative Tract Map for Planning Area 6 illustrates that a proposed internal road and a small portion of two residential lots are located within the area identified by the Fault Investigation; therefore, the project does not propose any critical human occupancy structures within the recommended setback.

The proposed project complies with General Plan policies as it would adhere to all applicable building requirements, including the CBC, Municipal Code, FEMA flood control guidelines, and applicable City and County Ordinances. The proposed project would include siting, design, and construction measures that would stabilize the on-site soils and reduce the proposed project's exposure to seismic and flood risk. Additionally, the proposed project would be built in conformance with applicable CBC and Uniform Building Code standards, which would reduce potential impacts from ground subsidence and unstable soils. Furthermore, the proposed project would include recommendations included in the Geotechnical Investigation that would reduce the risk of subsidence. Moreover, development of Planning Area 6 is not included in the current project, further reducing already less than significant impacts. Therefore, impacts related to subsidence would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-2 On-site soils shall be prepared in conformance with the following:

- On-site soils within the footprint of the single-family residential structures shall be overexcavated and removed uniformly to a minimum depth of 3 feet below existing grade or finish grade, whichever is lower, in areas exposing older alluvium (Map Symbol Qoal).
- On-site soils within the footprint of the single-family residential structures shall overexcavated and removed uniformly up to 10 feet below existing grades in areas of younger alluvium (Map Symbol Qal–i.e., canyon bottoms), and replaced with properly compacted fill such that the building foundations and slabs are supported on a re-engineered, compacted fill layer. The excavation bottoms shall be near uniform.
- The overexcavation shall extend laterally to a minimum distance equal to the depth of removal beyond the perimeters of the single-family residential structures, wherever possible. The project shall adhere to the requirements on the quality, corrosivity and expansion potential of fill soils identified in Sections 6.2.9 and 6.2.10 of the 2018 Associated Soils Engineering, Inc. (ASE) Geotechnical Investigation Report.
- Soils exposed at excavation bottoms to a depth of 1 foot shall be scarified, reworked and recompacted to exhibit a minimum 90 percent relative compaction with a minimum moisture content of 2 percentage points above the optimum moisture content prior to receiving fill placement. The exposed excavation bottoms shall be observed, tested, and approved by a Geotechnical Consultant prior to placing compacted fill. In case of the presence of localized loose soils, the overexcavation shall be deepened accordingly to delete the loose soil condition. However, this deepened overexcavation shall be terminated when the exposed native, undisturbed soils exhibit a natural relative compaction greater than 85 percent, subject to the testing and inspection by the representative from the Geotechnical Consultant.
- A Geotechnical Consultant shall be provided with appropriate foundation details and staking during grading to verify that depths and/or locations of the overexcavation are adequate. For areas on-site that grading stipulated in both Sections 6.2.1 and 6.2.3 of the 2018 ASE Geotechnical Investigation Report apply, the more stringent grading criteria between the two sections shall govern.
- The depth of overexcavation shall be reviewed by a Geotechnical Consultant during the actual construction. Any subsurface obstruction, buried structural elements, and unsuitable material encountered during grading, shall be immediately brought to the attention of the Geotechnical Consultant for proper exposure, removal, and processing.

The additional site grading recommendations and requirements in the 2018 ASE Geotechnical Investigation Report shall be implemented.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Other Geologic Hazards

Impact GEO-6: Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?

Source(s): On-site Inspection, Project Application Materials, Riverside County 2020 General Plan, City of Corona 2020-2040 General Plan, GIS database, and project-specific Geotechnical Investigation, and Fault Investigation.

Impact Analysis

According to the Geotechnical Investigation, hazard from a tsunami is considered very low due to the elevation of the project site and absence of nearby waterfront. Seiches are rhythmic movements of water within a lake or other enclosed or semi-enclosed body of water, generally caused by earthquakes. Since no lakes or other bodies of water lie on or near the project site, the hazard from seiches is not present at the site.

As described under Impact GEO-4a, the proposed project includes permanent cut and fill slopes that will be formed across the project site, which are generally considered unstable. However, these slopes would be inspected and verified by the Geotechnical Consultant for the possible presence of loose sands, weak rock, fractures, adverse bedding, groundwater seepage or other forms of weakness that may affect slope stability (MM GEO-1). All grading activities would be required to comply with to Riverside County Standards and meet the requirements of the currently adopted California Building Code, Riverside County General Plan, Riverside County Ordinance 457 and all other laws, rules and regulations governing grading in Riverside County. The proposed project would also comply the recommendations and guidelines adopted during hillside grading; therefore, the project site would not contain unstable slope conditions and would not be susceptible to mudflows. In addition, the project is not located on or near an active or dormant volcano. Impacts related to geologic hazards such as a seiche, mudflow, or volcano hazard would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM GEO-1.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Slopes

Impact GEO 7a: Change topography or ground surface relief features?

Source(s): Riv. Co. 800-Scale Slope Maps, Project Application Materials, Slope Stability Report, Riverside County 2020 General Plan, City of Corona 2020-2040 General Plan, GIS database, and project-specific Geotechnical Investigation, and Fault Investigation

Impact Analysis

According to the Geotechnical Investigation, the proposed project includes permanent cut and fill slopes that will be formed across the project site. These permanent slopes would require construction of a keyway at the toe of the fill slope. Slopes constructed in this manner are considered unstable and would be inspected and verified by the Geotechnical Consultant for the possible presence of loose sands, weak rock, fractures, adverse bedding, groundwater seepage, or other forms of weakness that may affect slope stability (MM GEO-1). The proposed project would also comply the recommendations and guidelines adopted during hillside grading; therefore, the project site would not contain unstable slope conditions. Furthermore, the proposed project would include all recommendations included in the Geotechnical Investigation related to permanent cut and fill slopes which would ensure permanent slopes would not have a slope ratio greater than 2:1 (horizontal: vertical). As a result, the Geotechnical Investigation determined slopes at this ratio would be stable. Although the proposed project would result in a change in topography due to proposed grading, all grading and construction would include recommendations contained in the Geotechnical Investigation. Additionally, all grading activities would be required to comply with to Riverside County Standards and meet the requirements of the currently adopted California Building Code, Riverside County General Plan, Riverside County Ordinance 457 and all other laws, rules and regulations governing grading in Riverside County. Therefore, impacts related to topography or ground surface relief changes would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM GEO-1.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Slopes

Impact GEO-7b: Create cut or fill slopes greater than 2:1 or higher than 10 feet?

Source(s): Riv. Co. 800-Scale Slope Maps, Project Application Materials, Slope Stability Report Impact Analysis, Riverside County 2020 General Plan, City of Corona 2020-2040 General Plan, GIS database, and project-specific Geotechnical Investigation, and Fault Investigation

As discussed above, during construction the project could excavate site soils 4 feet or deeper which would be temporarily sloped in accordance with California Occupational Health and Safety Administration (Cal/OSHA) requirements. The proposed project would include permanent cut and fill slopes at operation. These slopes would be constructed at proportions no greater than 2:1

(horizontal: vertical) and according to the specifications contained in the Geotechnical Investigation (MM GEO-1). Additionally, all grading activities would be required to comply with to Riverside County Standards and meet the requirements of the currently adopted California Building Code, Riverside County General Plan, Riverside County Ordinance 457 and all other laws, rules and regulations governing grading in Riverside County. As a result, the proposed project would not create cut or fill slopes greater than 2:1 or higher than 10 feet. Therefore, impacts related to slopes would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM GEO-1.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Impact GEO-7c: Result in grading that affects or negates subsurface sewage disposal systems?

Source(s): Riv. Co. 800-Scale Slope Maps, Project Application Materials, Slope Stability Report, Riverside County 2020 General Plan, City of Corona 2020-2040 General Plan, GIS database, and project-specific Geotechnical Investigation, and Fault Investigation.

Impact Analysis

The proposed project would connect to existing sewer lines contained within existing roadways. Project grading as part of construction would take place within the project site boundaries and would not impact subsurface sewage disposal systems currently in use. Any sewage disposal systems leftover on the project site from the previous golf course use would be removed and, as a result, the proposed project would not affect subsurface sewage disposal systems. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Soils

Impact GEO-8a: Result in substantial soil erosion or the loss of topsoil?

Source(s): USDA Soil Conservation Service Soil Surveys, Project Application Materials, On-site Inspection, Soils Report, Riverside County 2020 General Plan, City of Corona 2020-2040 General Plan, GIS database, and project-specific Geotechnical Investigation, and Fault Investigation.

Impact Analysis

Soil Erosion

Construction

Pursuant to the requirements of the California State Water Resources Control Board (State Water Board), the project applicant is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities, including proposed grading. The NPDES permit is required for all projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least 1 acre of total land area. The County of Riverside Municipal Separate Storm Sewer System (MS4) NPDES permit requires the project applicant to prepare and submit to the County and City for approval a project-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would identify a combination of erosion control and sediment control measures (i.e., Best Management Practices [BMPs]) to reduce or eliminate sediment discharge to surface water from stormwater and non-stormwater discharges during construction. In addition, proposed construction activities would be required to comply with South Coast Air Quality Management District (SCAQMD) Rule 403, which would reduce the amount of particulate matter in the air and minimize the potential for wind erosion. Rule 403 requires that certain construction practices be followed that limit dust and dirt from leaving the construction site. For example, no dust is allowed to be visible in the air beyond the property line of the construction site, and no dirt is allowed to be tracked out of the project site by more than 25 feet. With mandatory compliance with the requirements noted in the proposed project's SWPPP, as well as mandatory compliance with applicable regulatory requirements including but not limited to SCAQMD Rule 403, the potential for water and/or wind erosion impacts during project construction would be less than significant and mitigation is not required.

Operation

The implementation of the proposed project would be consistent with existing drainage patterns of the watershed. Each of the Planning Areas would contain different BMPs for stormwater management for water capturing, cleansing, and discharging into the stormwater system. All development containing water quality systems must comply with NPDES requirements in effect at the time of approval. Planning Areas 1-5 would include the following BMPs, which would serve as stormwater storage and treatment of on-site flows, as well as prevent a substantial increase in water erosion and siltation:

- Planning Area 1: One bioretention basin and one self-retaining area.
- Planning Area 2: One bioretention basin and one modular wetland system.
- Planning Area 3: Four bioretention basins, one modular wetland system, and one self-treating area.
- Planning Area 4: Four bioretention basins and one self-treating area.

- Planning Area 5: One modular wetland system/underground storage and one bioretention basin.
- Planning Area 6: Two bioretention basins.

The improvements above were developed as part of the required project-specific Water Quality Management Plans (WQMPs) and Hydrological Analysis, included in Appendix G. The WQMPs are required to identify an effective combination of erosion control and sediment control measures (i.e., BMPs) to reduce or eliminate sediment discharge to surface water from stormwater and non-stormwater discharges. The WQMP also requires post-construction maintenance and operational measures to ensure ongoing erosion protection. Compliance with the WQMP would be required as conditions of project approval as would the long-term maintenance of water quality features. Therefore, implementation of the proposed project would not result in substantial erosion or loss of topsoil during long-term operation.

The proposed detention basin would drain through a storm drain system that would direct the stormwater runoff to controlled discharge points located within the project site. The storm drainpipes and structures would be designed to reduce 100-year storm flows to less than existing conditions. Compliance with applicable regulations and geotechnical recommendations as detailed in the Geotechnical Investigation would reduce erosion impacts to less than significant levels with mitigation incorporated (MM GEO-3).

Water Erosion

As described in detail in Section 3.9, Hydrology and Water Quality, the drainage plan for the proposed project would include two on-site development systems. The first would be a collection and conveyance drainage system (i.e., detention basin) and the other would be an existing open space natural flow drainage system developed from an existing pond. The drainage system is designed to utilize the upstream natural drainage course in Planning Area 1 and the existing pond within Planning Area 5 to provide adequate erosion control and 100-year-flood protection. In order to limit the discharge at the SR-91 culvert, a proposed detention basin in Planning Area 3 would mitigate the increase runoff from the proposed project. The detention basins would serve to capture runoff during high stormwater flow events. The development of the proposed project would reduce the peak flow stormwater runoff to less than existing conditions for all storm events modeled. Thus, the proposed project will have a less than significant impact regarding an increase in water erosion either on-site or off-site.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-3 On-site soils shall be prepared in conformance with the following:

- Any soil re-used or imported as fill for the completion of subgrade preparation shall consist of predominantly “Very Low” to “Low” expansive, granular material exhibiting an Expansion Indices (EI) not greater than 35, and shall exhibit a

relatively uniform gradation, free of debris, particles greater than 4 inches in maximum dimension, organic matter, or other deleterious materials. For the excavated on-site soils to be blended such that the resultant EI is not exceeding 35, a general rule-of-thumb would be blending 1 part of excavated site soils with 2 parts of imported "Very Low" (EI ≤ 20) expansive soils.

- Unless otherwise approved by a Geotechnical Consultant, the fill materials shall also comply with the soil corrosivity criteria tabulated in the 2018 Associated Soils Engineering, Inc. (ASE) Geotechnical Investigation Report. All blended material and potential import material must be approved by a Geotechnical Consultant or their representative, prior to its use and arrival on-site, and shall be subject to continuing verification testing during site grading.
- Unless indicated otherwise, existing site soils having EI ≥ 35 shall be considered suitable for reuse as fill in depths greater than 2 feet from finish subgrade during site grading within the footprint of the buildings and flatworks. Any fill placed within 2 feet from finish subgrade shall exhibit a tested EI ≤ 35. This shall be achieved by using approved "Very Low" to "Low" site soils, imported "Very Low" to "Low" expansive soils, or blended site soils and imported soils with a tested "Very Low" expansive soils, as per discussed previously in Section 6.2.3 of the 2018 ASE Geotechnical Investigation Report. There shall be no depth restriction to the reuse of site soils for fill in nonstructural or landscape areas and backfilling of utility trenches.
- All fill soils shall also be (1) free of debris, particles greater than 4 inches in maximum dimension, organic matter, or other deleterious materials, (2) not environmentally contaminated, and (3) adequately moisture conditioned to permit achieving the required compaction. No nesting of large particles (2 to 4-inch size) shall be permitted during backfilling operations.
- On-site soils and import materials approved for use as fill shall be placed in horizontal lifts not exceeding 8 inches in loose thickness, moisture conditioned to a minimum of 2 percentage points above optimum moisture content for "Low" expansive import or blended material, as well as for untreated site clayey/silty soils, and to a minimum of 1 percentage point above optimum moisture content for "Very Low" expansive import material, and compacted to a minimum 90 percent relative compaction, per American Society of Testing and Materials (ASTM) D1557-12 Test Method, unless otherwise stated.

The additional imported soils and backfilling recommendations and requirements in the 2018 ASE Geotechnical Investigation Report shall be implemented.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Soils

Impact GEO-8b: Be located on expansive soil, as defined in Section 11803.5.3of the California Building Standards Code (2022), creating substantial direct or indirect risks to life or property?

Source(s): USDA Soil Conservation Service Soil Surveys, Project Application Materials, On-site Inspection, Soils Report, Riverside County 2020 General Plan, City of Corona 2020-2040 General Plan, GIS database, and project-specific Geotechnical Investigation, and Fault Investigation.

Impact Analysis

As part of the Geotechnical Investigation, soil samples were taken. Laboratory test results from near surface soil samples indicated a "Very Low" to "Medium" soil expansion potential. The Geotechnical Investigation includes foundation and slab design considerations, for constructing on soils with "Medium" soil expansion potential, such as structure reinforcements and deeper foundations, which the proposed project would incorporate. In addition, as part of the proposed project, soil from the project site, including soils with "Medium" expansion potential would be excavated and replaced with soils with a "Very Low" to "Low" expansion potential.

The proposed project complies with General Plan policies as it would adhere to all applicable building requirements, including the CBC, Municipal Code, FEMA flood control guidelines, and applicable City and County Ordinances. The proposed project would include siting, design, and construction measures that would stabilize the on-site soils and reduce the proposed project's exposure to seismic and flood risk. As such, with compliance of applicable building regulations such as the CBC, County and City regulations, and geotechnical recommendations as detailed in the Geotechnical Investigation (MM GEO-4), impacts would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-4 In view of minimizing the potential adverse effects associated with the project being located on expansive soils, preparation of on-site soils shall be reduced through conformance with the applicable recommendations from the 2018 Associated Soils Engineering, Inc. (ASE) Geotechnical Investigation Report. Laboratory test results on near surface soil samples indicates a "Very Low" to "Medium" soil expansion potential (i.e., Expansion Indices [EI] = 10 to 55 per American Society of Testing and Materials [ASTM] D4829-11 Test Method) as defined in the current California Building Standards Code (CBC). While foundation and slab design recommendations presented in this Soils Report have taken into account the likely presence of "Medium" expansive soils on-site, the soil expansion potential shall be re-evaluated through additional testing during or after rough grading operations to verify the design adequacy of foundation or slab-on-grade against the re-tested soil expansion potential as heterogeneity within soil mass is not uncommon. Lightly loaded

structural elements such as shallow foundations and slabs could undergo movements that might potentially result in distress due to the "Medium" expansion potential of site clayey/silty soils. Design provisions presented in Sections 6.2 and 6.3 of the 2018 ASE Geotechnical Investigation Report, such as the use of "Very Low" to "Low" expansive fill beneath lightly loaded structural elements, adequate reinforcements, deeper foundations, or other measures, may help alleviate the effects of soils expansion.

The additional expansive soils recommendations and requirements in the 2018 ASE Geotechnical Investigation Report shall be implemented.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Soils

Impact GEO-8c:	**Have soils incapable of adequately supporting use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

Source(s): USDA Soil Conservation Service Soil Surveys, Project Application Materials, On-site Inspection, Soils Report, Riverside County 2020 General Plan, City of Corona 2020-2040 General Plan, GIS database, and project-specific Geotechnical Investigation, and Fault Investigation.

Impact Analysis

There are five septic tanks on the project site as outlined in the Phase I Environmental Site Assessment (Phase I ESA) (Appendix F). The septic tanks are located in the proposed project's Planning Areas 1, 3, and 5. As part of the proposed project, the five septic tanks would be removed, and the excavation would be appropriately backfilled. Additionally, the proposed project does not propose the use of any septic tanks or alternative wastewater disposal systems. The proposed project would connect to the existing sewer system. Therefore, the proposed project would have no impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

No impact.

Wind Erosion and Blowsand from Project Either On or Off-site

Impact GEO-9:	**Be impacted by or result in an increase in wind erosion and blowsand, either on or off-site?**

Source(s): Riverside County 2020 General Plan, including Figure S-8 "Wind Erosion Susceptibility Map," Ord. No. 460, Article XV and Ord. No. 484, Project Application Materials, City of Corona 2020-2040 General Plan, GIS database.

Impact Analysis

Wind Erosion

Per the County of Riverside 2020 General Plan Safety Element Figure S-8: Wind Erosion, the project area has a moderate wind erodibility rating. The fill and native soils are subject to erosion by wind and water. The potential for erosion is greatest during grading and construction of the project site. Project development would require grading operations throughout the project site during the construction period. As previously discussed, the proposed project would be required to comply with SCAQMD Rule 403 that requires implementation of best available dust control measures during construction activities that generate fugitive dust, such as earthmoving, grading, and construction equipment travel on unpaved roads. With mandatory compliance to applicable regulatory requirements, the potential for the proposed project to result in an increase in wind erosion and blowsand, either on- or off-site, would be less than significant and mitigation is not required.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.8 - Greenhouse Gas Emissions

This section describes the existing greenhouse gas (GHG) emissions and potential effects from project implementation. Descriptions and analyses in this section are based in part on information contained in the emission estimates and model outputs, included in this Draft Environmental Impact Report (Draft EIR) as Appendix B.

3.8.1 - Environmental Setting

Climate Change

Climate change is a change in the average weather of the Earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature changes from 1990 to 2100, given six scenarios, could range from 1.1°C (degrees Celsius) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios.[1] The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

An individual project cannot generate enough GHG emissions to effect a discernible change in global climate. However, the proposed project participates in the potential for global climate change by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on global climate change.

Greenhouse Gases

The GHGs defined by Assembly Bill (AB) 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. A seventh GHG, nitrogen trifluoride (NF_3), was added to Health and Safety Code Section 38505(g)(7) as a GHG of concern.

For the purposes of this analysis, emissions of CO_2, CH_4, and nitrous oxide (N_2O) were evaluated because these gases are the primary contributors to global climate change from development projects. Although other substances such as fluorinated gases also contribute to global climate change, sources of fluorinated gases are not well-defined, and no accepted emissions factors or methodology exist to accurately calculate these gases.

[1] Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller [eds.]). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Website: www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html. Accessed October 27, 2021.

As shown on Table 3.8-1, individual GHG compounds have varying global warming potential and atmospheric lifetimes. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. To describe how much global warming a given type and amount of GHG may cause, the CO_2 equivalent (CO_2e) is used. The calculation of the CO_2 equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, CO_2. For example, CH_4's warming potential of 25 indicates that CH_4 has 25 times greater warming effect than CO_2 on a molecule-per-molecule basis. A CO_2 equivalent is the mass emissions of an individual GHG multiplied by its global warming potential.

Table 3.8-1: Global Warming Potentials and Atmospheric Lifetime of Select GHGs

Category	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50 to 200	1
Methane (CH_4)	12±3	25
Nitrous Oxide	120	298
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane	50,000	6,500
PFC: Hexafluoroethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Sources:
Intergovernmental Panel on Climate Change (IPCC). Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller [eds.]). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, Website: www.ipcc.ch /publications_and_data/ar4/wg1/en/contents.html. Accessed August 20, 2021.

Intergovernmental Panel on Climate Change (IPCC). 2014. Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Core Writing Team, Pachauri, R.K. and Reisinger, A. [eds.]). IPCC, Geneva, Switzerland. Website: www.ipcc.ch/publications_ and_data/ar4/syr/en/contents.html. Accessed August 20, 2021.

Emissions Inventories

United States GHG Inventory

An emissions inventory is a database that lists, by source, the amount of air pollutants discharged into the atmosphere of a geographic area during a given time period. Emissions worldwide were approximately 47,515 million metric tons (MMT) of cCO_2e in 2018. As shown in Figure 3.8-1, China was the largest GHG emitter with 12.4 billion metric tons of CO_2e, and the United States was the second largest GHG emitter with over 6 billion metric tons of CO_2e.[2]

[2] World Resources Institute (WRI). 2020. This Interactive Chart Shows Changes in the World's Top 10 Emitters. Website: https://www.wri.org/insights/interactive-chart-shows-changes-worlds-top-10-emitters#fn:1. Accessed October 27, 2021.

Since 1990, U.S. emissions have increased at an average annual rate of 0.3 percent. Transportation emissions also increased because of an increase in vehicle miles traveled. Within the U.S., fossil fuel combustion accounted for 92.4 percent of CO_2 emissions in 2019. Transportation was the largest emitter of CO_2 in 2019, accounting for 28.6 percent of emissions, followed by electric power generation, accounting for 25.1 percent.[3]

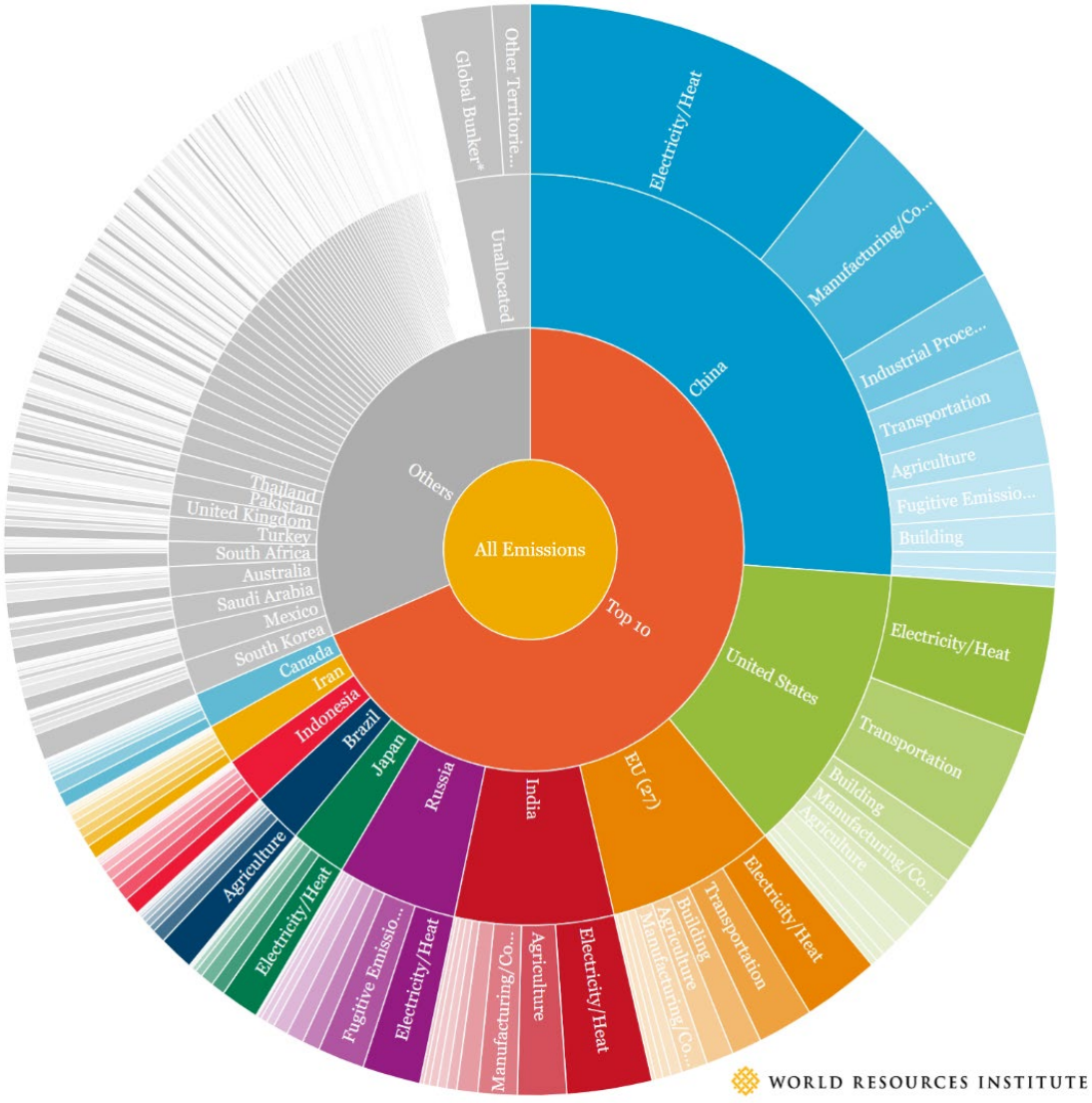

Figure 3.8-1: Greenhouse Gas Emissions Trends

[3] United States Environmental Protection Agency (EPA). 2016. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. Website: https://www.epa.gov/sites/default/files/2021-04/documents/us-ghg-inventory-2021-main-text.pdf?VersionId=wEy8wQuGrWS8Ef_hSLXHy1kYwKs4.ZaU. Accessed October 27, 2021.

California GHG Inventory

As the second largest emitter of GHG emissions in the United States, California contributes a large quantity (418.2 MMT CO_2e in 2019) of GHG emissions to the atmosphere.[4] Anthropogenic CO_2 are largely byproducts of fossil fuel combustion and are attributable to transportation, industry/ manufacturing, electricity generation, natural gas consumption, and agriculture processes. As shown in Figure 3.8-2, in California, the transportation sector is the largest emitter at approximately 40 percent of GHG emissions, followed by industrial at approximately 21 percent of GHG emissions.

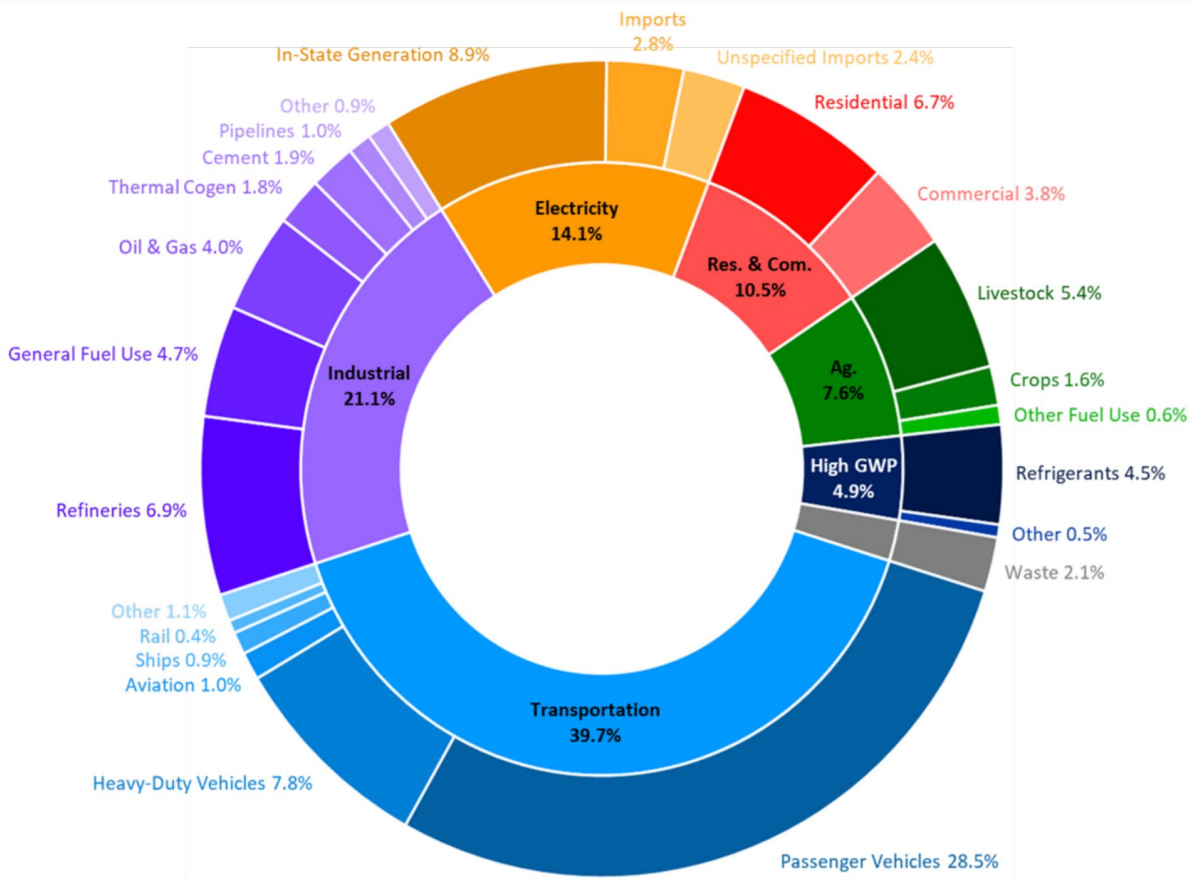

Figure 3.8-2: California Greenhouse Gas Emissions by Sector

Source: California Air Resources Board (ARB). 2021. California Greenhouse Inventory—Graphs. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf. Accessed October 27, 2021.

Environmental Effects of Climate Change in California

The California Environmental Protection Agency (Cal/EPA) published a report titled "Scenarios of Climate Change in California: An Overview" (Climate Scenarios report) in February 2006, that while not adequate for a California Environmental Quality Act (CEQA) project-specific or cumulative analysis, is generally instructive about the Statewide impacts of global warming.

[4] California Air Resources Board (ARB). 2021. Current California GHG Emission Inventory Data, 2000-2019 Trends Figure Data. Website: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed October 27, 2021.

The Climate Scenarios report uses a range of emissions scenarios developed by the IPCC to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the twenty-first century: lower warming range (3.0–5.5°F [degrees Fahrenheit]); medium warming range (5.5–8.0°F); and higher warming range (8.0–10.5°F). The Climate Scenarios report then presents an analysis of future climate in California under each warming range, that while uncertain, present a picture of the impacts of global climate change trends in California.

In addition, most recently on August 5, 2009, the State's Natural Resources Agency released a public review draft of its "California Climate Adaptation Strategy" report that details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts and precipitation changes. This report responds to the Governor's Executive Order S-13-2008 that called on State agencies to develop California's strategy to identify and prepare for expected climate impacts.

According to the reports, substantial temperature increases arising from increased GHG emissions potentially could result in a variety of impacts to the people, economy, and environment of California associated with a projected increase in extreme conditions, with the severity of the impacts depending upon actual future emissions of GHGs and associated warming.

In California, climate change may result in consequences such as the following:[5,6]

- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of Southern California are estimated to increase by approximately 30 percent toward the end of the twenty-first century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more Northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.

[5] California Climate Change Center. 2006. Scenarios of Climate Change in California: An Overview.
[6] Moser, Susie, Guido Franco, Sarah Pittiglio, Wendy Chou, Dan Cayan. 2009. The Future Is Now: An Update on Climate Change Science Impacts and Response Options for California. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2008-071.

- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about 7 inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Consequences of Climate Change in Project Area

Figure 3.8-3 displays a chart of measured historical and projected annual average temperatures in the County of Riverside. As shown in the figure, temperatures are expected to rise in the low and high GHG emissions scenarios. The results indicate that temperatures are predicted to increase by 4.1°F (degrees Fahrenheit) under the low emission scenario and 7.2°F under the high emissions scenario.[7]

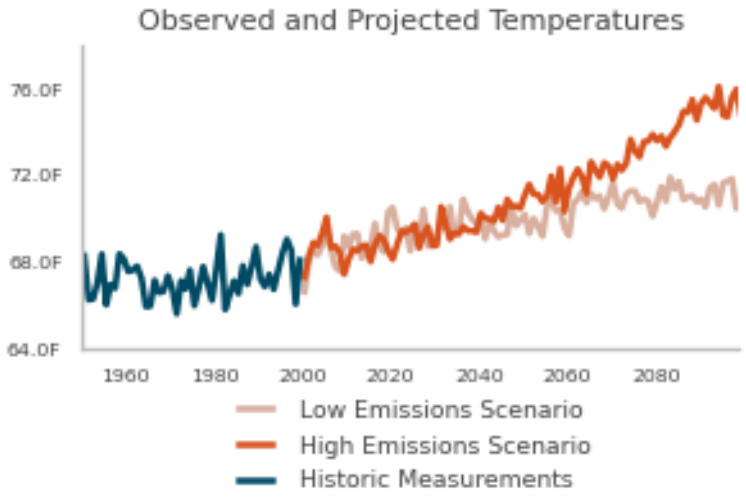

Figure 3.8-3: Observed and Projected Temperatures for Climate Change in the County of Riverside
Source: Cal-Adapt 2018

[7] Cal-adapt. Climate Tools. Website: https://cal-adapt.org/tools/. Accessed October 27, 2021.

Human Health Effects of GHG Emissions

GHG emissions from development projects would not result in concentrations that would directly impact public health. However, the cumulative effects of GHG emissions on climate change have the potential to cause adverse effects to human health. [8]

The United States Global Change Research Program, in its report, "Global Climate Change Impacts in the U.S.",[9] has analyzed the degree to which impacts of climate change on human health are expected to affect the United States.

Potential effects of climate change on public health include:

- **Direct Temperature Effects:** Climate change may directly affect human health through increases in average temperatures, which are predicted to increase the incidence of heat waves and hot extremes.
- **Extreme Events:** Climate change may affect the frequency and severity of extreme weather events, such as hurricanes and extreme heat and floods, which can be destructive to human health and well-being.
- **Climate-Sensitive Diseases:** Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects, such as malaria, dengue fever, yellow fever, and encephalitis.
- **Air Quality:** Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog (ground level ozone) events and particulate air pollution.[10]

Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), CO_2, CH_4, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen.

3.8.2 - Regulatory Framework

International Regulations

International organizations such as the ones discussed below have made substantial efforts to reduce GHGs. Preventing human-induced climate change will require the participation of all nations in solutions to address the issue.

[8] Centers for Disease Control and Prevention (CDC). CDC's Climate and Health Program - an Investment in our Future. Website: https://www.cdc.gov/climateandhealth/factsheet.htm. Accessed October 27, 2021.
[9] U.S. Global Change Research Program. Global Climate Change Impacts in the United States. Website: https://www.globalchange.gov/browse/reports/global-climate-change-impacts-united-states. Accessed October 27, 2021.
[10] Ibid.

Kyoto Protocol

In 1988, the United Nations established the IPCC to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Plan currently consists of more than 50 voluntary programs for member nations to adopt.

The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Some have estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced an estimated 5 percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments. In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Kyoto.

Paris Climate Change Agreement

Parties to the UNFCCC reached a landmark agreement on December 12 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a 4-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties, or "COP 21." Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every 5 years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;

- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC.[11]

On June 1, 2017, President Trump announced the decision for the United States to withdraw from the Paris Agreement.[12] However, on January 20, 2021, President Biden signed the instrument to bring the United States back into the Paris Agreement that same day. Nonetheless, California remains committed to combating climate change through programs aimed to reduce GHGs.[13]

Federal Regulations

Prior to the last decade, there were no concrete federal regulations of GHGs or major planning for climate change adaptation. Since then, federal activity has increased. The following are actions regarding the federal government, GHGs, and fuel efficiency.

Clean Air Act

Massachusetts et al. v. EPA (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the United States Environmental Protection Agency (EPA) regulate four GHGs, including CO_2, under Section 202(a)(1) of the Clean Air Act (CAA). A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the CAA. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations; and
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to greenhouse gas pollution, which threatens public health and welfare.

[11] Center for Climate and Energy Solutions (C^2ES). 2015. Outcomes of the U.N. Climate Change Conference. Website: http://www.c2es.org/international/negotiations/cop21-paris/summary. Accessed October 29, 2021.
[12] The White House. Statement by President Trump on the Paris Climate Accord. Website: https://it.usembassy.gov/statement-president-trump-paris-climate-accord/. Accessed October 29, 2021.
[13] California Air Resources Board (ARB). 2017. New Release: California and China Team Up to Push for Millions More Zero-Emission Vehicles. Website: https://ww2.arb.ca.gov/news/california-and-china-team-push-millions-more-zero-emission-vehicles. Accessed October 29, 2021.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed under "Clean Vehicles" below. After a lengthy legal challenge, the U.S. Supreme Court declined to review an Appeals Court ruling which upheld the EPA Administrator findings.

United States Consolidated Appropriations Act (Mandatory GHG Reporting)

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons (MT) or more per year of GHG emissions are required to submit annual reports to the EPA. The first annual reports for the largest emitting facilities, covering calendar year 2010, were submitted to EPA in 2011.

U.S. Clean Air Act Permitting Programs (New GHG Source Review)

The EPA issued a final rule on May 13, 2010, which establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Code of Federal Regulations, the EPA states:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Energy Independence and Security Act

The Energy Policy Act of 2005 created the Renewable Fuel Standard program. The Energy Independence and Security Act of 2007 expanded this program by:

- Expanding the Renewable Fuel Standard program to include diesel in addition to gasoline.
- Increasing the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- Establishing new categories of renewable fuel, and setting separate volume requirements for each one.
- Requiring EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

This expanded Renewable Fuel Standard program lays the foundation for achieving substantial reductions of GHG emissions from the use of renewable fuels, reducing the use of imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector.

Signed on December 19, 2007, by President George W. Bush, the Energy Independence and Security Act of 2007 (EISA) aims to:

- Move the United States toward greater energy independence and security.
- Increase the production of clean renewable fuels.
- Protect consumers.
- Increase the efficiency of products, buildings, and vehicles.
- Promote research on and deploy greenhouse gas capture and storage options.
- Improve the energy performance of the federal government.
- Increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy.

EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards.

The EPA is committed to developing, implementing, and revising both regulations and voluntary programs under the following subtitles in EISA, among others:

- Increased Corporate Average Fuel Economy Standards
- Federal Vehicle Fleets
- Renewable Fuel Standard
- Biofuels Infrastructure
- Carbon Capture and Sequestration[14]

[14] United States Environment Protection Agency (EPA). Summary of the Energy Independence and Security Act. Website: https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act. Accessed August 20, 2021.

EPA and National Highway Traffic Safety Administration Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards Final Rule

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, the President put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 MMT and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

The EPA and the NHTSA issued final rules on a second phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012.[15] The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles. The final standards are projected to result in an average industry fleet wide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon if achieved exclusively through fuel economy improvements.

The EPA and NHTSA issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20 percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles, and a 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

The State of California has received a waiver from the EPA to have separate, stricter Corporate Average Fuel Economy Standards. Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the incidental reduction of GHG emissions. In order to manage the State's energy needs and promote energy efficiency, AB 1575 created the California Energy Commission (CEC) in 1975.

[15] United States Environmental Protection Agency (EPA). 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks. Website: http://www.epa.gov/otaq/climate/documents/420f12051.pdf. Accessed August 20, 2021.

State Regulations

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any State in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 1493—Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required the California Air Resources Board (ARB) to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.[16]

The standards are to be phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.[17]

The second phase of the implementation for the Pavley Bill was incorporated into Amendments to the Low Emission Vehicle (LEV) Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles (EVs) and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.[18]

[16] California Legislative Information. 2002. Clean Car Standards—Pavley, Assembly Bill 1493. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020AB1493. Accessed October 27, 2021.

[17] California Air Resources Board (ARB). 2013. Facts About the Clean Cars Program. Website: http://www.arb.ca.gov/msprog/zevprog/factsheets/advanced_clean_cars_eng.pdf. Accessed October 27, 2021.

[18] California Air Resources Board (ARB). 2013. Final 2017 Scoping Plan and Appendices. Website: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents. Accessed October 27, 2021.

AB 32—California Global Warming Solutions Act of 2006

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs.

The ARB is the State agency charged with monitoring and regulating sources of GHGs. The ARB approved the 1990 GHG emissions level of 427 MMT CO_2e on December 6, 2007.[19] Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 MMT CO_2e. Emissions in 2020 in a business-as-usual (BAU) scenario were estimated to be 596 MMT CO_2e, which do not account for reductions from AB 32 regulations.[20] At that rate, a 28 percent reduction was required to achieve the 427 MMT CO_2e 1990 inventory. In October 2010, the ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted regulation is now estimated at 545 MMT CO_2e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.[21] On July 11, 2018, the ARB announced that the State has meet its target of reducing GHG emissions to 1990 levels.[22]

ARB Scoping Plan

The ARB Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32. The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a Statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and

[19] California Air Resources Board. 2007. Staff Report. California 1990 Greenhouse Gas Level and 2020 Emissions Limit. Website: www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf. Accessed October 27, 2021.

[20] California Air Resources Board. 2008. Climate Change Scoping Plan, a framework for change. Website: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed October 27, 2021.

[21] California Air Resources Board. 2014 Edition BAU Emissions Projection. Website: https://ww2.arb.ca.gov/ghg-bau. Accessed October 27, 2021.

[22] California Air Resources Board. 2018. Climate Pollutants Fall Below 1990 Levels for First Time. Website: https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time. Accessed October 27, 2021.

- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed cap-and-trade program. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update builds upon the Initial Scoping Plan with new strategies and recommendations.

Senate Bill 375—Sustainable Communities and Climate Protection Act

SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Senate Bill 32—California Global Warming Solutions Act of 2006: Emissions Limit

The Governor signed SB 32 in September of 2016, giving the ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the 2017 Scoping Plan Update. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that Statewide greenhouse gas emissions are reduced to at least 40 percent below the Statewide greenhouse gas emissions limit no later than December 31, 2030." The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

1. Senate Bill 350
   - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
   - Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard (LCFS)
   - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
   - Maintaining existing GHG standards for light- and heavy-duty vehicles.
   - Put 4.2 million Zero-Emission Vehicles (ZEVs) on the roads.
   - Increase ZEV buses, delivery and other trucks.

4. Sustainable Freight Action Plan
   - Improve freight system efficiency.
   - Maximize use of near ZEVs and equipment powered by renewable energy.
   - Deploy over 100,000 zero-emission trucks and equipment by 2030.
5. Short-Lived Climate Pollutant Reduction Strategy
   - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
   - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
6. Senate Bill 375 Sustainable Communities Strategies
   - Increased stringency of 2035 targets.
7. Post-2020 Cap-and-Trade Program
   - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
   - The ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.
8. 20 percent reduction in GHG emissions from the refinery sector.
9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.[23]

Senate Bill 1368—Emission Performance Standards

In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs. CO_2 per megawatt-hour (MWh).

Senate Bill 1078—Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established an RPS target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the

[23] California Air Resources Board. 2017. California's 2017 Climate Change Scoping Plan. Website: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed October 27, 2021.

State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

Senate Bill 100—The 100 Percent Clean Energy Act of 2018

On September 10, 2018, Governor Jerry Brown signed SB 100, which further advances the Renewable Portfolio Standard target for California to require load serving entities to increase their renewable energy mix to 50 percent by 2026, and 60 percent by 2030. The Bill is intended to transition toward sourcing 100 percent of retail electricity sales from eligible renewable energy sources and zero-carbon sources by 2045.[24]

Senate Bill 350—Clean Energy and Pollution Reduction Act

In 2015, the State Legislature approved and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the California Energy Commission, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.[25]

California SBX 7-7—Water Conservation Act

This 2009 legislation directs urban retail water suppliers to set individual 2020 per capita water use targets and begin implementing conservation measures to achieve those goals. Meeting this Statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet in urban water use in 2020.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the State and guide the actions of State agencies.

[24] California Legislative Information. 2018. SB-100 California Renewable Portfolio Standard Program: emissions of greenhouse gases. Website: https://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill_id=201720180SB100. Accessed October 27, 2021.

[25] California Legislative Information. 2015. Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed October 27, 2021.

Executive Order S-3-05

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

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

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an Executive Order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07: Low Carbon Fuel Standard

The Governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a Statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the Executive Order established a LCFS and directed the Secretary for Environmental Protection to coordinate the actions of the CEC, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "lifecycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by CEC on December 24, 2007) and was submitted to the ARB for consideration as an "early action" item under AB 32. The ARB adopted the LCFS on April 23, 2009.

The LCFS was subject to legal challenge in 2011. Ultimately, on August 8, 2013, the Fifth District Court of Appeal (California) ruled that the ARB failed to comply with CEQA and the Administrative Procedure Act when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal directed that Resolution 09-31 and two Executive Orders of the ARB approving LCFS regulations promulgated to reduce GHG emissions be set aside. However, the Court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while the ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, the ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify, and streamline program operations, and enhance enforcement. The second public hearing for the new LCFS regulation was held on September 24, 2015, and September 25, 2015, where the LCFS regulation was adopted. The Final Rulemaking Package adopting the regulation was filed with the Office of Administrative Law (OAL) on October 2, 2015. The OAL approved the regulation on November 16, 2015.[26]

[26] California Air Resources Board. 2015. Low Carbon Fuel Standard Regulation. Website: https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about. Accessed October 27, 2021.

Executive Order S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy was adopted, which is the ". . . first Statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued an Executive Order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's Executive Order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Executive Order sets a new interim Statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMT CO_2e. The Executive Order also requires the State's climate adaptation plan to be updated every 3 years and for the State to continue its climate change research program, among other provisions.

Executive Order B-55-18

On September 10, 2018, former California Governor Jerry Brown issued Executive Order B-55-18, which established the following GHG emissions reduction target:

By 2045, California shall achieve carbon net neutrality.

Executive Order B-55-18 identifies that the new Statewide goal is to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net neutrality emissions thereafter. This emissions goal is in addition to the existing targets established by Executive Orders S-3-05 and B-30-15 and SB 32, as described in greater detail below. This Executive Order also directs the ARB to work with other State agencies to identify and recommend measures to achieve this goal.

Executive Order N-79-20

On September 23, 2020, Governor Gavin Newsom issued Executive Order N-79-20 establishing a goal that 100 percent of new passenger cars and trucks sold in California shall be zero-emission by 2035. The Executive Order also sets a goal that, where feasible, all operations include zero-emission medium- and heavy-duty trucks by 2045, and drayage trucks by 2035. Off-road vehicles have a goal to transition to 100 percent ZEVs by 2035, where feasible. While in-state sales of EVs will increase through 2045, the State does not currently have legislation which will restrict or preclude the use of fossil-fueled vehicles by or after 2045.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations

California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations, regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Included in the scope of these regulations are 23 categories of appliances. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.[27]

Title 24 Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

The current Standards focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards, residential and nonresidential ventilation requirements, and nonresidential lighting requirements.[28] One of the notable changes includes the solar photovoltaic systems requirement for new low-rise residential homes.

Title 24 California Green Building Standards Code

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings. Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The Bill requires local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with the (SBX-7-7) 2020 mandate are expected under the Ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (Executive Order B-29-15) directed the Department

[27] California Energy Commission. Title 20 Appliance Efficiency Proceedings. Website: https://www.energy.ca.gov/rules-and-regulations/appliance-efficiency-regulations-title-20/appliance-efficiency-proceedings. Accessed October 27, 2021.

[28] California Energy Commission. 2018. Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation. Website: https://www.energy.ca.gov/news/2018-05/energy-commission-adopts-standards-requiring-solar-systems-new-homes-first. Accessed October 27, 2021.

of Water Resources to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the Ordinance.

Senate Bill 97 and the CEQA Guidelines Update

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)."

Section 21097 was also added to the Public Resources Code, which provided an exemption until January 1, 2010, for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA. The Natural Resources Agency completed the approval process and the Amendments became effective on March 18, 2010.

The 2010 CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

California Supreme Court GHG Ruling

In a November 30, 2015, ruling, the California Supreme Court in *Center for Biological Diversity (CBD) v. California Department of Fish and Wildlife (CDFW)* on the Newhall Ranch project concluded that whether the project was consistent with meeting Statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25–27 of the ruling to address this issue summarized below:

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with Statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (p. 25).
- **Compliance with Regulatory Programs or Performance Based Standards**. A lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. (See Final Statement of Reasons, supra, at p. 64 [greenhouse gas emissions 'may be best analyzed and mitigated at a programmatic level.'].)" To the extent a project's design features

comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Resources Board or other State agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions' (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also id., § 15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of greenhouse gas emissions']) (p. 26).

- **Compliance with GHG Reduction Plans or Climate Action Plans**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (p. 26).
- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (p. 27).

Regional Regulations

The proposed project is within the South Coast Air Basin (SoCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

SCAQMD Regulation XXVII, Climate Change, currently includes three rules:

- **Rule 2700:** The purpose of Rule 2700 is to define terms and post global warming potentials.
- **Rule 2701:** The purpose of Rule 2701, Southern California Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- **Rule 2702:** The Greenhouse Gas Reduction Program was adopted on February 6, 2009. The purpose of this rule is to create a GHG Reduction Program for GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

Local Regulations

County of Riverside General Plan

The County of Riverside adopted its General Plan in December of 2015. [29] The County's applicable GHG goals and policies from the Air Quality Element are listed below.

GHG Emission Reduction Focus Areas

Policy AQ-20.10 Reduce energy consumption of the new developments (residential, commercial and industrial) through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design.

[29] Riverside County Planning Department. Riverside County General Plan. Website: https://planning.rctlma.org/General-Plan-Zoning/General-Plan. Accessed April 26, 2023.

Policy AQ-20.11 Increase energy efficiency of the new developments through efficient use of utilities (water, electricity, natural gas) and infrastructure design. Also, increase energy efficiency through use of energy efficient mechanical systems and equipment.

Policy AQ-20.14 Reduce the amount of water used for landscaping irrigation through implementation of County Ordinance 859 and increase use of nonpotable water.

Policy AQ-20.20 Reduce the amount of solid waste generation by increasing solid waste recycle, maximizing waste diversion, and composting for residential and commercial generators. Reduction in decomposable organic solid waste will reduce the methane emissions at County landfills.

County of Riverside Climate Action Plan

The County of Riverside has adopted the C*ounty of Riverside Climate Action Plan* (CAP) that was originally released in December 2015 and was revised in November 2019.[30] The CAP was developed in compliance with AB 32 and meets the CEQA Guideline requirements to fulfill cumulative mitigation for GHG emissions. The CAP utilizes a GHG emissions reduction target of a 15 percent decrease from 2008 levels by the year 2020, in order to meet the requirements of AB 32 and SB 375. The CAP has developed a process for determining significance of GHG impacts from new development projects that includes: (1) apply an emissions level that is determined to be less than significant for small projects, and (2) utilizing Screening Tables to mitigate project GHG emissions that exceed the threshold level. The CAP has provided a threshold of 3,000 MT CO_2e per year used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions. Each mitigation measure provided in the CAP Screening Tables is assigned a point value and according to the document, if a project garners at least 100 points it will be consistent with the reduction quantities anticipated in the County of Riverside CAP.

The 2019 CAP revisions emphasize the need for specific GHG reductions for 2035 and 2050 needed to reduce emissions to 80 percent below 1990 levels by 2050. The current CAP provides conceptual reduction targets for 2035 and 2050 that could be used in a future post 2020 CAP. In addition, the current CAP includes potential reduction measures to reach the conceptual 2035 goal of 2.3 MMT CO_2e. The current CAP required the County of Riverside to adopt a Post-2020 CAP that will include specific GHG reduction targets for 2035 and 2025 and corresponding policies, revisions to the General Plan, programs, ordinances, and financing by January 1, 2020.

City of Corona Climate Action Plan

Although Planning Area 6 is no longer being developed and will remain in its current condition, the following discussion is provided for informational purposes. Project Planning Area 6 is located in the City of Corona, County of Riverside. The City of Corona CAP was approved in 2012.[31] The City of Corona CAP aims to reduce emissions attributable to Corona to levels at or below 1990 GHG

[30] Riverside County Planning Department. 2019. Riverside County Climate Action Plan. Website: https://planning.rctlma.org/CAP. Accessed October 27, 2021.

[31] City of Corona. 2012. Climate Action Plan. Website: https://www.coronaca.gov/home/showdocument?id=1186. Accessed October 27, 2021.

emissions by year 2020 which is consistent with the target reductions of AB 32. The City of Corona provides all developers with a list of feasible GHG reduction measures that reflect the current state of the regulatory environment prior to design development. The developer would be required to submit to the City of Corona a mitigation report demonstrating which proposed reduction measures are feasible. The City of Corona CAP also provides a Screening Table. If a project meets the required point allotment (100 points), the developer meets the requirement of reduction measures. The CAP acted as a qualified reduction plan for which development within the City prior to 2020 could tier and thereby streamline from, in accordance with the environmental analysis required under CEQA. The City of Corona is currently in the process of updating the CAP, and the updated CAP will include mitigation and consider emissions through at least the year 2030.

3.8.3 - Methodology

Model Selection and Guidance

The emission estimates were developed using consistent assumptions (e.g., proposed land uses, construction schedule, trip generation) and models such as those discussed in Section 3.6, Air Quality. See Section 3.6, Air Quality, for a detailed description of modeling assumptions and methods.

Construction

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction-related GHG emissions result from on-site and off-site activities. On-site GHG emissions principally consist of exhaust emissions from heavy-duty construction equipment. Off-site GHG emissions would occur from motor vehicle exhaust from material delivery vehicles and construction worker traffic. The construction parameters used to estimate the proposed project's construction-related GHG emissions were based on applicant-provided data and California Emissions Estimator Model (CalEEMod) default-provided assumptions. Full assumptions are detailed in the CalEEMod modeling output contained in Appendix B.

Operation

Operational sources for land use development projects are typically distinguished as mobile, area, and energy emissions. The major sources and operational parameters used to estimate the proposed project's operational-related GHG emissions are summarized below. Full assumptions are detailed in the CalEEMod modeling output contained in Appendix B. The analysis considers emissions from the proposed project in the year 2025 and 2035 (cumulative buildout of the proposed project).

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the project site. The emissions were estimated using CalEEMod. The average trip generation rates for project operations were obtained from the project-specific traffic study.

Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the plan area on an

adjacent street or roadway that offers direct access to the generator. Pass-by trips are not diverted from another roadway. The CalEEMod defaults pass-by trips were used for this analysis.

Landscape Equipment

The use of landscaping equipment (leaf blowers, chain saws, mowers) would generate GHG emissions as a result of fuel combustion based on assumptions in the CalEEMod model.

Electricity

The County of Riverside is served by Southern California Edison (SCE). For the purpose of estimating GHG emissions for this analysis, emission factors from SCE were used. SCE provides estimates of its emission factor per MWh of electricity delivered to its customers. SCE emissions factors for 2025 and 2035 for CO_2 are provided below. The rates for methane and nitrous oxide are based on compliance with the Renewable Portfolio Standard.

Year 2025

- **Carbon dioxide:** 529.11 lb/MWh
- **Methane:** 0.029 lb/MWh
- **Nitrous oxide:** 0.006 lb/MWh

Year 2035

- **Carbon dioxide:** 367.44lb/MWh
- **Methane:** 0.029 lb/MWh
- **Nitrous oxide:** 0.006 lb/MWh

CalEEMod has three categories for electricity consumption: Title 24-electricity; non-Title 24-electricity; and lighting. CalEEMod default assumptions for the split of electricity use between these three categories were used based on the land use type.

Water and Wastewater

There would be emissions from the combustion of natural gas used for the proposed project (water heaters, heat, etc.). CalEEMod has two categories for natural gas consumption: Title 24 and non-Title 24. CalEEMod defaults were used.

Solid Waste

GHG emissions would be generated from the decomposition of solid waste generated by the proposed project. CalEEMod was used to estimate the GHG emissions from this source. The CalEEMod default for the mix of landfill types is as follows:

- Landfill no gas capture—6 percent;
- Landfill capture gas flare—94 percent;
- Landfill capture gas energy recovery—0 percent.

3.8.4 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, greenhouse gas emissions impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Greenhouse Gas Emissions

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The SCAQMD developed interim recommended significance thresholds for greenhouse gases for local lead agency consideration in 2008.[32] However, the SCAQMD Board has not approved the thresholds as of the date of this analysis. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 MT CO_2e per year
  - Based on land use type: residential: 3,500 MT CO_2e per year; commercial: 1,400 MT CO_2e per year; industrial: 10,000 MT CO_2e; or mixed use: 3,000 MT CO_2e per year
- Tier 4 has the following options:
  - Option 1: Reduce emissions from business-as-usual by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 MT CO_2e/SP/year for projects and 6.6 MT CO_2e/SP/year for plans;
  - Option 4, 2035 target: 3.0 MT CO_2e/SP/year for projects and 4.1 MT CO_2e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

[32] South Coast Air Quality Management District (SCAQMD). 2008. Interim CEQA GHG Significance Threshold for Stationary Sources. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds. Accessed October 28, 2021.

The SCAQMD provided substantial evidence to support its threshold approach. The SCAQMD discusses its draft thresholds in the following excerpt:

> The overarching policy objective with regard to establishing a GHG [greenhouse gas] significance threshold for the purposes of analyzing GHG impacts pursuant to CEQA is to establish a performance standard or target GHG reduction objective that will ultimately contribute to reducing GHG emissions to stabilize climate change. Tier 3, which is expected to be the primary tier by which the AQMD will determine significance for projects where it is the lead agency, uses the Executive Order S-3-05 goal as the basis for deriving the screening level. Specifically, the Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects.
>
> A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions.

In summary, the SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus stabilizing global climate.

To determine whether the proposed project would have a significant impact with respect to the generation of GHG emissions, this analysis utilizes the SCAQMD's draft local agency threshold of 3,000 MT CO_2e per year for the operational years of 2025 and 2035, which is also consistent with the recommendations of the County of Riverside. To address emissions consistent with the long-term goals of SB 32, the analysis also uses the SCAQMD recommended efficiency threshold of 3 MT CO_2e/SP/year for the operational year of 2035.

The proposed project was also assessed using the process developed in the County of Riverside CAP for determining significance of GHG impacts from new development projects, which includes: (1) applying an emissions level that is determined to be less than significant for small projects, and (2) utilizing Screening Tables to mitigate project GHG emissions that exceed the threshold level. The CAP has provided a threshold of 3,000 MT CO_2e per year used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions. The first CEQA Checklist question (Criterion a) would be evaluated by first screening the proposed project based on the 3,000 MT CO_2e per year threshold. If the 3,000 MT CO_2e per year threshold is exceeded, then specific mitigation from the CAP's Screening Tables will be selected to garner a total of 100 points or greater. According to the CAP, such projects that implement 100 points of mitigation measures from the Screening Tables would be determined to have a less than significant individual impact for GHG emissions.

The second CEQA Checklist question (criterion b) would be evaluated by determining whether the proposed project is consistent with the County of Riverside CAP, and the 2017 Scoping Plan Update to address GHG emissions consistent with SB 32.

3.8.5 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Greenhouse Gas Emissions

Impact GHG-1:	**Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Impact Analysis

Although construction-related GHG emissions are temporary in nature, the total amount of emissions could have a substantial contribution to a project's total GHG emissions. SCAQMD recommends that construction-related GHG emissions be amortized over the life of the proposed project, which is defined as 30 years, and added to annual operational emissions. As described above in Section 3.7.4, Methodology, construction-related GHG emissions were modeled using CalEEMod Version 2020.4.0. Construction-related GHG emissions would occur from fossil fuel combustion for heavy-duty construction equipment, material delivery and haul trucks, and construction worker vehicles. Table 3.8-2 presents the proposed project's construction-related GHG emissions by construction year and total amortized construction emissions. For the purpose of this analysis, the first construction year was modeled to be 2022. As of this writing in March 2024, construction has not commenced and the emissions below are therefore a conservative estimate that does not account for upgrades in equipment technology and more stringent regulations for equipment emissions in future years.

Table 3.8-2: Construction Greenhouse Gas Emissions

Construction Year	Emissions (MT CO_2e)
Construction 2022	81
Construction 2023	1,195
Construction 2024	2,102
Construction 2025	233
Total[1]	**3,611**

Construction Year	Emissions (MT CO_2e)
Amortized over 30 years[2]	***120***

Notes:
MT CO_2e = metric tons of carbon dioxide equivalent.
[1] Figures may not appear to add exactly due to rounding.
[2] Construction greenhouse gas emissions are amortized over the 30-year life of the project.
Source: CalEEMod Output (see Appendix B)

Following buildout of the proposed project, long-term operational emissions would be generated from area, energy, and mobile sources. As described in Section 3.7.4, Methodology, indirect GHG emissions associated with water consumption and solid waste disposal would also be generated by the proposed residential development. Table 3.8-3 presents the proposed project's annual operational emission during full operation in 2025 and 2035, along with the amortized construction emissions.

Table 3.8-3: Operational Emissions

Emissions Source	2025 Emissions (MT CO_2e/year)	2035 Emissions (MT CO_2e/year)
Area	81	81
Residential Energy–Electricity	320	320
Residential Energy–Gas	509	509
Nonresidential Energy–Electricity	82	82
Nonresidential Energy–Gas	146	146
Mobile	2,102	1,680
Waste	233	233
Water	223	223
Amortized Construction	120	120
Total Project Emissions[1]	**3,818**	**3,396**
SCAQMD Tier 3 Threshold	3,000	3,000
Exceed Threshold?	**Yes**	**Yes**

Notes:
MT CO_2e = metric tons of carbon dioxide equivalent; SP = service population.
[1] Totals may not appear to add exactly due to rounding.
Source of emissions: CalEEMod Output (see Appendix B).
Source of thresholds: South Coast Air Quality Management District (SCAQMD). 2008. Interim CEQA GHG Significance Threshold for Stationary Sources. Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds. Accessed October 28, 2021.

As shown above, the proposed project's annual operational plus amortized construction emissions would generate an estimated 3,818 MT CO_2e per year starting in 2025, which exceeds the applicable significance threshold of 3,000 MT CO_2e per year. Thus, GHG emissions generated by the proposed project would be considered a potentially significant impact. In addition, the proposed project's annual operational plus amortized construction emissions in 2035 would generate 3,396 MT CO_2e per year, which exceeds the screening threshold of 3,000 MT CO_2e per year. As the proposed residents are age restricted to 60 years and older, the proposed project is anticipated to have a total of 730 residents living in the 365 dwelling units and an estimated 20 permanent employment positions. Therefore, the proposed project's service population (residents plus employees) would be 750 people and the operational emissions (plus amortized construction emissions) per service population be 4.5 MT CO_2e per year in 2035, which also exceeds the SCAQMD's specified threshold of 3.0 MT CO_2e per service population.

According to the County of Riverside CAP, projects that implement 100 points of reduction measures from the applicable Screening Tables would be determined to have a less than significant individual impact for GHG emissions. The proposed project would implement various reduction measures from the applicable Screening Tables, including but not limited to, enhanced building insulation, energy star appliances, water-efficient appliances and water fixtures, and electric vehicle charging infrastructure (Appendix B). The proposed project would implement a total of 115 points of reduction measures from the applicable Screening Table, which would be above the minimum County requirement of 100 points of reduction measures for a project to be determined to have a less than significant individual impact for GHG emissions. In addition, the proposed project would comply with County of Riverside CAP measure R2-CE1, Clean Energy, which requires that new development projects with more than 75 new dwelling units of residential development or one or more new buildings totaling more than 100,000 gross square feet of commercial, office, industrial, or manufacturing development, produce on-site renewable energy that meets or exceeds 20 percent of on-site energy demand for multi-family residential development, and produces on-site renewable energy that meets or exceeds 30 percent of on-site energy demand for single-family residential development as a condition of County approval of the development. The proposed project would construct 193 single-family residential units and 116 two-family residential units across Planning Areas 1-5 and would therefore be required to produce on-site renewable energy that would meet or exceed 30 percent of energy demand of the proposed project as a condition of approval.

As such, project-related GHG emissions in Planning Areas 1-5 would be less than significant. Planning Area 6 would remain undeveloped, and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Conflict with Plan, Policy, or Regulation that Reduces Emissions

Impact GHG-2:	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Source: County of Riverside Climate Action Plan.

Impact Analysis

Project Planning Areas 1 to 5 are located in the County of Riverside. As discussed earlier, the County of Riverside has developed a CAP that is considered a qualified reduction plan for analysis of future development.

The County of Riverside CAP was developed in compliance with the AB 32 Scoping Plan (Scoping Plan), and aims to reduce emissions to levels at or below 1990 GHG emissions by year 2020, which is consistent with the target reduction of AB 32. As discussed above in Impact GHG-1, the proposed project's annual operational plus amortized construction emissions would generate an estimated 3,818 MT CO_2e per year starting in 2025, which would exceed the applicable threshold of 3,000 MT CO_2e per year. However, the proposed project would implement 115 points worth of reduction measures contained in the County of Riverside CAP Screening Tables, which would exceed the County of Riverside CAP's minimum screening requirement of 100 points (Appendix B).

As stated under Impact GHG-1m the proposed project would also be required to comply with County of Riverside CAP measure R2-CE1, Clean Energy, by meeting or exceeding an on-site renewable energy production equivalent to 30 percent of the proposed project's energy demand as a condition of approval. As such, the proposed project would be compliant with the County of Riverside CAP and would develop land uses consistent with the goals of the CAPs.

Senate Bill 32 Scoping Plan (2017 Scoping Plan)

SB 32 extends the goals of AB 32 and set a 2030 goal of reducing Statewide GHG emissions to 40 percent below 1990 levels by the year 2030. The 2017 Scoping Plan provides a path that will achieve California's 2030 target. Therefore, to address future impacts associated with implementation of the proposed project, this section also analyzes the proposed project's consistency with the SB 32 2017 Scoping Plan.

The 2017 Scoping Plan outlines the regulations, programs, and other mechanisms needed to reduce GHG emissions in California. The ARB and other State agencies will continue to work with State and local agencies and the public to develop regulatory measures and other programs to implement the 2017 Scoping Plan. As shown in Table 3.8-4, the 2017 Scoping Plan provides a high-level summary of the Climate Change Policies and Measures to achieve the 2030 target and discusses the proposed project's consistency with the recommended actions.

Table 3.8-4: Consistency with 2017 Scoping Plan Update

Recommended Action	Project Consistency
1. **Senate Bill 350.** Reduce GHG emissions in the electricity sector through the implementation of the 50 percent RPS, doubling of energy savings, and other actions as appropriate to achieve GHG emissions reductions planning targets in the Integrated Resource Plan (IRP) process.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. SCE is required to increase its percentage of power supply from renewable sources to pursuant to the Renewable Portfolio Standard. The proposed project would purchase power that consists of a greater amount of renewable sources and could install renewable solar power systems that will assist the utility in achieving the mandate. In addition, the proposed project will comply with the latest Title 24 energy efficiency standards. Furthermore, the proposed project provide on-site renewable energy generation meeting or exceeding an on-site renewable energy production equivalent to 30 percent of the proposed project's energy demand.
2. **Low Carbon Fuel Standard.** Transition to cleaner/less-polluting fuels that have a lower carbon footprint.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, the standard is applicable to the fuel used by vehicles that would access the proposed project site.
3. **Mobile Source Strategy (Cleaner Technology and Fuels [CTF] Scenario).** Reduce GHGs and other pollutants from the transportation sector through transition to zero-emission and low emission vehicles, cleaner transit systems and reduction of vehicle miles traveled.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing the residences and businesses at the project site would be subject to the standards.
4. **Senate Bill 1383.** Approve and Implement Short-Lived Climate Pollutant strategy to reduce highly potent GHGs	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency.
6. **Post-2020 Cap-and-Trade Program.** Reduce GHGs across largest GHG emissions sources	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. Furthermore, the Cap-and-Trade program would apply to sources that generate more than 25,000 MT CO_2e/year.
7. Implement Forest Carbon Plan.	**Not applicable.** The project site is not forested; therefore, no forest carbon plan is possible.
Source: California Air Resources Board (ARB). 2017. California's 2017 Climate Change Scoping Plan Chapter 5: Achieving Success. November 2017. Website: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed November 4, 2021.	

As shown in Table 3.8-4, the proposed project would not conflict with the policies set forth in the 2017 Climate Change Scoping Plan Update.

Through the implementation of 115 points of GHG reduction measures from the County of Riverside CAP Screening Tables, the proposed project would be considered to be consistent with the County of Riverside CAP, and SB 32 Scoping Plan. Thus, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

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3.9 - Hazards and Hazardous Materials

This section describes the existing setting as it relates to hazards and hazardous materials and describes the potential effects on the site and its surrounding area that may result from project implementation. Descriptions and analyses in this section are based in part on information contained in the Phase I and Phase II Environmental Site Assessments (ESAs) by G3SoilWorks, which are contained in Appendix F of this Draft Environmental Impact Report (Draft EIR) (see Appendix F1 and F2, respectively).

3.9.1 - Existing Conditions

Hazardous Materials

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic—causes human health effects
- Ignitable—has the ability to burn
- Corrosive—causes severe burns or damage to materials
- Reactive—causes explosions or generates toxic gases

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24, contains technical descriptions of the characteristics of hazardous waste.

Phase I Environmental Site Assessment

A Phase I ESA, dated November 30, 2015, was prepared by G3SoilWorks for the project (Appendix F1). The purpose of the Phase I ESA is to assess the potential for the presence or likely presence of hazardous substances or petroleum products on the property, and whether there are any conditions which indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water in connection with the property.

Project Site

The project site is currently an undeveloped vacant property that was occupied by a golf course until 2009. However, the fairways and putting greens were disked and have been minimally maintained. The abandoned clubhouse burned, and the building was subsequently demolished, leaving only the concrete pad. The corrugated storage shed used for golf cart storage and maintenance still exists next to the clubhouse pad. Residential structures border most of the site, except for a small northern portion of the site that is bordered by commercial properties.

Project Site History

The project site history is based on historical maps and aerial photographs and information gathered from interviews. Several of the historical resources used to evaluate the site history are included in Appendix F1 (see Appendix A of the Phase I ESA).

The earliest aerial photograph of the site, dated 1948, shows the area to be undeveloped natural land with two stream channels flowing around the project site. By 1966, properties adjacent to the area appear to be graded, ready for residential development, with streets and associated infrastructure already built as well as a portion of the golf course. From 1966 to 2014, the development of the project site and its surroundings accelerated, with the continued construction of residential dwellings and associated infrastructure, including State Route (SR) 91, which appears in the photograph dated 1975.

The project site history is based on historical maps, aerial photographs and information gathered from interviews. Several of the historical resources, including city directories as well as zoning and land use records used for the review of the site history are appended to the Phase I ESA (see Appendix F1).

Environmental Record Search

An Environmental Record Search (ERS) report of standard environmental record sources was prepared specifically for the project site. The project site was listed as a closed Leaking Underground Storage Tank (LUST) case in the ERS. The search included queries to multiple databases for cases within the specified search distance of the project site. For a radius map showing the locations of database-listed properties adjacent to the project site and a complete list of all the databases searched, refer to the ERS RecCheck Report that is appended to the Phase I ESA (Appendix F1).

Adjacent Properties Agency Records

The following adjacent properties, located less than 1 mile from the project site, were identified in the ERS report.

- Song's Arco, located at 800 Serfas Club Drive, Corona, CA 92882 (Map ID 2), is listed on the LUST database. The potential for environmental impacts to affect the project site from the Song's Arco appears low because the LUST case was closed by the California Regional Water Quality Control Board (RWQCB), Santa Ana Region, on August 8, 2007.
- Mobil No. 18, located at 616 Paseo Grande Road, Corona, CA (Map ID 4), is listed on the LUST database. The potential for environmental impacts on the project site to result from the Mobil No. 18-FLM is low because the LUST case was closed on July 2013 and Mobil No. 18 is at a lower elevation.

California State Water Resources Control Board GeoTracker Database

On October 29, 2015, and again on November 24, 2021, the California State Water Resources Control Board (State Water Board) GeoTracker database was queried for potential environmental hazards. The search listed the project site as a LUST cleanup site for potential contamination of gasoline in the soil reported February 11, 1991, and the case has been closed since January 22, 1993. The project

site does not represent an environmental hazard to the surrounding residential properties due to its current "case closed" status. The facilities listed below do not represent an environmental hazard to the project site due to their current case closed status.

- Mountain View Country Club (T0606500230) located at 2121 Mountain View Drive, in Corona, CA 91720 which is located within the project site. The LUST remediation was completed January 22, 1993.
- Song's Arco Station (T0606500159) is located at 800 Serfas Club Drive in Corona, CA 91720, which is northwest adjacent of the project site. The case for LUST remediation was completed August 9, 2007.
- Certified Grocers (T0606500279) is located at 1990 Pomona Road in Corona, CA 91270, approximately 0.5-mile northeast of the project site. The case for LUST remediation was completed December 2, 1998.
- US Rentals (T0606500045) is located at 525S Maple Street, in Corona, CA, 91270, approximately 0.5-mile northeast of the project site. The case for LUST remediation was completed October 17, 1994.
- Mobil No. 18-FLM (T060650003) is located at 616 Paseo Grande, in Corona, CA, 91270, approximately 0.5-mile northeast of the project site. The case for LUST remediation was completed July 11, 2013.
- Thrifty Oil No. 335/Arco No. 9705 (T0606500526) is located at 1735 W Sixth Street, Corona, CA, approximately 0.4-mile east of the project site. The case for LUST remediation was completed October 14, 1999.

Site Reconnaissance

The site reconnaissance for the Phase I ESA was performed on November 19, 2015. The project site reconnaissance consisted of driving to each of the Phase I ESA identified areas and walking the areas of proposed development and the former golf course fairways. The following was noted in the Phase I ESA as found in the areas specific to the study:

Planning Area 6

At the time of this analysis, the project applicant proposed the development of 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 6.

Planning Area 6 is located in the southeastern portion of the project site and consists primarily of an elongated parcel within the city limits of Corona that is surrounded by residential streets and residential property. During the reconnaissance, it was noted that 6-inch asbestos-containing transite pipes had been used as primary water supply lines throughout the fairways in this area. A north facing view of Planning Area 6 is shown in Appendix F1 (see Figures 2 and 5 [Area A] and Photo 38 in Appendix D of the Phase I ESA).

Planning Area 1

Planning Area 1 is an irregular-shaped parcel located in Riverside County that occupies the northwest portion of the project site. During the reconnaissance, broken pieces of transite pipe were observed on an open slope. The pipe appeared to have been exposed by surface water erosion near the center of the fairway and the broken pieces were abandoned on the adjacent slope. It was noted that 6-inch asbestos-containing transite pipes had been used as primary water supply lines throughout the fairways in this area. Increasing and significant erosion was observed along the drainage channel in the former fairway, ranging from light soil erosion and water ponding near the center of the area to severe erosion toward the north end of the area adjacent to the SR-91 construction. Remnants of a former restroom and associated septic tank location (Septic Tank 3, approximately 500 gallons) were also observed (Appendix F1; see Figures 2 and 4 [Area B] and Photos 21–36 and 38–40 in Appendix D of the Phase I ESA).

Planning Area 5

Planning Area 5 is an irregular-shaped parcel located in Riverside County that occupies the south-central portion of the project site. During the reconnaissance, it was noted that 6-inch asbestos-containing transite pipes had been used as primary water supply lines throughout the fairways in Planning Area 5. Remnants of a former restroom and associated septic tank location (Septic Tank 4, approximately 500 gallons) were also observed in the northwest portion of Planning Area 5. A well, pump, and irrigation water reservoir were observed in the northern portion of Planning Area 5. A drainage retention basin was located adjacent to the pump house. Planning Area 5 is shown I Appendix F1 (see Figures 2 and 6 [Area C] and Photos 41–48 in Appendix D of the Phase I ESA).

Planning Area 3

Planning Area 3 is an irregular-shaped parcel located in Riverside County that occupies the south-central portion of the project site. Structures in Planning Area 3 include the former clubhouse and pool and an existing golf cart shed. Three septic tanks were identified in the vicinity of Planning Area 3: Septic Tank 1 (approximately 3,000 gallons) located along the southeast slope adjacent to the parking lot, Septic Tank 2 (approximately 1,200 gallons) located just north of the clubhouse parking lot behind the nearest residence, and Septic Tank 5 (approximately 500 gallons) located northeast of Planning Area 3, adjacent to Via Del Rio Road. A former underground storage tank (UST), removed in April 1992 was also located immediately adjacent to the septic tank. The concrete secondary containment structure for a 250-gallon diesel and a 500-gallon gasoline aboveground storage tank (AST) was also observed immediately south of the former clubhouse. Six-inch asbestos-containing transite pipes had been used as primary water supply lines throughout the fairways adjacent to Planning Area 3 (see Appendix F1; Figures 2 and 3 [Area D] and Photos 1–20 in Appendix D of the Phase I ESA).

Interview

On Thursday, November 19, 2015, during the project site reconnaissance, Mr. Carlos Briseno, the maintenance and groundskeeper supervisor for the former golf course was interviewed. Mr. Briseno indicated that he had been employed at the course since the early 1980s and that the course was in operation from the early 1960s until 2009, when it was closed after a fire gutted the interior of the clubhouse and restaurant. He also confirmed the presence of five septic tanks, the removal of the

former UST and remediation of hydrocarbon impacted soil from the vicinity of the UST, and the presence of 6-inch asbestos-containing transite irrigation water conveyance lines throughout the golf course fairways. Mr. Briseno also noted that gasoline powered golf carts were used until 2001, when they were changed to battery powered carts. The locations of two former ASTs to fuel these carts—one 250-gallon diesel tank and one 500-gallon gasoline tank—were identified immediately south of the former clubhouse in Planning Area 3 (Appendix F1; see Figure 3). When asked about the use of pesticides and herbicides on the course, Mr. Briseno said that due to the narrow fairways and in order to keep play moving, that there were no areas of rough and that the margins of the fairways were kept mowed short. Consequently, no applications of herbicides or pesticides were necessary other than the occasional use of Roundup to clear any cracks in the cart paths and walkways of incidental weeds or grass.

Findings

Information obtained by the database search and governmental agency review indicated the following:

- A total of five septic tanks were identified at the project site. Three septic tanks were located in Planning Area 3: one in the south portion, one in the northwestern portion, and one located to the northeast of Planning Area 3 adjacent to Vista Del Rio (Appendix F1; see Figure 3). One septic tank is located in Planning Area 1 and one in Planning Area 5 (Appendix F1; see Figures 4 and 6, respectively).
- One UST was removed, and hydrocarbon impacted soil was excavated and transported off-site in 1993. Based on the UST removal and the excavation of the impacted soil, the County of Riverside Department of Environmental Health confirmed the completion of the site investigation and remedial action for the UST.
- There is a low spot/depression in the north region of Planning Area 3. This depression contained miscellaneous debris. Mr. Briseno indicated the depression flooded during rainstorms.
- The clubhouse pool was backfilled with sand and concreted over. The outline of the remains and its location is indicated in Appendix F1, Figure 3.
- The clubhouse burned and the fire scorched the vegetation surrounding the building. The clubhouse has been demolished and only the pad remains, detailed in Appendix F1, Figure 3.
- Water draining through Planning Area 1 has created an erosion trench that empties into the confluence of two drains. This drain confluence was also observed to have blue tinted water draining and ponding, shown in Appendix F1, Figure 4 and Photos 29–36.
- The former fairway bathroom buildings in Planning Area 1 and Planning Area 5 have been reduced to rubble in Planning Area 1 and a concrete pad in Planning Area 5. The bathroom building locations in Planning Area 1 and 5 are shown in Appendix F1, Figures 4 and 6, respectively.
- In general, the fairway greens and adjacent areas have been mowed to minimize groundcover or disked to remove weeds and groundcover.

Conclusions and Recommendations

The Phase I ESA provided the following conclusions and recommendations for the proposed project:

- Remove the septic tanks and appropriately backfill the resulting excavations.
- Complete a limited Phase II ESA to evaluate potential impacts of the diesel and gasoline ASTs in Planning Area 3.
- Clear brush and debris-filled depressions and drainage courses.
- Remove rubble and construction materials and remnant concrete cart paths from the project site and adjacent areas.
- Locate and remove all transite pipe from the fairways in, around, and adjacent to areas proposed for development.

Additionally, the Phase I ESA made the following conclusion and recommendations related to hydrology, erosion, and watershed issues, which have been included as part of the studies in the Water Quality Management Plan and Hydrology Report for the proposed project (see Appendix G of this Draft EIR) and incorporated into Section 3.9—Hydrology and Water Quality.

- Design and use of bioswale and bioretention systems.
- Stormwater control using infiltration and groundwater recharge basins.
- Water quality improvements and biofiltration to reduce sediment transport loads.
- Restoration, enhancement, and maintenance of high-quality riparian habitat in the immediate vicinity of existing stream channels and multispecies habitat at other locations throughout the project site.

2016 Phase II Environmental Site Assessment

A Phase II ESA dated February 3, 2016, was prepared for the project by G3SoilWorks (Appendix F2). During the completion of the Phase I ESA report, the former locations of one 250-gallon diesel AST and one 500-gallon gasoline AST were identified. However, no documentation on the permitting, installation, inspection, removal, disposal, or any regulatory agency compliance status of the ASTs was available. Therefore, the recommendation was made to complete a Phase II ESA in the immediate vicinity of the ASTs.

On January 15, 2016, one soil boring was completed adjacent to the concrete containment for the former ASTs. The boring was completed to a depth of approximately 12 feet below ground surface (bgs). During drilling, soil samples were collected at approximately 2-foot-depth intervals. The location of the boring is shown in Appendix F2 (see Figure 2, Site Location Map).

The soil borings were completed by hydraulically advancing a steel probe using Direct Push technology (a limited access Geoprobe unit). During drilling, continuous core soil samples were collected from the acetate sleeves cut at the individual sample intervals. Soil samples were collected at depths of approximately 2, 4, 6, 8, 10, and 12 feet bgs. The acetate sleeves were sealed with Teflon film, capped, and labeled. A portion of each soil sample was screened with a photo ionization detector (PID) for volatile organic compounds (VOCs). Based on the results of the screening, three

samples were selected for analysis. The sample screening results indicated no concentrations of VOCs in any of the samples. Therefore, the three shallowest samples (from depths of 2, 4, and 6 feet bgs) were selected. Groundwater was not encountered in the boring, therefore, no groundwater sample was collected.

Soil samples to be analyzed for VOCs were prepared in accordance with United States Environmental Protection Agency (EPA) Method 5035 using disposable laboratory provided samplers. Each sample consisted of three aliquots of soil weighing approximately 5 grams, each preserved in 40 milliliter volatile organic analysis (VOA) vials. All the soil samples were labeled, placed on ice, and delivered to a State certified laboratory under chain-of-custody documentation.

During drilling, the recovered soil samples were described in general accordance with the Uniform Soil Classification System by G3SoilWorks' field geologist. A copy of the Boring Log is provided in Appendix F2 (see Appendix A of the Phase II ESA).

Before each use, all drilling and sampling equipment was cleaned, double rinsed with tap water, and final rinsed with distilled water to reduce the potential for cross contamination. Geoprobe holes were backfilled with hydrated bentonite and finished to match the adjacent surface.

Results

The laboratory analytical results indicated no reported concentrations of total petroleum hydrocarbons (TPH) or VOCs above the method-reporting limit in any of the soil samples analyzed. No further additional soil sampling is recommended.

The complete Laboratory Analytical Report is presented in Appendix F2 (see Appendix B of the Phase II ESA).

2019 Phase II Environmental Site Assessment

In response to the completion of the Phase I and Phase II ESAs prepared by G3SoilWorks, a correction sheet was issued stating the Riverside County Department of Environmental Health's Cleanup Program required an additional Phase II ESA be completed to sample for historical pesticide and herbicide use at the golf course fairway greens, drainage basins, and irrigation ponds within the limits of the project site. An additional Phase II ESA dated May 10, 2019, was prepared for the project by G3SoilWorks (Appendix F), which sampled the project site for the possible presence of herbicides, organic phosphorus pesticides, and chlorinated pesticides.

G3SoilWorks provided a clarifying memorandum dated January 3, 2024, and is included in Appendix F. The memorandum clarifies that on April 15, 2019, soil samples were obtained from six designated zones: Zone 1, Zone 2, Zone 3, Zone 4, Zone 5, and Zone DR. Multiple soil samples were obtained from all six Planning Areas and from the upper 6 inches and were developed into one representative composite sample. For the evaluation, the samples from Planning Areas 1 through 5 represented green and fairway, and Planning Area 6 considers and represents drainage areas, sumps, and irrigation ponds. The samples were delivered to the analytical laboratory the same day of sampling.

Results

The laboratory analytical results indicated that several recognized chlorinated pesticides and herbicides were present within the limits of the project site. A summary of the concentrations of these herbicides and pesticides is provided on Table 1 in the 2019 Phase II ESA (Appendix F). Trace levels of dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyldichloroethylene (DDE), dichlorodiphenyldichloroethane (DDD), Chlordane (technical), Dinoseb, and 2,4,5-TP (Silvex), and Glyphosate 2-4-D were present at the project site. The levels identified are all below the shallow soil screening limits as identified by the RWQCB and EPA regional soil screening levels. It is expected that these levels will continue to decline by ongoing slow natural degradation processes and be diluted, dispersed, and degraded by the proposed grading activities associated with the proposed project. Based on these findings, the environmental risks associated with pesticides and herbicides are considered very low to remote and do not present meaningful or material risks related to the proposed use of the project site.

Based on the above conclusion, no further additional soil sampling or study is recommended.

Airports/Airfields

The closest airport to the project site is the Corona Municipal Airport, which is located approximately 1.37 miles northeast of the project site. There are no private airfields located within 2 miles of the project site.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) belong to a broad family of manufactured organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. Electrical transformers historically contained cooling lubricant containing PCB compounds. Other products that may contain PCBs include voltage regulators, switches, reclosers, bushings, and electromagnets.

During the reconnaissance of the project site, no leaking or soil staining pole-mounted transformers were observed.

Radon

According to the EPA Map of Radon Zones, Riverside County is located in Zone 2 of the EPA Radon Zone Map. Zone 2 is designated as a moderate potential radon zone with levels between 2 and 4 picocuries per liter (pCi/l) of air but is not considered an adverse environmental condition on the project site.

Asbestos and Lead-Based Paint

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is commonly used as an acoustic insulator and in thermal insulation, fireproofing, and other building materials. Asbestos is made up of microscopic bundles of fibers that may become airborne when asbestos-containing materials are damaged or disturbed. When these fibers get into

the air, they may be inhaled into the lungs where they can cause significant health problems. The California Occupational Health and Safety Administration (Cal/OSHA) defines asbestos-containing building materials (ACBMs) as any material that contains 0.1 percent asbestos by weight.

Lead is a highly toxic metal that was used until the late 1970s in a number of products, most notably paint. Lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Primary sources of lead exposure are deteriorating lead-based paint (LBP), lead contaminated dust, and lead contaminated soil.

The project site is currently undeveloped and does not contain structures with a high possibility of containing ACBM and LBP. However, transite pipes containing asbestos were found on-site as part of the previous use, and these pipes are recommended to be removed.

3.9.2 - Regulatory Setting

This section discusses the federal, State, and local regulations that pertain to the use and storage of hazardous materials and explains the various agencies' roles and responsibilities in regulating hazardous materials.

Federal Regulations

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. RCRA establishes a system that uses hazardous waste manifests to track the movement of hazardous waste from generation to disposal (cradle-to-grave). The 1984 amendments to the RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires states to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for USTs that hold hazardous materials. Owners of USTs must demonstrate financial assurance for the cleanup of a potential leaking tank. As of 2001, an estimated 85 percent of USTs complied with the required standard.

Comprehensive Environmental Response, Compensation and Liability Act

The U.S. Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) in 1980. The purpose of CERCLA is identifying and remediating chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) primarily pertain to emergency management of accidental releases. SARA requires the formation of State and local emergency planning committees, which are responsible for collecting material handling and transportation data for use as a basis for their planning. Chemical inventory data is made available to the public under the "right-to-know" provision of this Act. SARA also requires annual reporting of continuous

emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory.

Hazardous Material Transportation Act

The Hazardous Materials Transportation Act serves as the statutory basis for the body of regulations designed to ensure the safe transport of hazardous materials via water, rail, highways, air, or pipelines. This Act includes provisions for material classification, packaging, marking, labeling, placecarding, and shipping documentation.

The United States Department of Transportation (USDOT), along with the Federal Highway Administration and the Federal Railroad Administration, regulate the transportation and handling of hazardous materials through the Federal Hazardous Materials Transportation Act (HMTA) and through the RCRA. Through these regulations, Congress directed the EPA to create regulations to manage hazardous materials from "the cradle to the grave." Under this mandate, the EPA developed strict requirements for all aspects of hazardous materials management, including the treatment, storage, and disposal of hazardous substances. In addition to those federal requirements, states may develop more stringent requirements that are broader in scope than the federal regulations.

In California, the California Department of Transportation (Caltrans) implements, and the California Highway Patrol enforces these regulations. Carriers that violate these regulatory requirements subject themselves to possible civil and criminal liability.

Asbestos and Lead-based Paint

The EPA declared asbestos a hazardous air pollutant under the Clean Air Act (CAA) and distributed National Emissions Standards for Hazardous Air Pollutants (NESHAP) that regulates the demolition and/or renovation of facilities containing asbestos. The NESHAP imposes procedures for the handling and disposal of asbestos-containing material (ACM). In California, most of the State's regional air districts are delegated by the EPA to implement the NESHAP requirements. The California Air Resources Board enforces the NESHAP in air districts not delegated by the EPA.

The first federal regulatory effort regarding lead was the Lead-Based Paint Poisoning Prevention Act of 1971 (PCB), which defined lead as a serious health threat and called for the detection and abatement of existing LBP hazards in residential structures. The Lead-Based Poisoning Prevention Act (LBPPA) amendments in 1973 designated the United States Department of Housing and Urban Development (HUD) as the lead agency in eliminating LBP hazards in residential dwellings. The Housing and Community Development Act of 1987 (HCDA) changed the definition of LBP hazards to include all surfaces, including exterior ones. The latest source of HUD authority regarding lead is the Residential Lead-based Paint Hazard Reduction Act of 1992 (Title X). Along with the Lead-based Paint Exposure Reduction Act of 1992 (Title IV) of the Toxic Substances Control Act (TSCA), Title X outlines needed actions aimed at reducing lead exposure to children and the general public.

State Regulations

California Health and Safety Code

The California Environmental Protection Agency (Cal/EPA) has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531, *et seq*., incorporate the requirements of SARA and the CAA as they pertain to hazardous materials. Health and Safety Code Section 25534 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop a Risk Management Plan (RMP). The RMP must be submitted to the appropriate local authorities, the designated local administering agency, and the EPA for review and approval.

The California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in California. HWCL implements RCRA as a "cradle-to-grave" waste management system in the State. The HWCL states that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes. The HWCL exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by RCRA.

California Code of Regulations

Most State and federal regulations and requirements that apply to generators of hazardous waste are spelled out in the California Code of Regulations, Title 22, Division 4.5. Title 22 contains detailed compliance requirements for hazardous waste generators and transporters as well as treatment, storage, and disposal facilities. Because California is a fully authorized State according to RCRA, most RCRA regulations (those contained in 40 Code of Federal Regulations [CFR] Part 260, *et seq.*) have been duplicated and integrated into Title 22. However, because the California Department of Toxic Substances Control (DTSC) regulates hazardous waste more stringently than the EPA, Title 22 contains fewer exemptions and exclusions than 40 CFR Part 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than RCRA regulations in 40 CFR Part 260. To make regulatory requirements more accessible and easier to follow, California compiled the hazardous materials, waste, and toxics-related regulations contained in the California Code of Regulations, Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27, into one consolidated California Code of Regulations Title 26 "Toxics." However, California hazardous waste regulations are still commonly referred to as Title 22.

Local Regulations

Southern California Hazardous Waste Management Authority

The County of Riverside is a member of the Southern California Hazardous Waste Management Authority (SCHWMA) and, therefore, has agreed to work on a regional level to solve problems involving hazardous waste. SCHWMA was formed through a joint powers agreement between Santa Barbara, Ventura, San Bernardino, Orange, San Diego, Imperial, and Riverside counties and the cities of Los Angeles and San Diego. Using a "fair share" approach, each SCHWMA county has agreed to take responsibility for the treatment and disposal of hazardous waste in an amount that is at least equal to the amount generated within that county. This responsibility can be met by siting hazardous

waste management facilities (transfer, treatment and/or repository) capable of processing an amount of waste equal to or larger than the amount generated within the county, or by creating intergovernmental agreements between counties to provide compensation to a county for taking another county's waste, or through a combination of both facility siting and intergovernmental agreements. Once an application to site a facility has been received, the County of Riverside will review the requested facility and its location against a set of established siting criteria to ensure that the location is appropriate and may deny the application based on the findings of this review. Presently, the County of Riverside does not have any of these facilities within its jurisdiction and therefore must rely on intergovernmental agreements to fulfill its fair share responsibility to SCHWMA.

The Riverside County Hazardous Waste Management Plan

As indicated in the Safety Element of the County of Riverside 2015 General Plan, the Board of Supervisors adopted the Riverside County Hazardous Waste Management Plan (CHWMP) on September 12, 1989. With a framework of 24 existing and recommended programs, the CHWMP serves as the County's primary planning document for the management of hazardous substances. The CHWMP is a comprehensive document containing all of the County programs for managing hazardous materials and waste.

County of Riverside 2020 General Plan

The County of Riverside 2020 General Plan sets forth the following applicable policies that are relevant to hazards and hazardous materials:

Safety Element

S 1.1 Mitigate hazard impacts through the adoption and strict enforcements of current building codes, which will be amended as necessary when local deficiencies are identified.

S 3.14 Development using, storing, or otherwise involved with substantial quantities of on-site hazardous materials should not be permitted within a 100-year floodplain or dam inundation zone, unless all standards for evaluation, anchoring, and flood-proofing have been satisfied. Hazardous materials should be stored in watertight containers, not capable of floating, to the extent required by State and federal laws and regulations. Facilities storing substantial quantities of hazardous materials within inundation zones should be adequately flood-proofed and hazardous materials containers shall be anchored and secured to prevent flotation and contamination.

S 5.2 Review all proposed development projects that manufacture, use, or transport hazardous materials for compliance with the CHWMP. Such projects shall provide a buffer zone, to be determined by the County, between the installation and property boundaries sufficient to protect public safety.

S 5.3 Require that applications for discretionary development projects that will generate hazardous wastes or use hazardous materials include detailed information on hazardous waste reduction, recycling, and storage.

S 5.8 Ensure that the use and disposal of hazardous materials in the County complies with local, State, and federal safety standards.

S 6.18 Prohibit development of critical facilities that are proposed in dam failure inundation areas unless no feasible alternative exists and apply hazardous materials safety guidelines within such zones.

S 6.22 During the development review process, when developing alternatives and adaptation projects for consideration, the County shall require applicants to identify natural infrastructure that may be used through the conservation, preservation, or sustainable management of open space to reduce climate change hazards, where feasible.

City of Corona 2020-2040 General Plan

The City of Corona 2020-2040 General Plan sets forth the following applicable policies that are relevant to hazards and hazardous materials:

Land Use

LU-2.1 Design development to reflect Corona's unique physical setting considering its natural topography, environmental resources, and natural hazards by including vegetation management zones and emergency access roads within the project boundary.

LU-4.3 **A**llow for the development of vacant lands on the periphery of existing development that complements the scale and pattern of existing uses; protects significant plant, animal, and other natural environmental resources by keeping vegetation management zones and emergency access roads within the project boundary; protects development and population from natural hazards; and where it is logical and feasible to extend infrastructure.

LU-23.7 Ensure, to the extent feasible, that environmental impacts such as noise, air quality, pollution, traffic congestion, and public safety hazards associated with continued operation of Corona Municipal Airport are mitigated to the extent practicable.

Public Safety

PS-3.1 Enforce federal and State regulations and local ordinances in accordance with Certified Unified Program Agency requirements that require all users, producers and transporters of hazardous materials and waste to clearly identify materials that they store, use or transport, and make available emergency response plans, emergency release reports, hazardous material inventory reports, and toxic chemical release

reports to reduce the risk from natural or other hazards and effectively protect the community.

PS-3.2 Require projects to comply with applicable land use regulation, building and fire codes, and local ordinances; determine the need for buffer zones/setbacks, building modifications, site design, operational changes, or other measures to minimize risk from hazardous materials.

PS-9.4 Maintain safe and accessible evacuation routes throughout the community; take precautions and ensure backup or mitigations for routes crossing high hazard areas (e.g., flood, seismic, high fire, etc.).

Healthy Community

HC-4.6 Support housing construction practices, where initiated by developers, that are free from asbestos, volatile organic compounds, and other chemicals known to be hazards.

3.9.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, as well as Riverside County's environmental checklist, hazards and hazardous materials impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Hazards and Hazardous Materials

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan.

d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school.

e) 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.

Airports

a) Result in an inconsistency with an Airport Master Plan.

b) Require review by the Airport Land Use Commission.

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

d) For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?

3.9.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas 2 and 56 single-family detached residences and a new trail system on Planning Area 2 and 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Routine Use

Impact HAZ-1a:	**Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Source(s): Project Application Materials, Phase I, 2016 Phase II, and 2019 Phase II Environmental Site Assessments.

Impact Analysis

Short-term Impacts

Construction Activities

In November 2015 and February 2016, G3SoilWorks prepared Phase I and Phase II ESAs for the project site, respectively (Appendix F). In response to the completion of the Phase I and Phase II ESAs prepared by G3SoilWorks, a correction sheet was issued stating the Riverside County Department of Environmental Health's Cleanup Program required an additional Phase II ESA be completed to sample the project site for the possible presence of herbicides, organic phosphorus pesticides, and chlorinated pesticides, which was completed in May 2019.

The scope of work for the Phase I ESA included a field reconnaissance of the project site and surrounding areas, personal interviews, records and document review, historic map and aerial photo review, selected soil sampling and laboratory analysis, evaluation of the data collected, and submittal of a report. As outlined above, transite pipes containing asbestos were found on-site as part of the previous use, and these pipes are recommended to be removed. Grading and construction activities may involve the limited transport, storage, usage, or disposal of hazardous materials, such as the fueling/servicing of construction equipment. However, such activity is short-term in nature and is subject to federal, State, and local health and safety requirements.

The findings and recommendations of the 2015 Phase I ESA were as follows:

- Remove the septic tanks and appropriately backfill the resulting excavations.
- Complete a limited Phase II ESA to evaluate potential impacts of the diesel and gasoline ASTs in Planning Area 3.
- Clear brush and debris-filled depressions and drainage courses.
- Remove rubble and construction materials and remnant concrete cart paths from the project site and adjacent areas.
- Locate and remove all transite pipe from the fairways in, around, and adjacent to areas proposed for development.

These recommendations are included as mitigation for the project as further described below in MM HAZ-1. While the removal of the septic tanks, brush/debris, rubble/construction materials, and transite pipes would constitute the transport and disposal of potentially hazardous materials, the proposed project would adhere to industry standards in their removal and disposal of these objects and materials. Transport of these materials would be performed by commercial vendors who would be required to comply with various federal and State laws regarding hazardous materials transportation (e.g., Federal Motor Carrier Safety Administration regulations and 49 CFR Parts 100-185). Additionally, the project would comply with all applicable laws regarding the use, storage, and disposal of hazardous materials, including provision of spill prevention kits in accordance with Cal/OSHA standards.

The findings of the 2016 Phase II ESA indicated no reported concentrations of TPH or VOCs above the method-reporting limit in any of the soil samples analyzed. No further additional soil sampling was recommended.

In May 2019, soil sampling occurred for an additional Phase II ESA, which determined that there were trace amounts of several recognized chlorinated pesticides and herbicides present within the limits of the project site. The levels identified are all below the shallow soil screening limits as identified by the RWQCB and EPA regional soil screening levels. Over time, these levels will continue to decline by ongoing slow natural degradation processes and be diluted, dispersed, and degraded by the proposed grading activities associated with the proposed project. Based on these findings, the environmental risks associated with pesticides and herbicides are considered very low to remote and do not present meaningful or material risks related to the proposed uses of the project site. No further soil sampling or study is recommended. While no impacts are anticipated due to contaminated soils or from the existing rubbish and transite pipes located on-site, if such soils or rubbish are later determined to be hazardous, all standard hazardous materials remediation and removal procedures are required to be adhered to.

Thus, with adherence to federal, State, and local health and safety requirements, potential impacts associated with construction activities creating a significant hazard to the public or the environment during the routine transport, use, or disposal of hazardous materials would remain less than significant.

Long-term Impacts

Hazards and Hazardous Materials

As outlined above, G3SoilWorks completed a Phase I ESA in November 2015, a Phase II ESA in February 2016, and an additional Phase II ESA in May 2019for the project site (see Appendix F). The scope of work for the Phase I investigation included a field reconnaissance of the project site and surrounding areas, personal interviews, records and document review, historic map and aerial photo review, selected soil sampling and laboratory analysis, evaluation of the data collected, and submittal of a report. Transite pipes containing asbestos were found on-site as part of the previous use, and these pipes are recommended to be removed.

Additionally, according to the Phase I ESA completed in 2016, the project site is not listed on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The project is not anticipated to create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials. Limited amounts of cleaning supplies and other potentially hazardous cleaning-related supplies may be stored on-site, as is typical of residential and retail/commercial uses, but they are not anticipated to be of sufficient quantity to pose a significant hazard to the public or environment. The additional Phase II ESA completed in 2019 identified trace amount of several recognized chlorinated pesticides and herbicides within the limits of the project site. It is expected that these levels will continue to decline by ongoing slow natural degradation processes and be further degraded by the proposed grading activities associated with the proposed project. Therefore, the hazards associated with these substances are considered very low to remote and do not present meaningful or material risks related to the proposed uses of the project site.

Additionally, the retail/commercial part of the project would comply with all applicable laws regarding the use, storage, and disposal of hazardous materials, including provision of spill prevention kits in accordance with Cal/OSHA standards. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HAZ-1 Prior to the initiation of construction for the project, the developer shall implement the following applicable recommendations made in the Phase I Environmental Site Assessment (Phase I ESA) dated November 30, 2015:

- Remove the septic tanks and appropriately backfill the resulting excavations.
- Clear brush and debris-filled depressions and drainage courses.
- Remove rubble and construction materials and remnant concrete cart paths from the project site and adjacent areas.
- Locate and remove all transite pipe from the fairways in, around, and adjacent to areas proposed for development.

Level of Significance After Mitigation

Less than significant impact.

Accident Conditions

Impact HAZ-1b:	**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?**

Source(s): Project Application Materials.

Impact Analysis

The project would construct a predominantly residential development, with one retail/commercial site as well as open space and trails. Potentially hazardous materials such as limited amounts of household cleaning supplies and other potentially hazardous cleaning-related supplies may be stored on-site, as is typical of residential and retail/commercial uses and are not anticipated to be of sufficient quantity to pose a significant hazard to the public or environment. Additionally, the retail/commercial part of the project would comply with all applicable laws regarding the use, storage, and disposal of hazardous materials, including the provision of spill prevention kits in accordance with Cal/OSHA standards. Therefore, the proposed project would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions related to the release of hazardous materials into the environment. The operations on-site would comply with all applicable federal, State, and local laws regarding warehouse land uses, and there are no uses contemplated that would involve the use of hazardous materials.

The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Although a limited amount of cleaning supplies and other potentially hazardous cleaning-related supplies may be stored on-site, they are not anticipated to be of sufficient quantity to pose a significant hazard to the public or environment. Additionally, the project would comply with all applicable laws regarding the use, storage, and disposal of such materials.

As discussed in Section 3.3, *Air Quality*, the proposed project would not emit air pollutants at levels that would exceed health and safety exposure thresholds. Additionally, the proposed project's diesel particulate matter emissions would not expose any sensitive receptors in the project vicinity to unacceptable levels of health risk. Thus, the project is anticipated to have a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Emergency Response or Evacuation Plan

Impact HAZ-1c: Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?

Source(s): Project Application Materials

Impact Analysis

The project would not impair the implementation of, or physically interfere with, an emergency response plan and/or emergency evacuation plan. The County of Riverside and City of Corona will review the proposed project to ensure it does not interfere with their respective established emergency operations plans. Therefore, the project would have a less than significant impact on adopted emergency response or emergency evacuation plans.

Construction

During construction, traffic management plans approved by the County of Riverside or City of Corona (depending on jurisdiction) would be in place to ensure that no impacts or delays to emergency response occur along roads. Therefore, the project would have a less than significant impact.

Operation

Once operational, the project would not impede emergency response access on any area roadway. The project would include adequate access for emergency response vehicles and personnel, as developed in consultation with County of Riverside and City of Corona Fire Department personnel. Project frontage improvements would provide adequate access for emergency vehicles. Therefore, the project would have a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Hazardous Emissions

Impact HAZ-1d: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school?

Source(s): Project Application Materials, Phase I ESA, 2016 Phase II ESA, and 2019 Phase II ESA.

Impact Analysis

The nearest schools within one-quarter mile of the project site are Coronita Elementary School, located approximately 248 feet (0.05 mile) east of the project site, Cesar Chavez Academy, located

approximately 415 feet (0.09 mile) southwest of the project site, and John Adams Elementary, located approximately 957 feet (0.18 mile) southeast of the project site. The project includes residential and commercial/retail buildings, similar to existing surrounding uses, that would not have any unique operations or features that would create a safety risk. However, as outlined above in Impact HAZ-1 and HAZ-2, although a limited amount of cleaning supplies and other potentially hazardous cleaning-related supplies may be stored on-site, they are not anticipated to be of sufficient quantity to pose a significant hazard to the public or environment. While the removal of the septic tanks, brush/debris, rubble/construction materials, and transite pipes would constitute the transport and disposal of potentially hazardous materials, the proposed project would adhere to industry standards in their removal and disposal of these objects and materials. Transport of these materials would be performed by commercial vendors who would be required to comply with various federal and State laws regarding hazardous materials transportation (e.g., Federal Motor Carrier Safety Administration regulations and 49 CFR Parts 100-185). Additionally, the project would comply with all applicable laws regarding the use, storage, and disposal of hazardous materials, including provision of spill prevention kits in accordance with Cal/OSHA standards

Therefore, implementation of the project would not produce hazardous emissions or otherwise cause hazardous materials impacts upon school facilities located within 0.25 mile of an existing or proposed school. Additionally, the project would not emit significant levels of hazardous emissions either during construction or operation. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Hazardous Materials Listing

Impact HAZ-1e:	**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 not create a significant hazard to the public or the environment?**

Source(s): Project Application Materials, Phase I Environmental Site Assessment.

Impact Analysis

As outlined in the Phase I ESA (Appendix F1), while the proposed project site is listed in the State Water Board GeoTracker Database, the project site does not represent an environmental hazard to the surrounding residential properties due to its current case closed status. The project site was not listed in any other State list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Thus, the project would not create a significant hazard to the public or the environment as a result of being included on such a list.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Airports

Impact HAZ-2a: Result in an inconsistency with an Airport Master Plan?

Source(s): Riverside County General Plan Figure S-20 "Airport Locations," GIS database.

Impact Analysis

The nearest airport to the project site is the Corona Municipal Airport, located approximately 1.35 miles northeast of the project site. As adopted by the Riverside County Airport Land Use Commission (ALUC), the Riverside County Airport Land Use Compatibility Plan Policy Document establishes policies applicable to land use compatibility planning in the vicinity of airports throughout Riverside County. The project site is not within a compatibility zone for the Corona Municipal Airport (ALUC 2004). Furthermore, according to the Riverside County Map My County GIS database, the project is not located in an Airport Influence Area or an airport compatibility zone. The project elements include typical residential and commercial/retail buildings, similar to surrounding uses, that will not have any unique operations or features that would result in a higher safety risk for the project site than would be typical throughout the region. Therefore, the project does not include any structures that would put people at risk of safety hazard related to a nearby airport.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Airports

Impact HAZ-2b: Require review by the Airport Land Use Commission?

Source(s): Riverside County General Plan Figure S-20 "Airport Locations," GIS database.

Impact Analysis

ALUC review is required when a project is located within the boundaries of an Airport Influence Area. ALUC review is also required when a local jurisdiction processes a legislative action like a

General Plan Amendment, Specific Plan Amendment, Zone Change, or Zoning Ordinance. The nearest airport to the project site is the Corona Municipal Airport, located approximately 1.35 miles northeast of the project site, which is located outside the boundaries of the Corona Municipal Airport Influence Area Boundary as indicated on Riverside County General Plan Figure S-20 "Airport Locations," GIS database. Although the project is located outside of any Airport Influence Area, implementation of the proposed project requires a General Plan Amendment and Zone Change. As such, the project will be reviewed by the Riverside County ALUC during the public review period through submission to State Clearinghouse.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Airports

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:

Impact HAZ-2c: Result in a safety hazard for people residing or working in the project area?

Source(s): Riverside County General Plan Figure S-20 "Airport Locations," GIS database.

Impact Analysis

The nearest airport to the project site is the Corona Municipal Airport, located approximately 1.35 miles northeast of the project site; however, the proposed project is located outside the boundaries of the Corona Municipal Airport Influence Area Boundary. As adopted by the Riverside County ALUC, the Riverside County Airport Land Use Compatibility Plan Policy Document establishes policies applicable to land use compatibility planning in the vicinity of airports throughout Riverside County. The project site is not within a compatibility zone for the Corona Municipal Airport (ALUC 2004). As previously stated in Impact HAZ-2a, the proposed project elements include typical residential and commercial/retail buildings, similar to surrounding uses, that will not have any unique operations or features that would result in a higher safety risk for the project site than would be typical throughout the region. Therefore, the proposed project does not include any structures that would put people at risk of safety hazard related to a nearby airport.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Private Airstrips

For a project within the vicinity of a private airstrip, or heliport:

Impact HAZ-2d: Result in a safety hazard for people residing or working in the project area?

Source(s): Riverside County General Plan Figure S-20 "Airport Locations," GIS database.

Impact Analysis

There are no private airstrips or helipads in the immediate project vicinity (Google 2018). The nearest heliport to the project site is located at Corona Municipal Airport, approximately 1.35 miles northeast of the project site. As discussed, the project elements include typical residential and commercial/retail buildings, similar to surrounding uses, that would not have any unique operations or features that would result in a higher safety risk for the project site than would be typical throughout the region. Additionally, the buildings proposed on the project site would be at a lower elevation than surrounding uses and would not create any substantial glare or have operations that would cause a risk to air traffic and would not interfere with any flight patterns for aircraft or helicopters. Therefore, the project would not present a safety hazard for people residing or working in the project area.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

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3.10 - Hydrology and Water Quality

This section describes the existing hydrology and water quality setting and potential effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based upon existing project site conditions, project site plans/exhibits, the County of Riverside 2020 General Plan, the City of Corona 2020-2040 General Plan; as well as the project-specific Preliminary Water Quality Management Plan (WQMP), the project-specific Preliminary Hydrologic Analysis, the project-specific Preliminary Water Report, and the project-specific Preliminary Reclaimed Water Report—all of which are located in Appendix G of this Draft EIR.

3.10.1 - Existing Conditions

Climate

Temperatures in the project area range from an average high of 79°F (degrees Fahrenheit) and an average low of 50.2°F. The record high for the area is 114°F and the record low is 23°F. The annual average rainfall for the area is approximately 16 inches per year. The climate is characterized by hot dry summers when temperatures can rise above 100°F, and moderate winters. Most of the precipitation in the project area occurs between the months of December and March.

Flood Zone

The National Flood Insurance Act (1968) established the National Flood Insurance Program (NFIP), which is based on minimum requirements for floodplain management and is designed to minimize flood damage within Special Flood Hazard Areas (SFHAs). The Federal Emergency Management Agency (FEMA) is the agency which administrates the NFIP. SFHAs are defined as areas that have a 1 percent chance of flooding within a given year; this is also referred to as the 100-year flood. Flood Insurance Rate Maps (FIRMs) were developed to identify areas of flood hazards within a community. According to FIRM No. 06065C0688G and No. 06065C1351G, published by FEMA (Exhibit 3.10-1 and Exhibit 3.10-2), the project site contains two SFHAs; County Club Creek and County Club Creek North Tributary. Both of these SFHAs are designated as Zone AE with floodways and Zone X. The Zone AE area is subject to flooding by the 1 percent annual chance flood with the flood elevations determined. The floodway is the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1 percent annual chance flood can be carried without substantial increases in flood heights. The Zone X area has a 0.2 percent annual chance flood or 1 percent annual chance flood with average depths less than 1 foot or with drainage areas less than 1 square mile.[1]

[1] KWC Engineers. 2024. Preliminary Hydrologic Analysis for Trails at Corona. May 2018, Revised April 2019, Revised May 2024.

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Source: FEMA FIRM Map, August 28, 2008.

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Exhibit 3.10-1
FEMA Flood Map No. 06065C0688G

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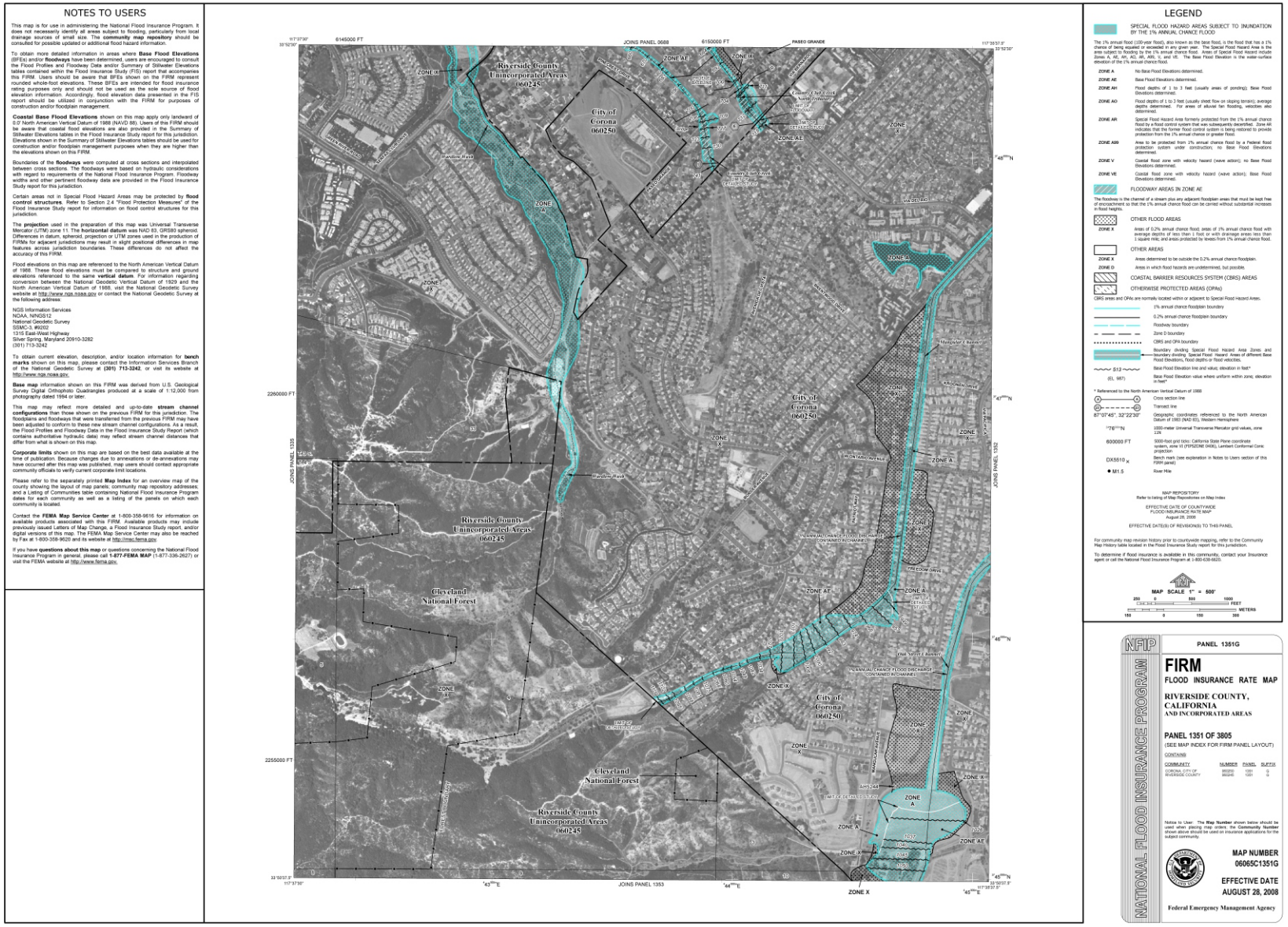

Source: FEMA FIRM Map, August 28, 2008.

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Exhibit 3.10-2
FEMA Flood Map No. 06065C1351G

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Redevelopment of the project site into residential/commercial developments would impact the FEMA floodplains and requires a Conditional Letter of Map Revision (CLOMR) prior to issue of a grading permit. CLOMR requests also need to include documented compliance with the Endangered Species Act from the National Marine Fisheries Service (NOAA Fisheries) or the United States Fish and Wildlife Service (USFWS). Prior to inspection for occupancy, a Letter of Map Revision (LOMR) is required.[2]

Additionally, the Riverside County Flood Control and Water Conservation District (District) has identified the area as an area of flooding sensitivity. Development in an area with this designation is subject to the development guidelines identified in Riverside County Ordinance No. 458. The intent of the ordinance is to: (1) ensure that any new construction and/or substantial improvement within a mapped floodplain is done in a manner that reduces damage to the public and property; and (2) discourage any new development within floodways. The District is designated to administer this program in most of the western parts of the County.

Regional Surface Water Hydrology

Riverside County incorporates four major watershed areas in which river systems, lakes, reservoirs, and natural drainage areas are located. Specifically, the project site is located within the Santa Ana River Watershed. The County of Riverside's supply of water is limited by its arid climate, agricultural practices, projected population growth and its associated demand and development, and the dependence on low quality imported water. Additionally, the availability of imported surface water has been reduced due to changing regulations.

Local Surface Water Hydrology

As included in the project-specific Preliminary Hydrologic Analysis (Appendix G), portions of the project area serve as a drainage watershed with the incoming water coming from an outlet point near Planning Area 1, immediately south of State Route (SR) 91, where flows concentrate at an 8-foot by 8-foot reinforced concrete box at the outlet point.

Groundwater

Groundwater resources in the County are delineated by their quality and quantity. Most groundwater basins within the County of Riverside store local and imported water and are used to satisfy seasonal and drought-year demands. Under groundwater recharge programs, groundwater basins are artificially replenished in wet years with surplus imported water. Water is then extracted during drought years or emergencies. Groundwater recharge may also involve the recharge of reclaimed water, thereby enhancing the region's ability to meet water demand during years of short supply and increasing overall local supply reliability.

The depth to the regional groundwater in the vicinity of the project site is approximately 94.31 to 111.7 feet below the ground surface, based on measurements taken at two different wells close to the project site on March 7, 2006, and March 16, 2015, respectively.

[2] KWC Engineers. 2024. Preliminary Hydrologic Analysis for Trails at Corona. May 2018, Revised April 2019, Revised May 2024.

Seismically Induced Inundation

Seismically induced inundation refers to flooding that occurs when water retention structures fail during an earthquake. Often, inundation is triggered by damage from a seiche. A seiche is a wave that reverberates on the surface of water in an enclosed or semi-enclosed basin, such as a reservoir, lake, bay, or harbor, in response to ground shaking during an earthquake. The following water bodies are located in the vicinity of the project site: Border Lake (approximately 1,570 feet east), Prado Basin (approximately 2,760 feet north/northwest), Lake Matthews (approximately 8.27 miles east), and Irvine Lake (approximately 8.33 miles southeast).

3.10.2 - Regulatory Setting

State Regulations

In California, the regulation, protection, and administration of water quality are carried out by the California State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards (RWQCBs). The State is divided into nine regions due to regional issues related to water quality and quantity. In compliance with Section 303 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, each RWQCB is required to adopt a Water Quality Control Plan or Basin Plan that recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface water, local water quality conditions and problems, and Total Maximum Daily Load (TMDL). The project site is located within the Santa Ana RWQCB, which is addressed in the Water Quality Control Plan for the Santa Ana Basin, dated January 24, 1995, updated in 2008, 2011, and 2016. The Santa Ana Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of its regional waters. The Santa Ana RWQCB has the authority to implement water quality protection standards through the issuance of permits to waters within its jurisdiction.

States are required to develop a TMDL to address each pollutant causing impairment. A TMDL defines how much of a pollutant a water body can tolerate and still meet water quality standards. Each TMDL must account for all sources of the pollutant, including discharges from wastewater treatment facilities; runoff from homes, forested lands, agriculture, and streets or highways; contaminated soils/sediments, legacy contaminants such as dichlorodiphenyltrichloroethane (DDT) and polychlorinated biphenyls (PCBs), on-site disposal systems (septic systems) and deposits from the air. Federal regulations require that the TMDL, at a minimum, account for contributions from point sources (permitted discharges) and contributions from non-point sources, including natural background. In addition to accounting for past and current activities, TMDLs may consider projected growth that could increase pollutant levels. TMDLs allocate allowable pollutant loads for each source, and identify management measures that, when implemented, will assure that water quality standards are attained.

The Santa Ana RWQCB administers the National Pollutant Discharge Elimination System (NPDES) permit requirements for the project area, including the project site. In 1990, the United States Environmental Protection Agency (EPA) established Phase I of the NPDES stormwater program to address discharges from construction activities disturbing 5 acres or more of land. In 1992, the State adopted a related NPDES General Permit for Storm Water Discharges Associated with Construction Activities (Construction Activities General Permit) for projects greater than 5 acres in size. The permit

required applicable projects have a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP specifies Best Management Practices (BMPs) that would prevent construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off-site into receiving waters; eliminates or reduces non-stormwater discharges to storm sewer systems and waters of the State; and provides a monitoring program for the routine inspection of all BMPs.

In 1999, the State adopted the Construction Activities General Permit (State Water Board Order No 99-08-DWQ, NPDES CAS000002) which requires the development and implementation of a SWPPP for applicable projects, where the threshold was reduced from 5 acres or greater of soil disturbance, set by the 1992 General Construction Permit, to 1 acre or greater of soil disturbance. The SWPPP is required to achieve two major objectives: to help identify the sources of sediment and other pollutants that affect the quality of stormwater discharges; and, to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater and non-stormwater discharges.

The State Water Board has jurisdiction throughout California. It was created by the State Legislature in 1967, and it protects water quality by setting Statewide policy, coordinating and supporting the RWQCB efforts, and reviewing petitions that contest Regional Board actions. There are nine RWQCBs that exercise rulemaking and regulatory activities by basins.

The Construction Stormwater General Permit (Order WQ 2022-0057-DWQ, NPDES No. CAS000002) authorizes the discharge of stormwater runoff from construction projects that may result in land disturbance of 1 acre or more (or less than 1 acre, if it is part of a larger common plan of development or sale, which is 1 acre or more). Unlike some of its predecessors, this General Construction Permit classifies construction sites under three Risk Levels. Risk Level 1 sites are subject to requirements similar to those established in Order No. 99-08-DWQ; Risk Level 2 sites are subject to Numeric Action Levels (NALs) for pH and turbidity, in addition to Risk Level 1 requirements; and Risk Level 3 sites are subject to Numeric Effluent Limits (NELs), in addition to Risk Level 1 and 2 requirements. Project Risk Levels are determined by the proposed project's sediment discharge risk and the receiving water risk. The discharger shall develop the SWPPP and a construction site monitoring program prior to the commencement of any of the construction activities, to be implemented until project completion.

Sustainable Groundwater Management Act

In September 2014, Governor Edmund G. Brown Jr. signed a three bill package known as the Sustainable Groundwater Management Act (SGMA). The legislation allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. The SGMA creates a framework for sustainable, local groundwater management. The three bills that make up the SGMA are Assembly Bill (AB) 1739 by Assembly Member Roger Dickinson, and Senate Bill (SB) 1319 and SB 1168 by Senator Fran Pavley.

In September 2015, Governor Brown signed SB 1319, by Senator Fran Pavley. SB 1319 makes various technical, clarifying changes to the SGMA including requirements for groundwater sustainability agency formation, the process for State Water Board intervention if no responsible agency is

specified for a basin, guidelines for high- and medium-priority basins, and participation of mutual water companies in a groundwater sustainability agency.

In summary, the SGMA**:**

- Provides for sustainable management of groundwater basins.
- Enhances local management of groundwater consistent with rights to use or store groundwater.
- Establishes minimum standards for effective, continuous management of groundwater.
- Provides local groundwater agencies with the authority, technical, and financial assistance needed to maintain groundwater supplies.
- Avoids or minimizes impacts for land subsidence.
- Improves data collection and understanding of groundwater resources and management.
- Increases groundwater storage and removes impediments to recharge.
- Empowers local agencies to manage groundwater basins, while minimizing State intervention.

The SGMA requires local agencies to establish a new governance structure, known as Groundwater Sustainability Agencies, prior to developing groundwater sustainability plans for groundwater basins or sub-basins that are designated as medium or high priority.

California Fish and Wildlife Code Sections 1601–1603

This legislation is intended to protect and conserve fish and wildlife resources of the State by requiring a permitting procedure for diverting, changing, or otherwise disturbing a current natural waterway. A Streambed Alteration Permit is required from the California Department of Fish and Wildlife (CDFW), for any changes to the stream, stream channel, or banks. For the proposed project, compliance with this code would be required if tributaries on the project site are diverted, changed, or otherwise disturbed. Compliance is usually satisfied with issuance of a permit from the CDFW, typically referred to as a "1602 Permit."

Local Regulations

County of Riverside General Plan

The County of Riverside 2020 General Plan Land Use Element, Multipurpose Open Space Element, and Safety Element set forth the following applicable policies that are relevant to hydrology and water quality:

Land Use Element

LU 4.1 Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts:

f. Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought-tolerant landscaping, and water recycling, as appropriate.

Multipurpose Open Space Element

OS 2.1 Implement a water-efficient landscape ordinance and corresponding policies that promote the use of water-efficient plants and irrigation technologies, minimizes the use of turf, and reduces water-waste without sacrificing landscape quality.

OS 2.2 Encourage the installation of water-conserving systems such as dry wells and graywater systems, where feasible, especially in new developments. The installation of cisterns or infiltrators shall also be encouraged to capture rainwater from roofs for irrigation in the dry season and flood control during heavy storms.

OS 3.3 Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.

OS 3.7 Where feasible, decrease stormwater runoff by reducing pavement in development areas, reducing dry weather urban runoff, and by incorporating "Low Impact Development," green infrastructure and other Best Management Practice design measures such as permeable parking bays and lots, use of less pavement, biofiltration, and use of multi-functional open drainage systems, etc.

OS 4.3 Ensure that adequate aquifer water recharge areas are preserved and protected.

OS 4.4 Incorporate natural drainage systems into developments where appropriate and feasible.

OS 4.6 Retain stormwater at or near the site of generation for percolation into the groundwater to conserve it for future uses and to mitigate adjacent flooding. Such retention may occur through "Low Impact Development" or other Best Management Practice measures.

OS 5.3 Based upon the site-specific study, all development shall be set back from the floodway boundary a distance adequate to address the following issues:

a) Public safety;
b) Erosion;
c) Riparian or wetland buffer;
d) Wildlife movement corridor or linkage;
e) Slopes;
f) Type of watercourse; and
g) Cultural resources.

OS 5.6 Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.

Safety Element

S 4.10 Require all proposed projects anywhere in the County to address and mitigate any adverse impacts that it may have on the carrying capacity of local and regional storm drain systems.

City of Corona General Plan

The City of Corona 2020-2040 General Plan sets forth the following applicable policies that are relevant to hydrology and water quality:

Land Use

LU-6.1 Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water-efficient building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

LU-6.2 Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:

- Landscaping—drought-tolerant species, use of recycled water for irrigation, and other purposes
- Capture of rainwater and reuse on-site
- Building design and construction materials—energy and water-efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques.

LU-15.7 Strive to incorporate best practices in sustainability (including water conservation, energy conservation, groundwater filtration, and other similar techniques) into the design and development of public and institutional buildings.

LU-20.6 Locate and design development to complement and assure its compatibility with the potential Metropolitan Water District (MWD) water treatment facility, if developed.

Infrastructure and Utilities

IU-1.5 As a condition of permit approval, require adequate water supply, distribution, pumping, storage, and treatment facilities to be operational prior to the issuance of building permits.

IU-1.7 Require all new development to be served from an approved domestic water supply to protect the health and safety of the public and groundwater supplies.

IU-1.8 Through engineering design, construction practices, and enforcement of water regulatory standards, ensure that existing and new land uses, and development do not degrade the City's surface waters and groundwater supplies.

IU-1.9 Require the costs of improvements to the water supply transmission, distribution, pumping, storage, and treatment facilities necessitated by new development be equitably borne by beneficiaries, either through the payment of fees, or construction of the improvements.

IU-2.3 Require incorporation of best available technologies for water conservation, internally and externally, in new construction and associated site design.

IU-2.5 Require that sewer flows be minimized in existing and future developments through water conservation and recycling efforts.

IU-2.9 Require that grading plans be designed and implemented to reduce stormwater runoff by capturing rainwater on-site and storing on a temporary, short-term basis to facilitate groundwater recharge rather than relying solely on community drainage facilities.

IU-2.10 Require the use of rainwater capture and storage facilities, techniques, and improvements in residential and nonresidential developments to further objectives for water conservation.

IU-4.4 Evaluate the adequacy of stormwater conveyance and storage control facilities in areas where intensification of land use is anticipated to occur; coordinate capital improvements planning for infrastructure with the direction, extent, and timing of growth.

IU-4.7 Require adherence to City regulatory stormwater quality measures and, if needed, take necessary enforcement action(s) to eliminate illicit connections and discharges to/from the stormwater system.

IU-5.1 Ensure that existing and new development does not directly degrade or indirectly contribute to the degradation of surface waters or the groundwater system.

IU-5.5 Require that development projects consider the appropriateness of the channelization of stormwater runoff to facilitate its possible capture and reuse for on-site irrigation and other purposes.

IU-5.8 During construction projects, ensure compliance with all terms and conditions outlined in the NPDES permit, including the implementation of the latest Best Management Practices and determination of need for any additional water quality management plans to reduce pollutants and urban runoff flows to the maximum extent practicable.

Environmental Resources

ER-1.2 Require all public and private grading and construction activities to minimize adverse impacts on the City's water resources through the use of Best Management Practices, as established and updated from time to time by the City of Corona.

ER-1.3 Implement standard conditions of approval on development and related projects that require appropriate mediation strategies if soil or groundwater contamination is encountered during project grading and construction.

ER-2.4 Require the use of water conservation features and materials in the design and construction of all public buildings, projects, and site development while encouraging their use citywide.

ER-2.5 Require the use of reclaimed water in outdoor common areas and landscape treatments for homeowners' associations, public facilities, commercial and industrial uses where feasible.

ER-3.2 Incorporate natural drainage systems (vegetated swales, small ponds, etc.) into developments, where appropriate and feasible, that offer opportunities for groundwater recharge.

ER-5.2 During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.

The Temescal Canyon Area Plan (TCAP)

The Prado Dam is an integral part of the Santa Ana River Watershed Mainstream project protecting western Riverside County as well as Orange County. Dam failure would cause flooding within the downstream areas of various the dam. The proposed project site is not within a dam inundation area (TCAP Figure 10).

TCAP 20.1 Adhere to the flood proofing and flood protection requirements of the Riverside County Flood Control and Water Conservation District.

TCAP 20.2 Protect proposed development projects that are subject to flood hazards, surface ponding, high erosion potential or sheet County Flood Control and Water Conservation District for review.

TCAP 20.3 When possible, create flood control projects that maximize multi-recreational use and water recharge.

3.10.3 - Thresholds of Significance

Based, in part, on criteria identified in Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, as well as Riverside County's environmental checklist, hydrology impacts resulting from the implementation of the proposed project would be considered significant if the project would:

Water Quality Impacts

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

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

c) Substantially alter the existing drainage pattern of site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces?

d) Result in substantial erosion or siltation on-site or off-site?

e) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?

f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

g) Impede or redirect flood flows?

h) In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?

i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.10.4 - Project Impact Analysis and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Water Quality Standards

Impact HYD-1a:	**Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?**

Source(s): Riverside County 2020 General Plan Figure S-9 “Special Flood Hazard Areas,” Figure S-10 “Dam Failure Inundation Zone,” Riverside County Flood Control District Flood Hazard Report/ Condition, GIS database, Project Application Materials, WQMP, Preliminary Hydrologic Analysis, and the City of Corona 2020-2040 General Plan.

Impact Analysis

Construction

Implementation of the proposed project would result in construction activities with the potential to contribute to pollutants in off-site surface waters, potentially impacting the water quality of the

Santa Ana Watershed. Generally, construction-phase activities could generate pollutants such as increased silts, debris, chemicals, and dissolved solids related to the activities described below:

- Grading—Disruption of surface soils and increased susceptibility to erosion.
- Building construction—Use of sealants, glues, wood preservatives, oils, concrete, and the generation of debris related to construction activities.
- Painting—Paint fragments and stucco flakes.
- Construction equipment and vehicle maintenance—Washing, chemical degreasing.

Water quality in jurisdictional areas could be negatively affected by potential surface runoff and sedimentation during construction. Because construction activities could result in increased pollutants to surface water, construction of the proposed project could potentially result in a short-term degradation to surface water quality. The use of petroleum products (e.g., fuels, oils, and lubricants) and erosion of cleared land during construction could potentially contaminate surface water. However, these impacts associated with water quality would be reduced through compliance with the County of Riverside 2020 General Plan policies, City of Corona 2020-2040 General Plan policies, and through compliance with mandatory NPDES permit requirements applicable to all new development. The City of Corona's grading ordinance contains requirements for grading, site erosion control, and NPDES requirements.

The WQMP is a guidance document that assists with project compliance with the Santa Ana Regional Water Quality Control Board requirement. The proposed project would, in addition to obtaining a General Construction Permit, be required to prepare a WQMP to address urban runoff water quality issues. Prior to the issuance of grading permits for any portion or phase of the proposed project, the developer would be required to prepare and submit a Final WQMP, Final Hydrologic Analysis, and a SWPPP that conforms to the NPDES permit. The SWPPP would be subject to review and approval by the County of Riverside (Planning Area 1–5) and City of Corona (Planning Area 6). The Final WQMP and SWPPP would contain specific BMPs to prevent stormwater pollution from construction sources and operational sources and avoid creating substantial additional sources of polluted runoff in stormwater discharges during construction.

The BMPs for this project would include Low Impact Development (LID) features—bioretention basins, self-treating areas, vaulted modular wetland systems Units, and Underground Detention Chambers—on-site. These BMPs would identify a practical sequence for site restoration, implementation, contingency measures, responsible parties, and agency contacts and are further discussed below under the *Water Quality Management Features* section. A Wet Weather Erosion Control Plan (WWECP) would be required to further address impacts related to runoff.

Through compliance with the Final WQMP, NPDES requirements, and County Grading regulations, temporary construction impacts would be considered less than significant.

Long-Term Operational Impacts

Long-term operations of the proposed project would increase the potential of stormwater runoff transporting contaminants from roadway surfaces, parking lots, roofs, and other exposed structural and landscape surfaces into the storm drain system. Typical residential and commercial runoff

contaminants (e.g., oil, grease, surfactant, heavy metals, solvents, pesticides, nutrients, or fecal coliform bacteria) can be expected within runoff. The project site runoff flows drain differently depending on the planning area. Current directional flows will be preserved as part of the proposed project, as follows:

- **Planning Area 1, 2, and Planning Area 4:** Westerly.
- **Planning Area 3:** Northerly and westerly.
- **Planning Area 5:** Northerly and northeasterly.
- **Planning Area 6:** Northerly.

Ultimately, drainage occurs at the downstream concentration point, located at the SR-91 culvert in Planning Area 1.

The receiving waters tributary to the project site is the Santa Ana River (Reach 3), which is currently on the State's 303(d) List of Water Quality Limited Segments as impaired. Reach 3 is impaired for bacteria and metals. Table 3.10-1 provides information from the proposed project's Preliminary WQMP that shows the potential pollutants generated by commercial industrial development.

Table 3.10-1: Potential Pollutants Generated by the Proposed Project's Land Use Types

Type of Development (Land Use)	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash and Debris	Oil and Grease
Detached Residential Development	P	N	P	P	N	P	P	P
Attached Residential Development	P	N	P	P	N	P	P	P[2]
Commercial/Industrial Development	P[3]	P	P[1]	P[1]	P[5]	P[1]	P	P
Hillside Development (>5,000 ft^2)	P	N	P	P	N	P	P	P
Parking Lots (>5,000 ft^2)	P[6]	P	P[1]	P[1]	P[4]	P[1]	P	P

Notes:
N = Not Potential
P = Potential
[1] A potential pollutant if non-native landscaping exists or is proposed on-site; otherwise not expected.
[2] A potential pollutant if the project includes uncovered parking areas; otherwise not expected.
[3] A potential pollutant is land use involving animal waste.
[4] Specifically petroleum hydrocarbons.
[5] Specifically solvents
[6] Bacterial indicators are routinely detected in pavement runoff.
Source: Water Quality Management Plan (WQMP) (Appendix G)

As indicated in the Preliminary WQMP prepared for the proposed project, based on current receiving water impairments (303(d) List), all potential pollutants are pollutants of concern. The expected

stormwater and urban runoff pollutants reasonably expected to have the potential to occur, and which are associated with a residential/commercial development are as follows:

Pathogens (potential)—Pathogens (bacteria and viruses) are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed. Water containing excessive bacteria and viruses can alter the aquatic habitat and create a harmful environment for humans and aquatic life.

Metals (potential)—The primary source of metal pollution in urban runoff is typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. However, at higher concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources, and bioaccumulation of metals in fish and shellfish.

Nutrients (potential)—Nutrients are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are either dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils. Excessive discharge of nutrients to water bodies and streams can cause excessive aquatic algae and plant growth. Such excessive production, referred to as cultural eutrophication, may lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms.

Pesticides (potential)—Pesticides (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive or improper application of a pesticide may result in runoff containing toxic levels of its active ingredient.

Sediments (potential)—Sediments are soils or other surficial materials eroded and then transported or deposited by the action of wind, water, ice, or gravity. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms' survival rates, smother bottom-dwelling organisms, and suppress aquatic vegetation growth.

Trash and Debris (potential)—Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products on the landscape. The presence of trash and debris may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a stream and thereby lower its water quality.

Oil and Grease (potential)—Oil and grease are characterized as organic compounds of high molecular-weight. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids. Introduction of these pollutants to the water bodies is very possible due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas.

Features have been incorporated into the design of the proposed project in order to ensure that potential runoff pollutants are captured and treated on-site before they are released into the stormwater system. The proposed project could potentially increase priority pollutants, as outlined above. Therefore, treatment control BMPs are required to remove pollutants typically associated with urban runoff. The water quality features and BMPs below are shown on Exhibit II-11 of the Specific Plan.

Water Quality Management Features

As part of the regional goal of improved water quality, the Riverside County Flood Control District accentuates that on-site stormwater be collected, treated and discharged back into the storm drain system. Each of the Planning Areas would contain different BMPs for stormwater management for water capturing, cleansing, and discharging into the stormwater system. All development containing water quality systems would comply with NPDES requirements in effect at the time of approval. If the full development of Planning area 2 and 6 were to occur, planning areas would include the following BMPs:

- Planning Area 1: one bioretention basin and one self-retaining area
- Planning Area 2: one bioretention basin and one modular wetland system[3]
- Planning Area 3: four bioretention basins, one modular wetland system, and one self-treating area
- Planning Area 4: four bioretention basins and one self-treating area
- Planning Area 5: one modular wetland system/underground storage and one bioretention basin
- Planning Area 6: two bioretention basins[4]

Modular wetland systems are a form of water quality treatment system that includes a concrete chamber that moves stormwater linearly, filtering pollutants on-site, to the outlet control device. Bioretention basins are landscaped, shallow basins used to slow and treat on-site stormwater runoff. Stormwater is directed to the basin and then percolates through the system where it is treated and allowed to infiltrate native soils or directed to nearby stormwater drains or receiving waters. Self-treating areas are a form of water quality management that includes natural, landscaped, or turf areas that do not drain into integrated management practices, but rather drain overland off-site or to the storm drain system. The purpose of these water quality management features is to capture and treat stormwater on-site. The proposed project's Homeowner's Association (HOA) would be responsible for maintenance of these features (Exhibit 3.10-3).

Hydromodification standards would be implemented in accordance with the Santa Ana RWQCB and Riverside County Flood Control requirements. A Final WQMP shall be provided in accordance with the requirements of the County of Riverside and the RWQCB. The BMPs discussed above shall be

[3] A modular wetland system is a biofiltration system that utilizes horizontal flow, allowing for a smaller footprint with a higher treatment capacity.

[4] A bioretention basin is a landscaped depression used to slow and treat on-site stormwater runoff. Stormwater is directed to the basin and then percolates through the system where it is treated by several physical, chemical, and biological processes.

implemented to provide water quality protection during grading operations, construction activities and post-construction activities and would be identified in the development of the SWPPP and Final WQMP. All water quality facilities shall be maintained by the HOA.

The Final WQMP shall provide detailed descriptions and instructions for implementing the various BMPs for the proposed project. Long-term stormwater quality would be managed pursuant to a County and City-approved WQMP and SWPPP. Conformance with the mandatory requirements of the SWPPP and WQMP for the proposed project would ensure that no substantial degradation of water quality associated with long-term operation would occur. As such, the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Groundwater Supplies

Impact HYD-1b:	**Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

Source(s): Riverside County 2020 General Plan Figure S-9 “Special Flood Hazard Areas,” Figure S-10 “Dam Failure Inundation Zone,” Riverside County Flood Control District Flood Hazard Report/ Condition, GIS database, Project Application Materials, and City of Corona 2020-2040 General Plan.

Impact Analysis

The proposed project would connect to the City of Corona’s water supply system, City of Corona Utilities Department. According to the City of Corona’s 2020 Urban Water Management Plan (Corona UWMP), the City relies on groundwater for up to 50 percent of its potable water supply. The City has a diverse water supply portfolio including groundwater from three local basins: Temescal Basin, Coldwater Basin, and Bedford Basin. According to the Corona UWMP, the Temescal Basin, Coldwater Basin, and Bedford Basin are not overdrafted of groundwater; nonetheless, the City actively works to prevent overdraft by monitoring the amount of water in the basins. Dominant recharge to the groundwater reservoir is from percolation of precipitation on the valley floor and infiltration of stream flow within tributaries exiting the surrounding mountains and hills.

The Corona UWMP includes analysis of normal, dry year, and multiple dry year supply and demand projections. The projections include demand increase due to growth in population, including increase from new construction, from the City of Corona 2013–2021 General Plan Housing Element. The proposed project is within both the City of Corona (Planning Area 6) and within the County of Riverside/City of Corona Sphere of Influence (Planning Areas 1—5), however only water usage from

Planning Area 6 has been included in the Corona UWMP projects. Table 3.10-2 outlines supply and demand projections.

Table 3.10-2: City of Corona Utilities Department Projected Water Supplies and Demands

Totals			2025	2030	2035	2040	2045
Supply Totals (AFY)			**47,572**	**47,572**	**47,572**	**47,572**	**47,572**
Supply from Groundwater (AFY)			18,072	18,072	18,072	18,072	18,072
Demand Total (AFY)							
Normal Year	Demand		**37,555**	**37,768**	**38,017**	**38,216**	**38,351**
	Surplus		10,017	9,804	9,555	9,356	9,221
Single Dry Year	Demand		**39,358**	**39,581**	**39,842**	**40,051**	**40,192**
	Surplus		8,214	7,991	7,730	7,521	7,380
Five Consecutive Dry Years	Year 1	Demand	**38,382**	**38,599**	**38,854**	**39,057**	**39,195**
		Surplus	9,190	8,973	8,718	8,515	8,377
	Year 2	Demand	**40,635**	**40,865**	**41,135**	**41,350**	**41,496**
		Surplus	6,937	6,707	6,437	6,222	6,076
	Year 3	Demand	**42,212**	**42,452**	**42,731**	**42,955**	**43,107**
		Surplus	5,360	5,120	4,841	4,617	4,465
	Year 4	Demand	**41,987**	**42,225**	**42,503**	**42,726**	**42,877**
		Surplus	5,585	5,347	5,069	4,846	4,695
	Year 5	Demand	**38,757**	**38,977**	**39,234**	**39,439**	**39,579**
		Surplus	8,815	8,595	8,338	8,133	7,993

Notes:
AFY = acre-feet per year
Source: City of Corona 2020 Urban Water Management Plan.

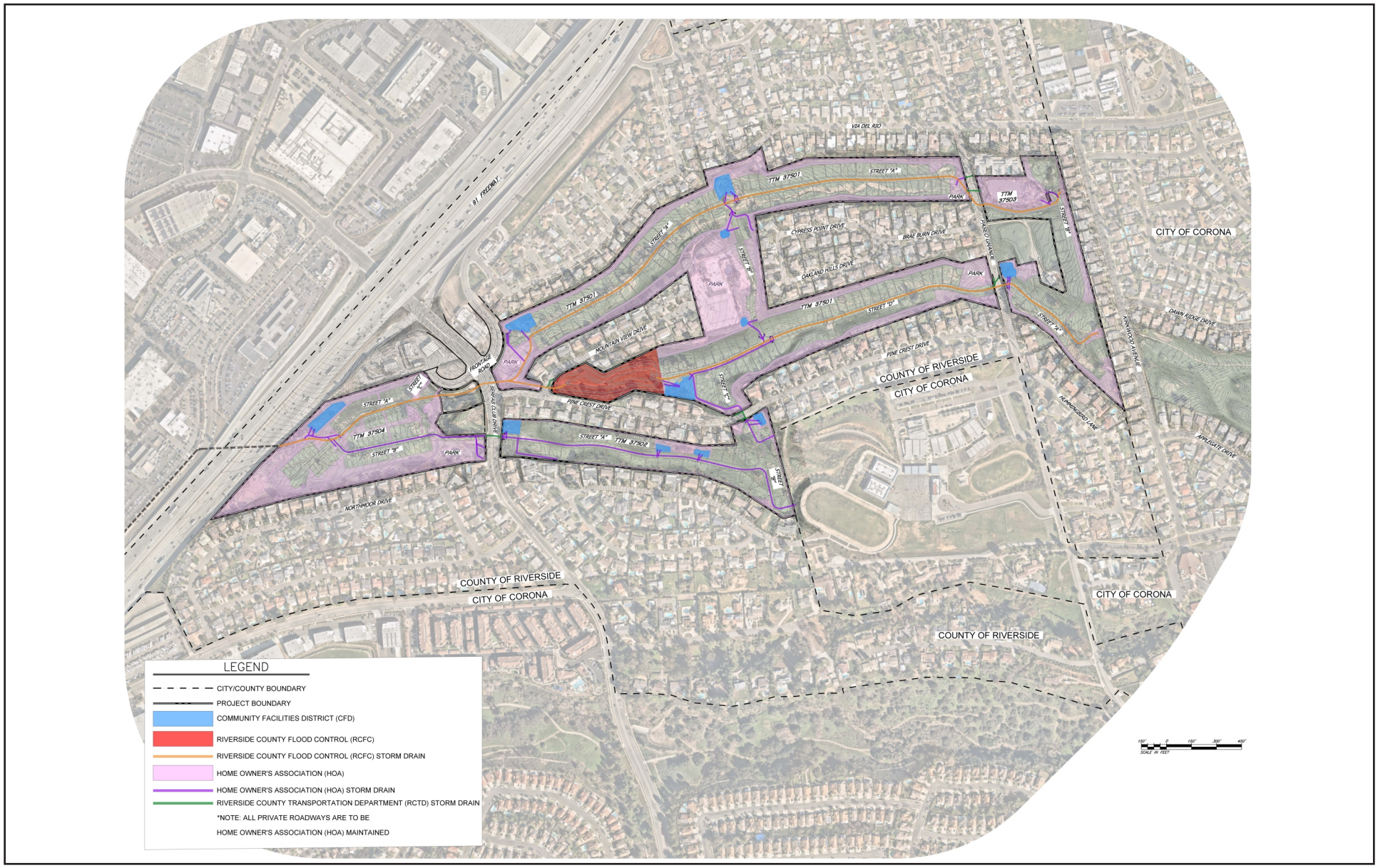
The Bedford-Coldwater Basin was recently declared to be under the direct influence of surface water. In 2020, the City did not produce any groundwater from the Coldwater Basin due to lack of treatment with respect to the influence of surface water. The City is reviewing options for treatment and intends to bring Bedford-Coldwater Basin production back online by 2025. Projected groundwater extractions are limited to the City's surface water rights for the Bedford-Coldwater Basin, approximately 2,112 acre-feet per year (AFY), and the projected supply available from the Temescal Basin is the long-term goal for sustainable production, which includes the sustainable yield estimated at 22,800 AFY and the reliability of this source is set at 15,960 AFY. Under all three scenarios (Normal Year, Dry Year, and Multiple Dry Year), the Corona UWMP forecasts surplus water supplies are currently available to the year 2045.

A Preliminary Water Report (Appendix G), prepared by KWC Engineers in November 2021, discusses the water demand of the proposed project. Table 3.10-3 below summarizes the proposed project's water demand and Exhibit 3.10-4 depicts the project's conceptual on-site domestic water plan.

Table 3.10-3: Proposed Project Water Demand

Planning Area	Total Acreage of Residential and Commercial Use[1]	Water Demand Factor by Use (GPD/ac)[2]	Average Day Demand	
			mgd	AFY
PA 1	3.92	4,000	0.016	17.93
PA 2	0.78	1,610	0.001	1.12
PA 3	18.38	4,000	0.074	82.95
PA 4	6.20	4,000	0.025	28.02
PA 5	4.18	4,000	0.017	19.06
PA 6	13.53	3,750	0.051	57.17
Total	**46.99**	N/A	**0.183**	**206.25**

Notes:
AFY = acre-feet per year
GPD/ac = gallons per day/acre
mgd = million gallons per day
[1] These figures only include the acreage that would be developed with residential and commercial uses, respectively.
[2] The water demand factor is used to convert land use into projected water use by applying a factor that varies by land use type.
Sources: FirstCarbon Solutions (FCS) and Preliminary Water Report, KWC Engineers, November 2021.



Source: KWC Engineers.

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Exhibit 3.10-3
Maintenance Responsibility for the Proposed Project

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The total estimated water demand generated by the proposed project, for all planning areas, is approximately 0.183 million gallons per day (mgd) Average Day Demand. The Average Day Demand results in 206.25 AFY including all planning areas, and 149.08 AFY not including Planning Area 6.

As mentioned above, only Planning Area 6 is included in the forecasted demand for water in the Corona UWMP; therefore, the 149.08 AFY has not been accounted for in the Corona UWMP. However, as outlined above, the entirety of the proposed project can be adequately supplied from the forecasted surplus water supply discussed in the Corona UWMP. Under the Normal Year scenario, Planning Areas 1–5 of the proposed project, which were not included in the Corona UWMP forecasts, would account for approximately 1.5 percent of the surplus water in 2025. Even in the worst-case Five Consecutive Dry Year Scenario, the proposed project would not have a significant impact. The City acknowledges that the use of recycled water is a cost-effective way to offset potable water demand and improve groundwater recharge. Reclaimed water will be used for the proposed project's nonpotable water demands. All Planning Areas will require reclaimed water to serve as park irrigation and slope stabilization on the project site. A Preliminary Reclaimed Water Report prepared by KWC Engineers in November 2021 examined the existing and proposed reclaimed water facilities. The proposed reclaimed water system for the project would be connecting to existing transmission lines at several locations to extend a distribution line to the proposed meter locations (Exhibit 3.10-5). The proposed sewer plan is shown on Exhibit 3.10-6. Approximate static pressures were calculated at the proposed meter locations to determine potential for connection into the existing reclaimed water system. Table 3.10-4 describes the proposed reclaimed water infrastructure improvements for each Planning Area.

Table 3.10-4: Proposed Reclaimed Water Infrastructure Improvements

Planning Area	Project Description	Facility Location	Zone	Proposed Pipe Size (inches)	Quantity
PA 1	Reclaimed Water Irrigation Meter	On-site	1008.5	–	1
	Distribution Reclaimed Water Lines	On-site	1008.5	8	65 (LF)
PA 2	Reclaimed Water Irrigation Meter	On-site	1008.5	–	1
	Distribution Reclaimed Water Lines	On-site	1008.5	8	65 (LF)
PA 3	Reclaimed Water Irrigation Meter	On-site	1008.5	–	4
	Distribution Reclaimed Water Lines	On-site	1008.5	8	460 (LF)
PA 4	Reclaimed Water Irrigation Meter	On-site	1008.5	–	1
	Distribution Reclaimed Water Lines	On-site	1008.5	8	70 (LF)
PA 5	Reclaimed Water Irrigation Meter	On-site	1008.5	–	1
	Distribution Reclaimed Water Lines	On-site	1008.5	8	50 (LF)
PA 6	Reclaimed Water Irrigation Meter	On-site	1008.5	–	1
	Distribution Reclaimed Water Lines	On-site	1008.5	8	650 (LF)

Notes:
LF = linear feet
Sources: FirstCarbon Solutions (FCS) and Preliminary Reclaimed Water Report, KWC Engineers, November 2021.

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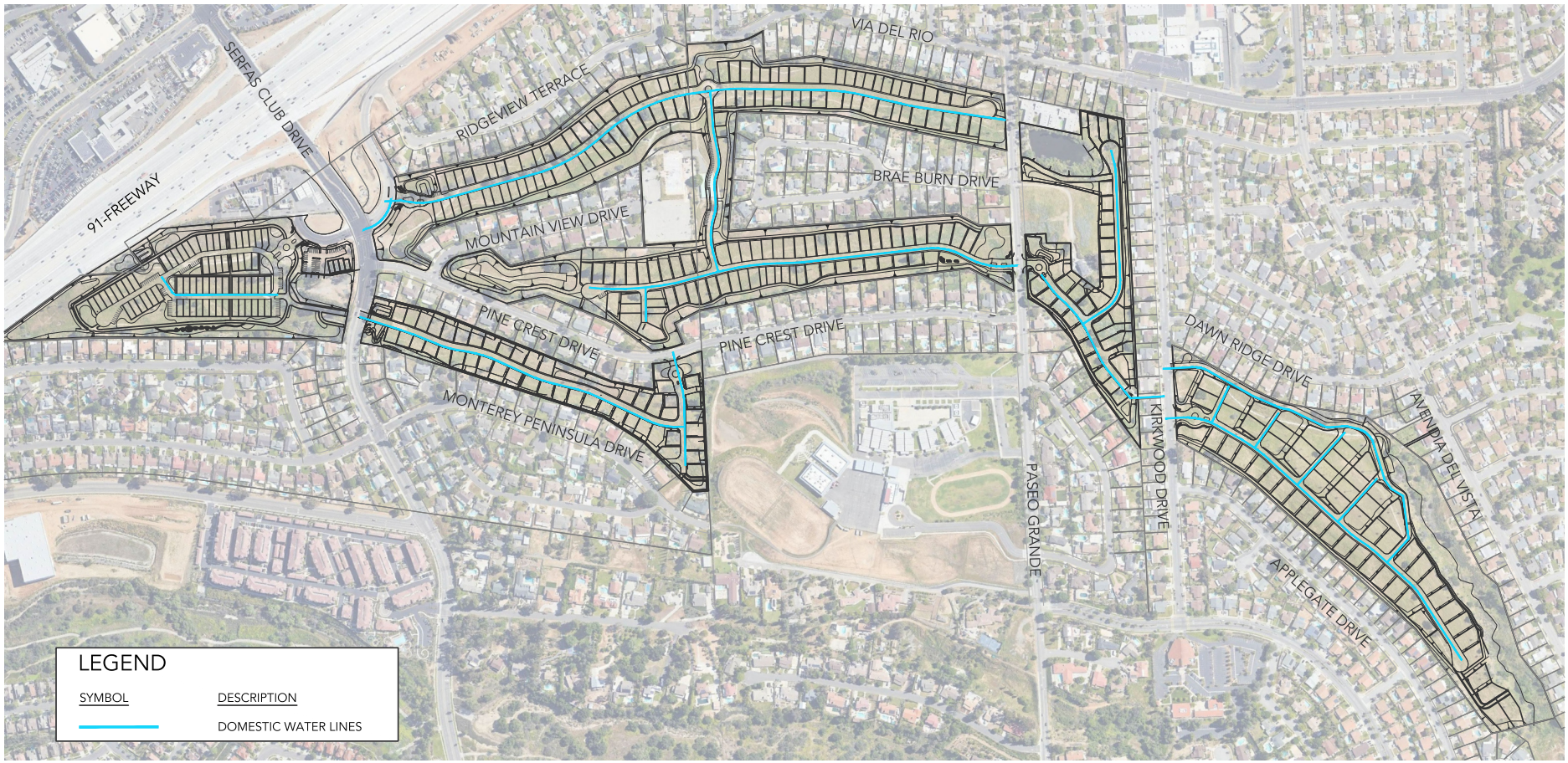

Source: Urban Arena, 2021.

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Exhibit 3.10-4
Conceptual On-Site Domestic Water Plan

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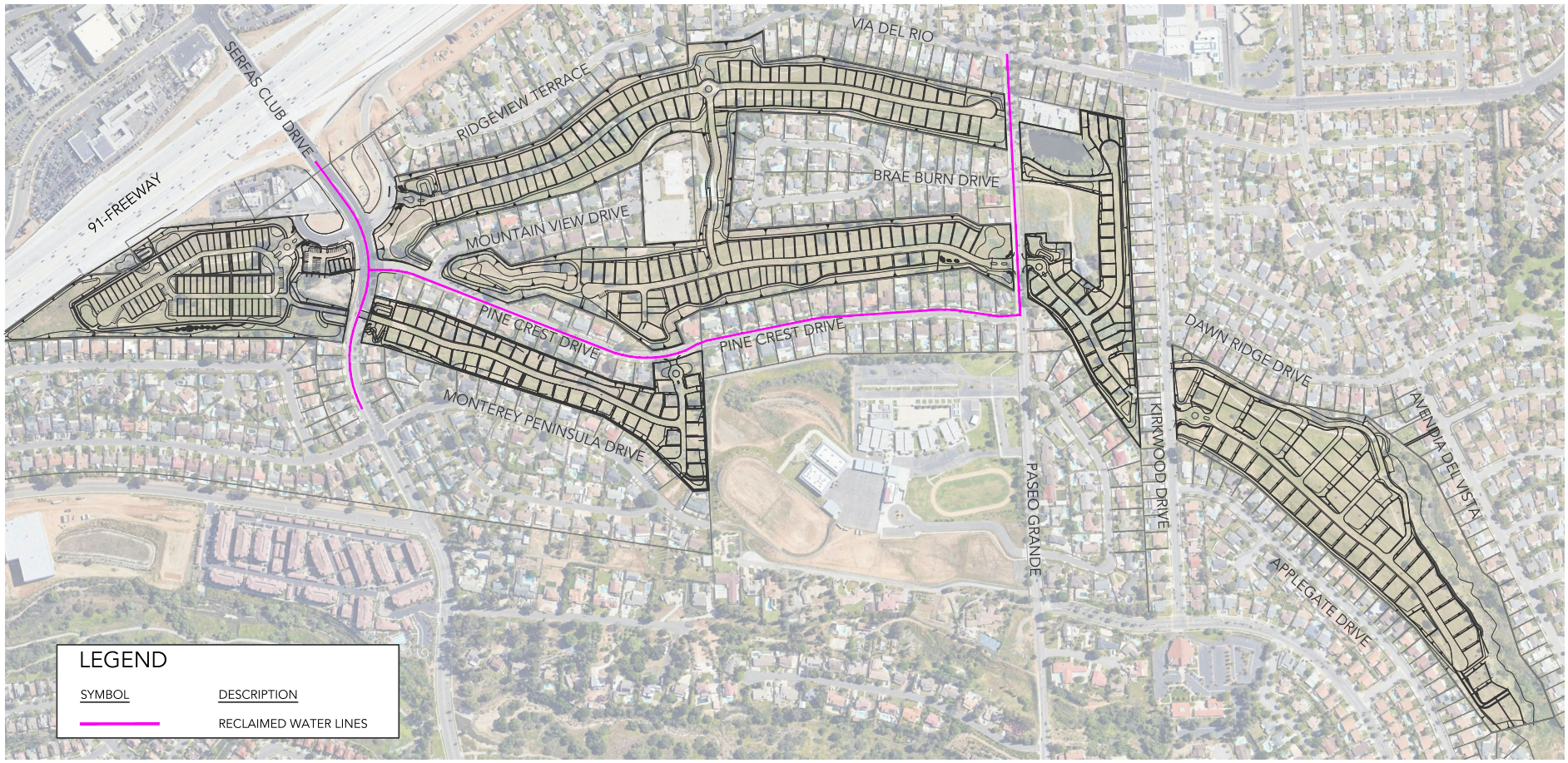

Source: Urban Arena, 2021.

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Exhibit 3.10-5
Conceptual On-Site Reclaimed Water Plan

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As each Planning Area is constructed, the appropriate facilities, as described above, would be put in place to provide the required reclaimed water supply. Because of existing transmission lines in the area, no single Planning Area would be dependent on another for its source of reclaimed water. The proposed reclaimed water infrastructure facilities and the proposed locations, alignments, and sizes would be consistent with the City's 2018 Draft Reclaimed Water Master Plan and related reclaimed water system studies in the City's service area.

Therefore, the proposed project would not add a substantial burden to available water supplies and would not necessitate a need to increase groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Drainage Pattern

Impact HYD-1c:	**Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious surfaces?**

Source(s): Riverside County 2020 General Plan Figure S-9 "Special Flood Hazard Areas," Figure S-10 "Dam Failure Inundation Zone," Riverside County Flood Control District Flood Hazard Report/Condition, GIS database, Project Application Materials, City of Corona 2020-2040 General Plan, and project-specific Hydrologic Analysis.

Impact Analysis

Development of the proposed project would increase runoff from the project site by increasing the amount of impervious surfaces and decreasing the pervious surfaces that could allow infiltration of precipitation. Impervious and paved areas for the project site include proposed streets, curbs, sidewalks and gutters, concrete ribbon, terrace and down drains, parking areas, driveways, and the impervious roofs of each building. However, pervious areas are included for the project site, including bioretention basins, modular wetlands, landscaped areas, and the various public and private open spaces throughout the project site. All private landscaping and private open spaces shall be maintained by the owner. Landscaping and open space located in the public areas will be owned and maintained by the County of Riverside.

Hydrologic Conditions of Concern

Impacts to the hydrologic regime resulting from the proposed project may include increased runoff volume and velocity; reduced infiltration; increased flow frequency, duration, and peaks; faster time to reach peak flow; and water quality degradation. Under certain circumstances, changes could also result in the reduction in the amount of available sediment for transport; storm flows could fill this sediment carrying capacity by eroding the downstream channel. These changes have the potential to permanently impact downstream channels and habitat integrity. A change to the hydrologic regime of a project site would be considered a hydrologic condition of concern if the change would have a significant impact on downstream natural channels and habitat integrity, alone or as part of a cumulative impact from development in the watershed.

Pre-Development Hydrology

As included in the project-specific 2024 Preliminary Hydrologic Analysis (Appendix G), portions of the project area serve as a part of a larger drainage watershed with incoming water flowing to an outlet point near Planning Area 1, immediately south of SR-91. Flows at this outlet point are concentrated at an 8-foot by 8-foot reinforced concrete box culvert with a peak flow capacity of 970 cubic feet per second. Table 3.10-5 below provides the peak flow at various storm frequencies and durations under existing conditions.

Table 3.10-5: Hydrograph Result Summary for 100-year Storm Frequency, Existing Conditions

Duration (hours)	Peak Flow (cubic feet per second)	Runoff Volume (acre-feet)
3	**1,025.5**	104.2
6	977.3	131.6
24	633.2	303.2

Notes:
Bold numbers indicate that peak flows exceed the 970 cubic feet per second capacity of the reinforced concrete box culvert.
Source: Preliminary Hydrologic Analysis, 2024.

Under existing conditions, the capacity of the reinforced concrete box culvert outlet point is exceeded by the 100-year, 3-hour and 6-hour, storm peak flow.

Post-Development Hydrology

As noted above, development of the proposed project would increase runoff from the project site by increasing the amount of impervious surfaces and decreasing the pervious surfaces that could allow infiltration of precipitation. Impervious and paved areas for the project site include proposed streets, curbs, sidewalks and gutters, concrete ribbon, terrace and down drains, parking areas, driveways, and the impervious roofs of each building. However, in addition to a water drainage system (Exhibit 3.10-7), public and private park open space (Exhibit 3.10-8), and required open space landscaping (Exhibit 3.10-9), the proposed project would include the following improvements, which would serve as stormwater storage and treatment of on-site flows, as well as prevent a substantial increase in

water erosion and siltation. If the full development of Planning area 2 and 6 were to occur, the following improvements would be included:

- Planning Area 1: one bioretention basin and one self-retaining area
- Planning Area 2: one bioretention basin and one modular wetland system
- Planning Area 3: four bioretention basins, one modular wetland system, and one self-treating area
- Planning Area 4: four bioretention basins and one self-retaining area
- Planning Area 5: one modular wetland system/underground storage and one bioretention basin
- Planning Area 6: two bioretention basins

Because the proposed project no longer involves the development of Planning Areas 2 and 6, Planning Area 2 would only require improvements limited to a proposed 96-inch storm drain that continues from Planning Area 1 through Planning Area 2 and connects into an existing storm drain line. Planning Area 6 would not require any improvements and would remain undeveloped.

The drainage plan for the proposed project would include two on-site drainage systems. The first will be a collection and conveyance drainage system (i.e., detention basin), and the other will be an existing open space natural flow drainage system developed from an existing pond. Drainage flows on the site are generally from the south to north and both of these systems will out-fall into proposed drainage facilities within the development consistent with the existing drainage pattern.

The drainage system is designed to utilize the upstream natural drainage course in PA 1 and the existing pond within PA 5 to provide adequate erosion control and 100-year flood protection. The system would be designed to ensure that on-site flows and off-site flows do not commingle, so that on-site flows are treated by the bioretention basins and modular wetlands before being released into the stormwater system. In order to limit the discharge at the SR-91 culvert, a proposed detention basin in Planning Area 3 would mitigate the increase runoff from the proposed project. The detention basins would serve to capture runoff during high stormwater flow events.

The detention basin in Planning Area 3 will have a storage volume of 17.25 acre-feet with 2:1 side slope and a height of 16.5 feet. As such, Riverside County Flood Control and the Water Conservation District (RCFC&WCD) would have the right to and would regularly and routinely maintain the detention basin as needed. The outlet structure is a single 3 feet tall by 6 feet wide opening placed at the basin bottom, which limits the outflows from the basin and provides the required attenuation to limit the downstream flowrate to the SR-91 culvert capacity. Table 3.10-6 below provides the peak flow under the existing and proposed project conditions.

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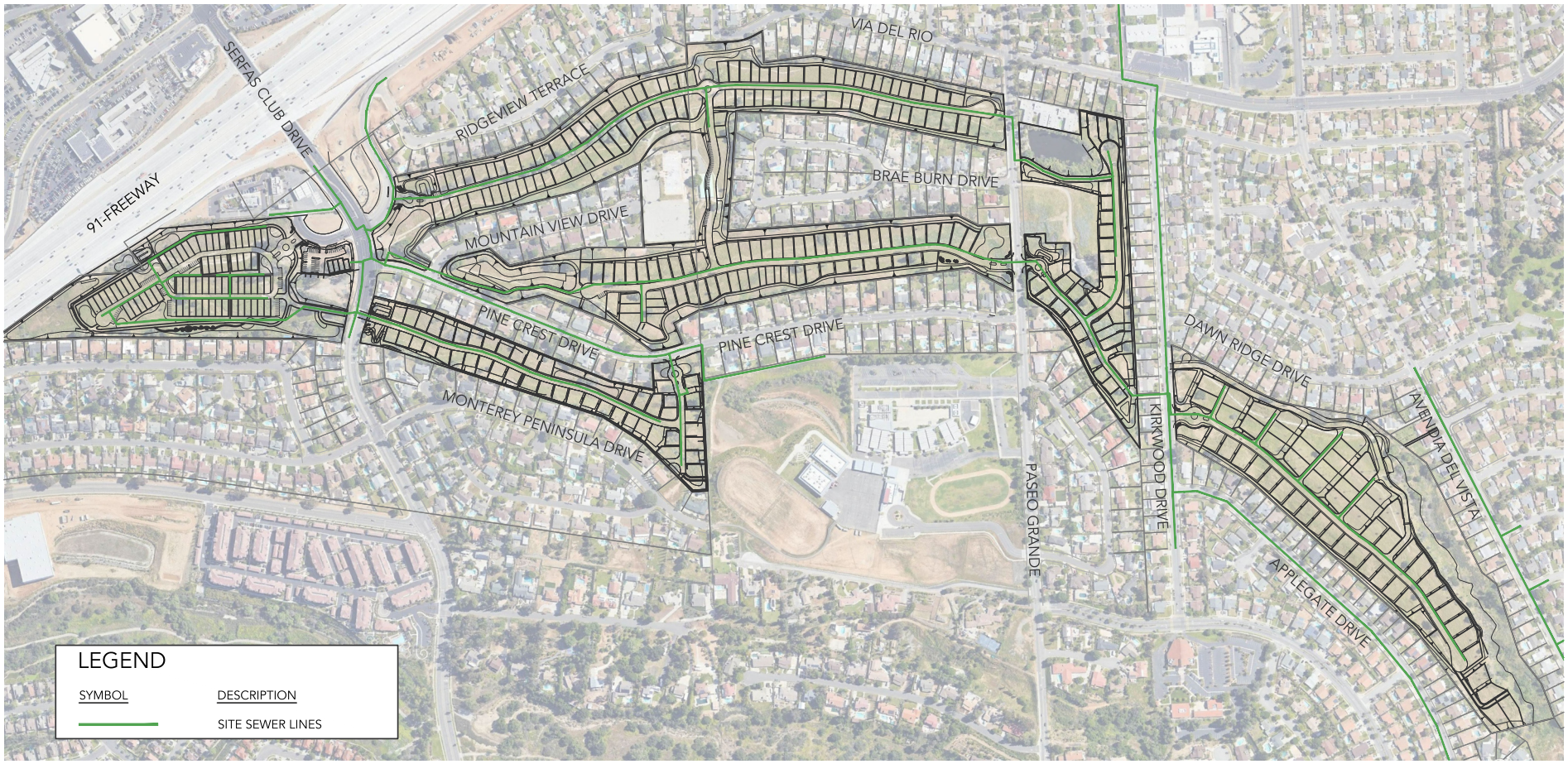

Source: Urban Arena, 2021.

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Exhibit 3.10-6
Conceptual On-Site Sewer Plan

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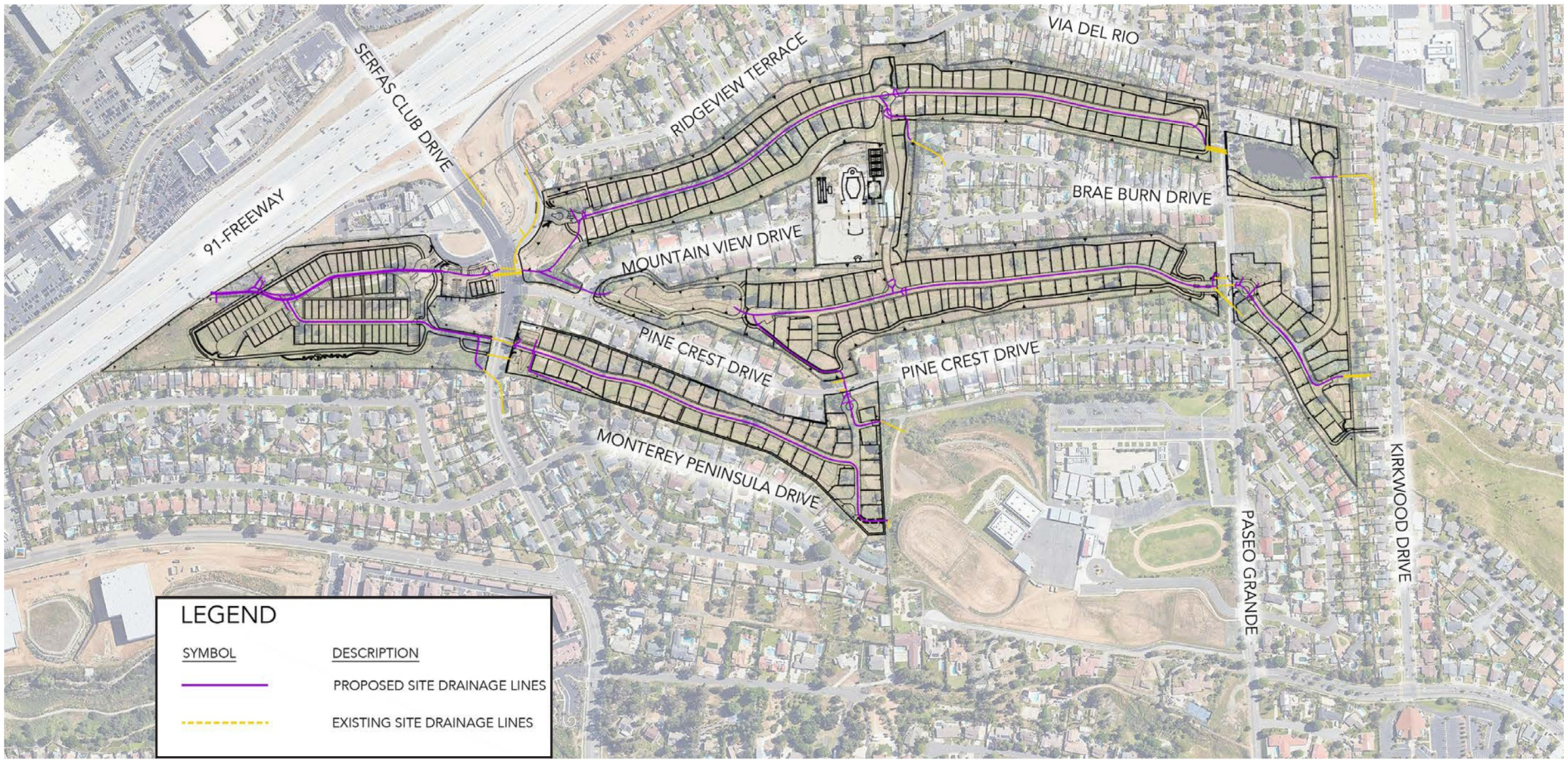

Source: Urban Arena, 2024.

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Exhibit 3.10-7
Conceptual Drainage Plan

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Table 3.10-6: Hydrograph Summary for 100-year Storm Frequency, Existing and Proposed Conditions at Project Outlet

Duration (hours)	Existing Conditions		Proposed Conditions without PA 3 Detention Basin		Proposed Conditions with PA 3 Detention Basin
	Peak Flow (cfs)	Total Volume (acre/foot)	Peak Flow (cfs)	Total Volume (acre/foot)	Peak Flow (cfs)
3	**1,025.5**	104.2	**1116.0**	105.5	924.8
6	977.3	131.6	**1088.2**	133.5	923.4
24	633.2	303.2	659.1	308.3	614.3

Notes:
cfs = cubic feet per second
Bold numbers indicate that peak flows exceed the 970 cubic feet per second capacity of the reinforced concrete box culvert.
Source: Preliminary Hydrologic Analysis, 2024.

The development of the proposed project would reduce the peak flow stormwater runoff to less than existing conditions and below 970 cfs capacity for the culvert below SR-91 for all storm events modeled. The Planning Area 3 detention basin would need to have an emergency spillway to pass the peak 100-year inflow in the event the outlet structure is clogged or if the design storm (100-year) has been exceeded. The spillway invert would be located at or just above the maximum 100-year water surface elevation in the basin so as not to affect the design outflow from the basin.

RCFC&WCD would be responsible for maintenance of the regional detention basin and storm drain system (Exhibit 3.10-3). As such, RCFC&WCD would have the right to and would regularly and routinely maintain the detention basin, its inlet and outlet, and storm drain facilities as needed.

Additionally, the existing artificial pond that will serve as a modular wetland in Planning Area 5 and the naturalized drainage features in Planning Area 6 that will serve as a publicly accessible open space park, are potentially jurisdictional features. As discussed within Section 3.4, Biological Resources, these two features are potentially subject to regulation by the United States Army Corps of Engineers (USACE), RWQCB, and the CDFW. Although project construction could alter the existing drainage pattern, including drainage to the potentially jurisdictional features, it would not result in an increase in the amount or rate of runoff that could result in flooding or siltation. Furthermore, the proposed project would include a Final WQMP, Final Hydrologic Analysis, and a SWPPP that conforms to the State Water Board NPDES permit. The WQMP and SWPPP would contain specific BMPs to prevent stormwater pollution from construction sources and operational sources. These BMPs would identify a practical sequence for site restoration, implementation, contingency measures, responsible parties, and agency contacts. As such, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Erosion

Impact HYD-1d: Result in substantial erosion or siltation on-site or off-site?

Source(s): Riverside County General Plan Figure S-9 "Special Flood Hazard Areas," Figure S-10 "Dam Failure Inundation Zone," Riverside County Flood Control District Flood Hazard Report/ Condition, GIS database, USDA Soil Conservation Service Soil Surveys, Project Application Materials, On-site Inspection, and Soils Report.

Impact Analysis

Accelerated soil erosion, including loss of topsoil, could occur as a result of project construction, including grading. As discussed above, the project applicant is required to obtain an NPDES permit for construction activities, which would require County and City approval for a project-specific SWPPP. The SWPPP would identify a combination of erosion control and sediment control measures to reduce or eliminate sediment discharge to surface water from stormwater and non-stormwater discharges during construction. With mandatory compliance with the requirements noted in the proposed project's SWPPP, the potential for water and/or wind erosion impacts during project construction would be less than significant and mitigation is not required. Because the proposed development is an infill project (conversion of the golf course to single-family residential development), within an existing urban watershed, the major watershed boundaries do not change.

Operation

As discussed in Impact HYD-3, under existing conditions, water flow is erosive and the majority of the project site is undeveloped. Under existing conditions, the capacity of the reinforced concrete box culvert outlet point near SR-91 is exceeded by the 100-year, 3-hour and 6-hour, storm peak flow. Implementation of the proposed project without additional drainage features would exacerbate these conditions as described in Table 3.10-6. Therefore, implementation of the proposed project with the Planning Area 3 detention basin would lower peak water flows for all storm event modeled. Additionally, the proposed project proposes an increase in impermeable surfaces covering soil that is exposed under existing conditions and decreasing erosion and siltation.

In addition to the proposed PA-3 on-site detention basin that would capture water during storm events and serve as stormwater storage and treatment of on-site flows, the proposed project would also include project design features and BMPs as outlined in the WQMP. If the full development of Planning area 2 and 6 were to occur, the following improvements would be included:

- Planning Area 1: one bioretention basin and one self-retaining area
- Planning Area 2: one bioretention basin and one modular wetland system
- Planning Area 3: four bioretention basins, one modular wetland system, and one self-treating area
- Planning Area 4: four bioretention basins and one self-retaining area

- Planning Area 5: one modular wetland system/underground storage and one bioretention basin
- Planning Area 6: two bioretention basins

The WQMPs are required to identify an effective combination of erosion control and sediment control measures to reduce or eliminate sediment discharge to surface water from stormwater and non-stormwater discharges. The WQMP is required to incorporate BMPs, including water quality/detention basins and vegetative swales, which are effective at removing silt and sediment from stormwater runoff. WQMPs also require post-construction maintenance and operational measures to ensure ongoing erosion protection. Compliance with the WQMP would be required as conditions of project approval as would the long-term maintenance of water quality features. Therefore, implementation of the proposed project would not result in substantial erosion or loss of topsoil during long-term operation. Thus, the proposed project will have a less than significant impact regarding an increase in water erosion either on-site or off-site.

Level of Significance Before Mitigation

Less significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Runoff

Impact HYD-1e:	**Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?**

Source(s): Riverside County General Plan Figure S-9 “Special Flood Hazard Areas,” Figure S-10 “Dam Failure Inundation Zone,” Riverside County Flood Control District Flood Hazard Report/ Condition, GIS database, Project Application Materials, and City of Corona 2020-2040 General Plan.

Impact Analysis

As discussed above, the proposed project would increase runoff from the project site by increasing the amount of impervious surfaces and decreasing the pervious surfaces that could allow infiltration of precipitation. Impervious and paved areas for the project site include proposed streets, curbs, sidewalks and gutters, concrete ribbon, terrace and down drains, parking areas, driveways, and the impervious roofs of each building. However, pervious areas are included for the project site, including one detention basin, bioretention basins, modular wetlands, landscaped areas, and the various public and private open spaces throughout the project site. All private landscaping and private open spaces shall be maintained by the owner. Landscaping and open space located in the public areas will be owned and maintained by the County of Riverside.

The existing artificial pond that will serve as a detention basin in Planning Area 5 and the naturalized drainage features in Planning Area 6 that will serve as a publicly accessible open space park, are potentially jurisdictional features. Thus, the proposed project would not result in an increase in the amount or rate of runoff that could result in flooding or siltation.

Because the project drains to an engineered Municipal Separate Storm Sewer System (MS4) storm drain system which outlets directly into the Prado Flood Control Basin, there are no Hydromodification impacts. Prado Flood Control Basin has been identified as an adequate sump per the Water Quality Management Plan Guidance Document for the Santa Ana Region of Riverside County, therefore no increase runoff analysis was necessary for the 2-year, 5-year and 10-year storm frequencies.

Portions of the project site are identified as an area of flooding sensitivity. Redevelopment of the project site into residential/commercial developments will impact the FEMA floodplains and requires a CLOMR prior to issue of grading permit, as a condition of approval.[5] Then, prior to inspection for occupancy, a LOMR is required. The two letters together will remove the project site from the 100-year flood zone by ensuring that the proposed project and associated improvements would address potentially adverse effects of a 100-year flood.

Development in an area with this special flood hazard designation would be required to meet construction standards as outlined in Ordinance No. 458. Whenever a floodplain application for a permit involves land that lies within special flood hazard area, the Floodplain Administrator would review the permit and determine if it allows the location of any structure, new construction, or substantial improvement. Accordingly, the project applicant would follow Ordinance No. 458 and submit the required application to the District for permits prior to the issue of a grading permit. This includes the submittal of a floodplain application permit form to Riverside County Building and Safety along with corresponding fees and attachments. The Floodplain Administrator shall review the permit and determine if it allows the location of any structure, new construction, or substantial improvement. Each application filed with the Floodplain Administrator must include the method by which the applicant proposes to comply with requirements of the ordinance, including proposed elevations of any structures or fills, flood proofing, erosion protection, flow-through area, any proposals to modify existing flow of stormwater and any other relevant information. All application plans must be prepared and certified by a California Registered Civil Engineer. This process shall be completed prior to the issue of the grading permit.

Furthermore, the proposed project would include a Final WQMP, Final Hydrologic Analysis, and a SWPPP that conforms to the State Water Board NPDES permit. The WQMP and SWPPP would contain specific BMPs to prevent stormwater pollution from construction sources and operational sources. These BMPs would identify a practical sequence for site restoration, implementation, contingency measures, responsible parties, and agency contacts. The impact would be less than significant.

Level of Significance Before Mitigation

Less significant impact.

[5] KWC Engineers. 2024. Preliminary Hydrology Analysis for Trails at Corona. Accessed March 5, 2024.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Runoff Water

Impact HYD-1f:	**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?**

Source(s): Riverside County General Plan Figure S-9 "Special Flood Hazard Areas," Figure S-10 "Dam Failure Inundation Zone," Riverside County Flood Control District Flood Hazard Report/ Condition, GIS database, Project Application Materials, and City of Corona 2020-2040 General Plan.

Impact Analysis

As outlined above, the proposed project would include project features that would reduce the 100-year peak flow stormwater runoff compared to existing conditions. Additionally, as outlined above, the receiving waters tributary to the project site is the Santa Ana River (Reach 3), which is currently on the State's 303(d) List of Water Quality Limited Segments as impaired. Reach 3 is impaired for bacteria and metals. The proposed project has the potential to increase the following pollutants: bacterial indicators, metals, nutrients, pesticides, toxic organic compounds, sediments, trash and debris, and oil and grease. As such, the project-specific WQMP outlines the following project design features and BMPs that will be incorporated as part of the proposed project. If the full development of Planning area 2 and 6 were to occur, the following improvements would be included:

- Planning Area 1: one bioretention basin and one self-retaining area
- Planning Area 2: one bioretention basin and one modular wetland system
- Planning Area 3: four bioretention basins, one modular wetland system, and one self-treating area
- Planning Area 4: four bioretention basins and one self-retaining area
- Planning Area 5: one modular wetland system/underground storage and one bioretention basin
- Planning Area 6: two bioretention basins

In addition, the WQMP proposes the following source control BMPs, which include permanent structural and operational BMPs that will be included in the proposed project:

Operational Source Control BMPs

1. Maintain and periodically repaint or replace inlet markings.
2. Provide stormwater pollution prevention information to new site owners, lessees, or operators.

3. Maintain landscaping using minimum or no pesticides.
4. Follow operational BMPs in Fact Sheet SC-44 of the California Stormwater Quality Association (CASQA) Handbook.
5. Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."
6. Maintain landscaping using minimum or no pesticides.
7. Follow operational BMPs from the District for landscape and gardening.
8. Provide Integrated Pest Management Information documentation to new owners, lessees, and operators.
9. Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect wash water containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

Permanent Structural Source Control BMPs

1. Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers shall be per local agency requirements.
2. Final landscape plans will include the following:
    I. Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.
    II. Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.
    III. Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.
    IV. Consider using pest-resistant plants, especially adjacent to hardscape.
    V. To ensure successful establishment, select plants appropriate to project site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.
3. Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.

The project applicant shall be responsible for the private area landscaping. The HOA would be responsible for maintenance of the additional water quality features. Landscape maintenance shall include all maintenance and replacement of dead vegetation, erosion rills, proper disposal of green wastes, etc. Irrigation systems shall be tested regularly to ensure that all systems are functioning optimally. Thus, odors will be controlled via removal of dead vegetation and proper disposal of green wastes. Vectors are not anticipated to be an issue because irrigation systems will be tested regularly to ensure optional function, which will reduce pooling of water, thus reducing areas that have the

potential to be used by mosquitoes. On-site BMPs will be maintained during operation, ensuring that there are no issues associated with vectors or odors.

As described above, both project site design and source control BMPs will be used to reduce runoff and improve water quality. Thus, with implementation of the proposed project design features, project site design BMPs, and source control BMPs, the proposed project would not 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.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Flood Flows

Impact HYD-1g: Impede or redirect flood flows?

Source(s): Riverside County 2020 General Plan Figure S-9 "Special Flood Hazard Areas," Figure S-10 "Dam Failure Inundation Zone," Riverside County Flood Control District Flood Hazard Report/ Condition, GIS database, Project Application Materials, City of Corona 2020-2040 General Plan, FEMA FIRMs No. 06065C0688G and No. 06065C1351G, and Hydrological Analysis.

Impact Analysis

According to FIRMs No. 06065C0688G and No. 06065C1351G, published by FEMA, portions of Planning Area 1, 2, 3, and 5 of the proposed project area are classified as flood Zone AE and Zone X. The Zone AE area is subject to flooding by the 1 percent annual chance flood with the flood elevations determined, also known as the 100-year flood zone. The Zone X area has a 0.2 percent annual chance flood or 1 percent annual chance flood with average depths less than 1 foot or with drainage areas less than 1 square mile, also known as the 500-year flood zone. Planning Area 6 is classified as Zone X, which is designated as an area of minimal flood hazard and not within a 100-year flood hazard area.

The Hydrological Analysis notes that development of the proposed project would impact the FEMA flood zones. However, the incorporation of the SWPPP, Final WQMP, and Final Hydrologic Analysis, as part of the final proposed project design, would mitigate potential 100-year flood hazards on the project site. A CLOMR would be required, as well as a LOMR, prior to inspection for occupancy. The two letters together would remove the project site from the 100-year flood zone by ensuring that the proposed project and associated improvements mitigate potential impacts from a 100-year flood.

As previously mentioned, portions of the project site as an area of flooding sensitivity. Development in an area with this designation is subject to the development guidelines identified in Riverside County Ordinance No. 458. Accordingly, the project applicant would follow Ordinance No. 458 and submit the required application to the District for permits. This includes the submittal of a floodplain application permit form to Riverside County Building and Safety along with corresponding fees and attachments. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None.

Level of Significance After Mitigation

Less than significant impact.

Inundation by Seiche, Tsunami or Mudflow

Impact HYD-1h:	**In flood hazard tsunami, or seiche zones, risk the release of pollutants due to project inundation?**

Source(s): Riverside County 2020 General Plan Figure S-9 "Special Flood Hazard Areas," Figure S-10 "Dam Failure Inundation Zone," Riverside County Flood Control District Flood Hazard Report/ Condition, GIS database, Project Application Materials, and City of Corona 2020-2040 General Plan.

Impact Analysis

A seiche is defined as a standing wave in an enclosed or partially enclosed body of water. The nearest large body of surface water is Border Lake, which is approximately 1,570 feet east of the project site. Because of the project site's distance from Border Lake and the amount of residences and other infrastructure between the lake the proposed project, the proposed project will not be subject to impacts associated with a seiche. Likewise, the project site's distance from the Pacific Ocean will preclude any impacts associated with tsunamis.

Existing drainage flows from off-site areas, would be conveyed through the project site as they currently do to the west side of the project site with the proposed water drainage system which will drain the water underground through pipes; thus, any potential of mudflow affecting the proposed project would be less than significant.

Additionally, as outlined in Impact HYD-3, the proposed project would reduce peak flow surface water conditions on the project site. Thus, the proposed project will have a less than significant impact regarding changes in the amount of surface water in the Santa Ana River and will not increase or substantially reduce the volumes of these water bodies to an extent that would cause an impact to potential downstream habitat.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Water Quality Control Plan

Impact HYD-9: Conflict with a water quality control plan or sustainable groundwater management plan?

Source(s): Project Application Materials

Impact Analysis

The proposed project has the potential to degrade local water quality. As discussed above, development of the project site will introduce a number of urban pollutants into the area, most notably bacterial indicators, metals, nutrients, pesticides, toxic organic compounds, sediments, trash and debris, and oil and grease. However, the project applicant shall prepare a SWPPP, Final WQMP, and Final Hydrologic Analysis that conforms to the State Water Board NPDES permit, along with Riverside County and City of Corona requirements. The SWPPP shall identify BMPs to prevent construction-related pollutants from reaching stormwater and all products of erosion from being released outside of the proposed project boundaries. Additionally, a WQMP would be prepared to control post-construction urban runoff from the proposed project. Therefore, impacts to water quality will be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

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Source: Urban Arena, 2021.

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Exhibit 3.10-8
Conceptual Park Plan

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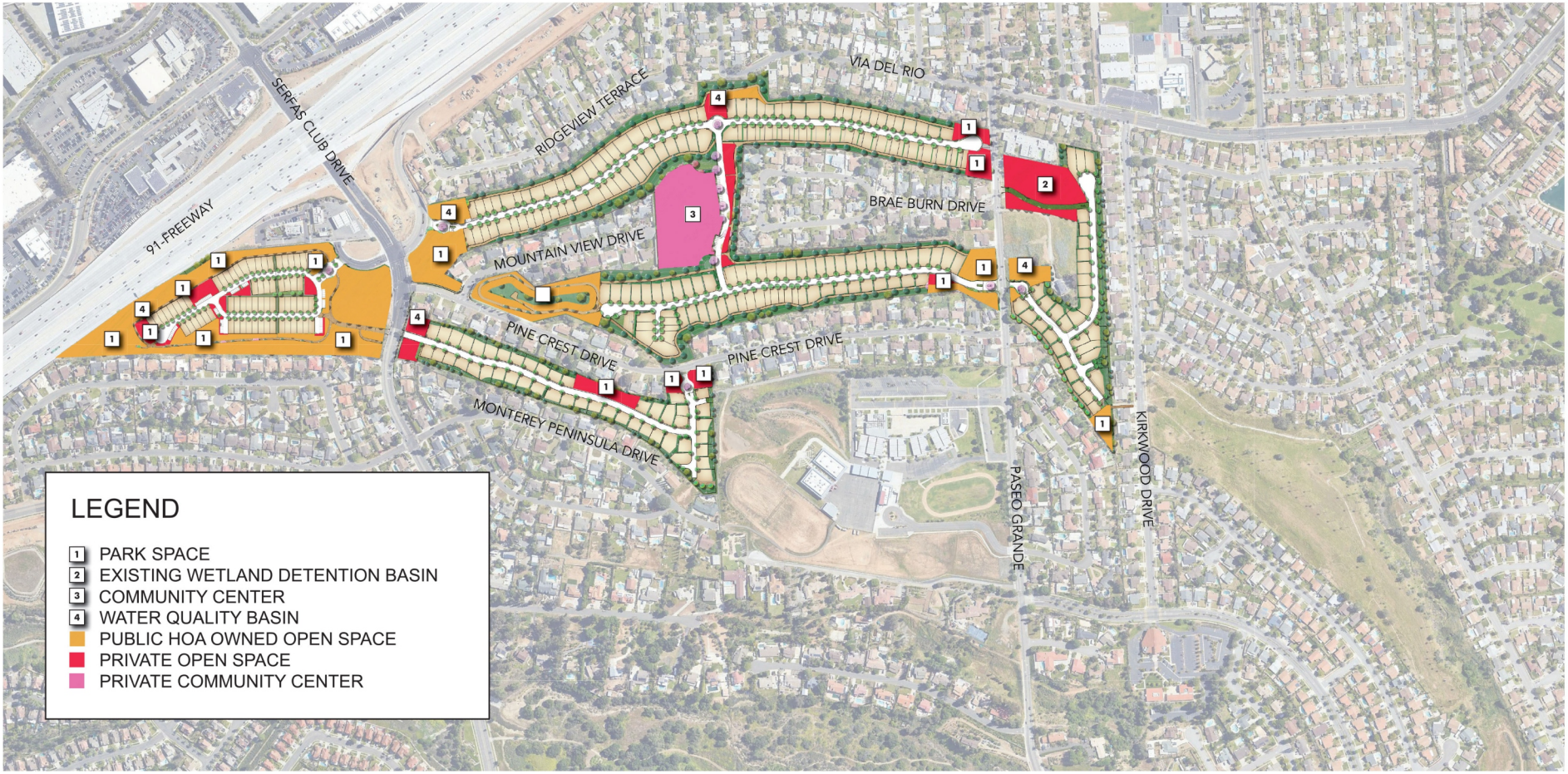

Source: Urban Arena, 2024.

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Exhibit 3.10-9
Conceptual Open Space and Recreation Plan

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3.11 - Land Use and Planning

This section describes existing land uses, applicable land use plans, policies or regulations, and any potential conflicts that may arise through project implementation. This section also describes the proposed project's consistency with Southern California Association of Governments (SCAG) regional growth policies. Descriptions and analysis in this section are derived from field observation, review of pertinent planning documents including the County of Riverside 2020 General Plan, City of Corona 2020-2040 General Plan, and from project information contained in Appendix A, Notice of Preparation (NOP), and Scoping Meeting Documents.

3.11.1 - Existing Conditions

Land Use

Project Site

The proposed project is located within the unincorporated area of Riverside County (Planning Area 1–Planning Area 5) and City of Corona (Planning Area 6). It is on the western edge of Riverside County, and the City of Corona surrounds the project site. Unincorporated Riverside County and the City of Chino Hills are to the north, the City of Norco is to the northeast, the City of Riverside is to the east, unincorporated Riverside County is to the south, and the City of Anaheim is to the west. The project site has various access points from Frontage Road, Kirkwood Drive, Paseo Grande, and Pine Crest Drive.

Existing Project Site Land Uses, Land Use Designation and Zoning

The project site is currently vacant and has been vacant since the closing of the Mountain View Golf Course in 2009.

As such, Planning Areas 1, 2, 3, 4, and 5 still have a County of Riverside 2020 General Plan Land Use Designation of Open Space Recreation (OS-REC). However, the County of Riverside has zoned the project site as One-Family Dwellings (R-1). A proposed General Plan Amendment from OS-REC to Medium Density Residential (MDR), as well as a change of zoning from R-1 to S-P, has been submitted to the County as part of the entitlement process for the proposed project.

Planning Area 6, in the City of Corona, has a General Plan Land Use Designation of Low Density Residential (LDR) and is zoned as Agricultural (A). Implementation of the proposed project would require a Change of Zone from Agriculture (A) to S-P under the Trails at Corona Specific Plan, which has been submitted as part of the entitlements process for the proposed project.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Exhibits 3.11-1a and 3.11-1b show the existing County of Riverside General Plan Land Use Element and City of Corona 2020-2040 General Plan Land Use Designation and Exhibits 3.11-2a and 3.11-2b shows existing zoning designations for the project site.

A summary of the land uses within the project site are provided in Table 3.11-1 below.

Table 3.11-1: Proposed Project Specific Plan Land Use Summary

Planning Areas	Land Use	Dwelling Unit Range	Total Acreage	Target Dwelling Units	Target Density
Residential Designation					
6	City of Corona: Low Density Residential (3.0–6.0 du/ac)	74–149	24.9	56	2.25
1, 3, 4, 5	County of Riverside: Medium Density Residential (2.0–5.0 du/ac)	159–399	79.85	309	3.87
Residential Subtotal		233–548	104.75	365	3.48
Nonresidential Designation					
2	Neighborhood Commercial	–	0.78	–	–
Nonresidential Subtotal		–	0.78	–	–
Trails at Corona Project Total		**233–548**	**105.53**	**365**	**3.48**

Source:
Trails at Corona Specific Plan (KWC Engineers November 2021)

Surrounding Area Land Use Designations and Zoning

Planning Area 1–Planning Area 5

Planning Area 1 through Planning Area 5 are within the County of Riverside.

West

The majority of the land uses immediately to the west are residential uses and a school facility (Coronita Elementary School).

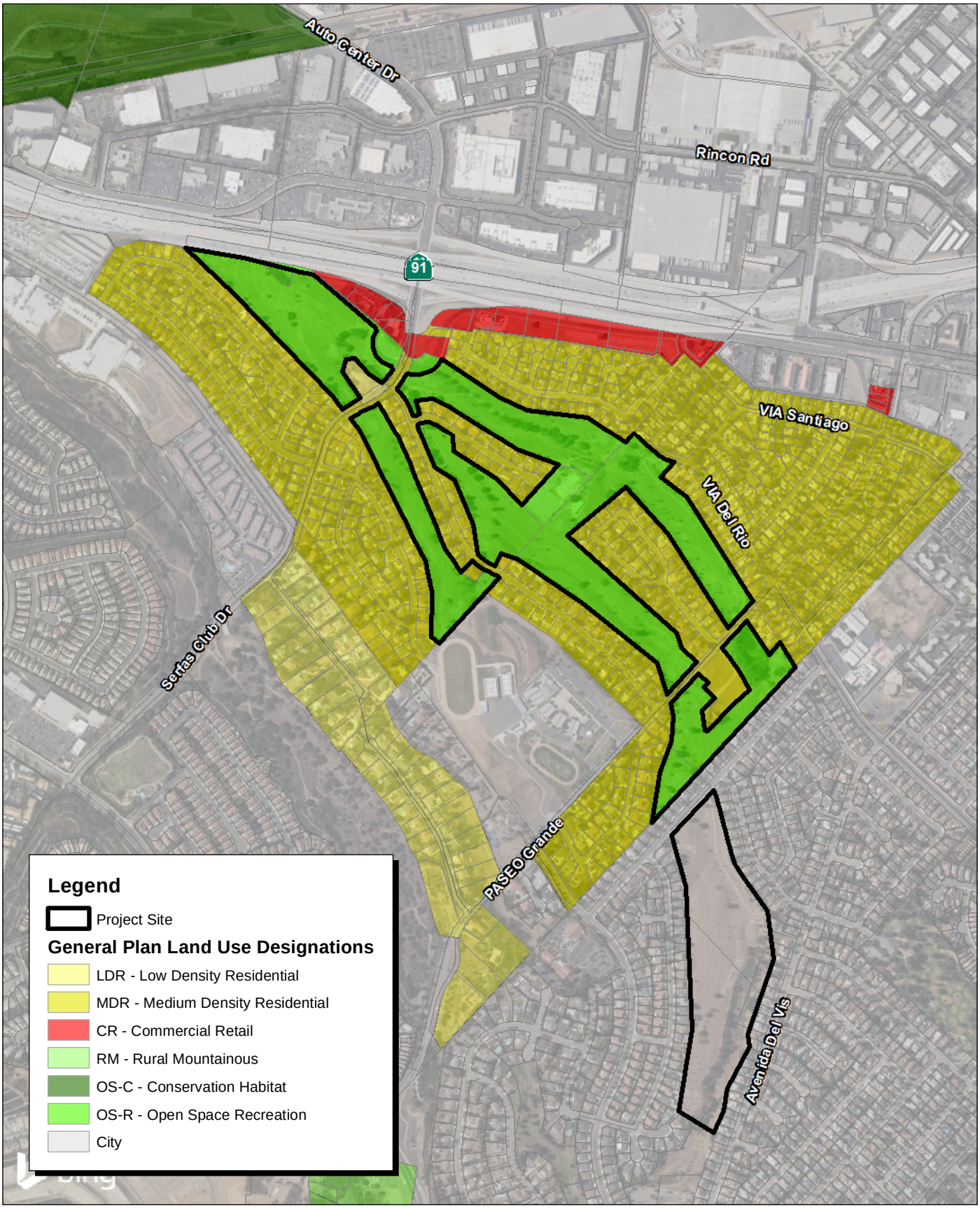
County of Riverside General Plan Land Use Designation: Medium Density Residential (MDR)

County of Riverside Zoning: One-Family Dwellings (R-1).

North

Immediately north of the project site is State Route (SR) 91, and uses further north include commercial (McDonald's, Arco Station, In-N-Out-Burger, Nissan, and Hyundai car dealerships) and industrial land uses.

- **City of Corona General Plan Land Use Designation:** General Commercial (GC) and Light Industrial (LI).
- **City of Corona Zoning:** Commercial (C-3) and Light Industrial (M-1).



Source: Bing Aerial Imagery. Riverside County Existing General Plan Land Use Data.

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Exhibit 3.11-1a
Existing County of Riverside General Plan Land Use Designations

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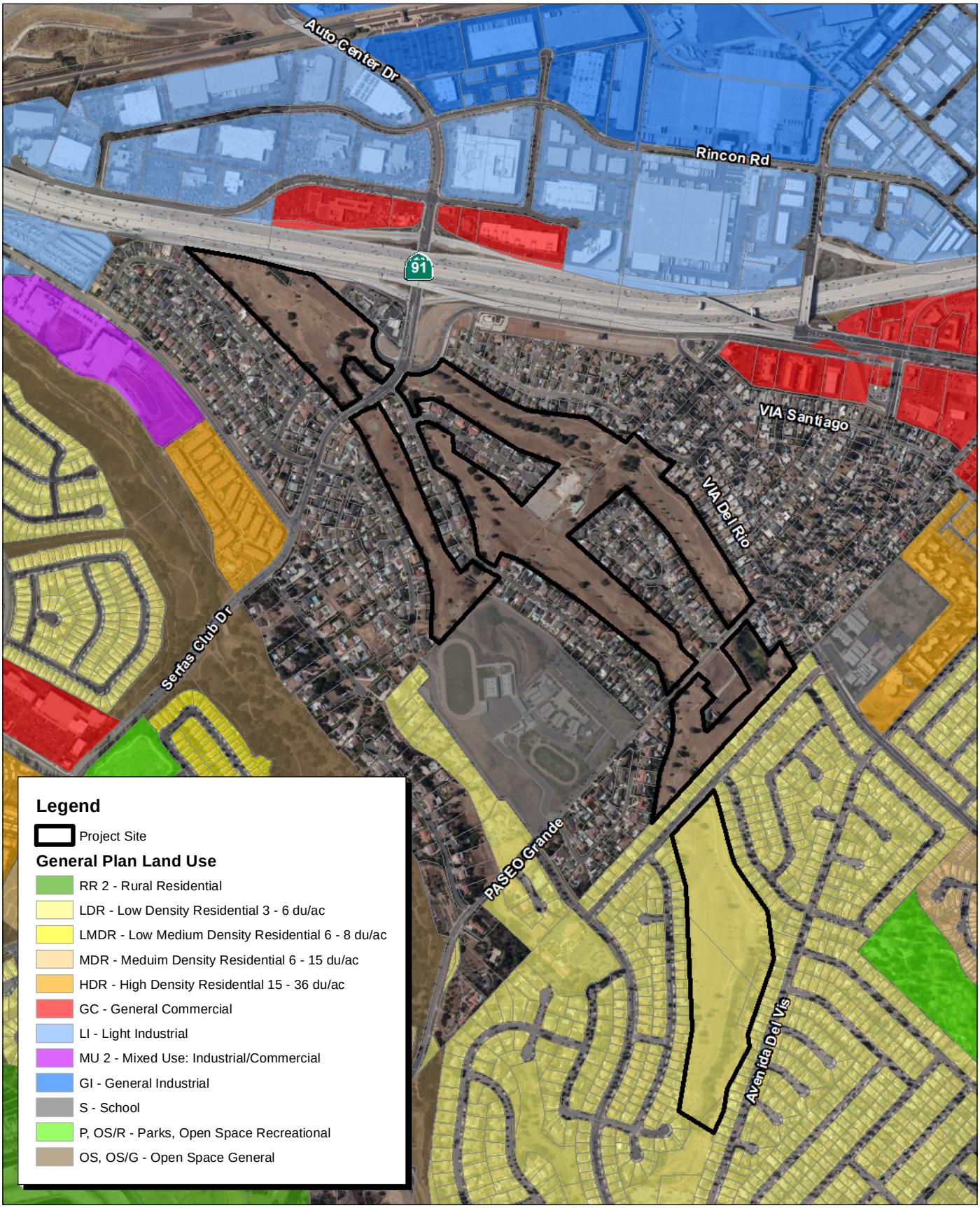

Source: Bing Aerial Imagery. City of Corona Existing General Plan Land Use Data.

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Exhibit 3.11-1b
Existing City of Corona General Plan Land Use Designations

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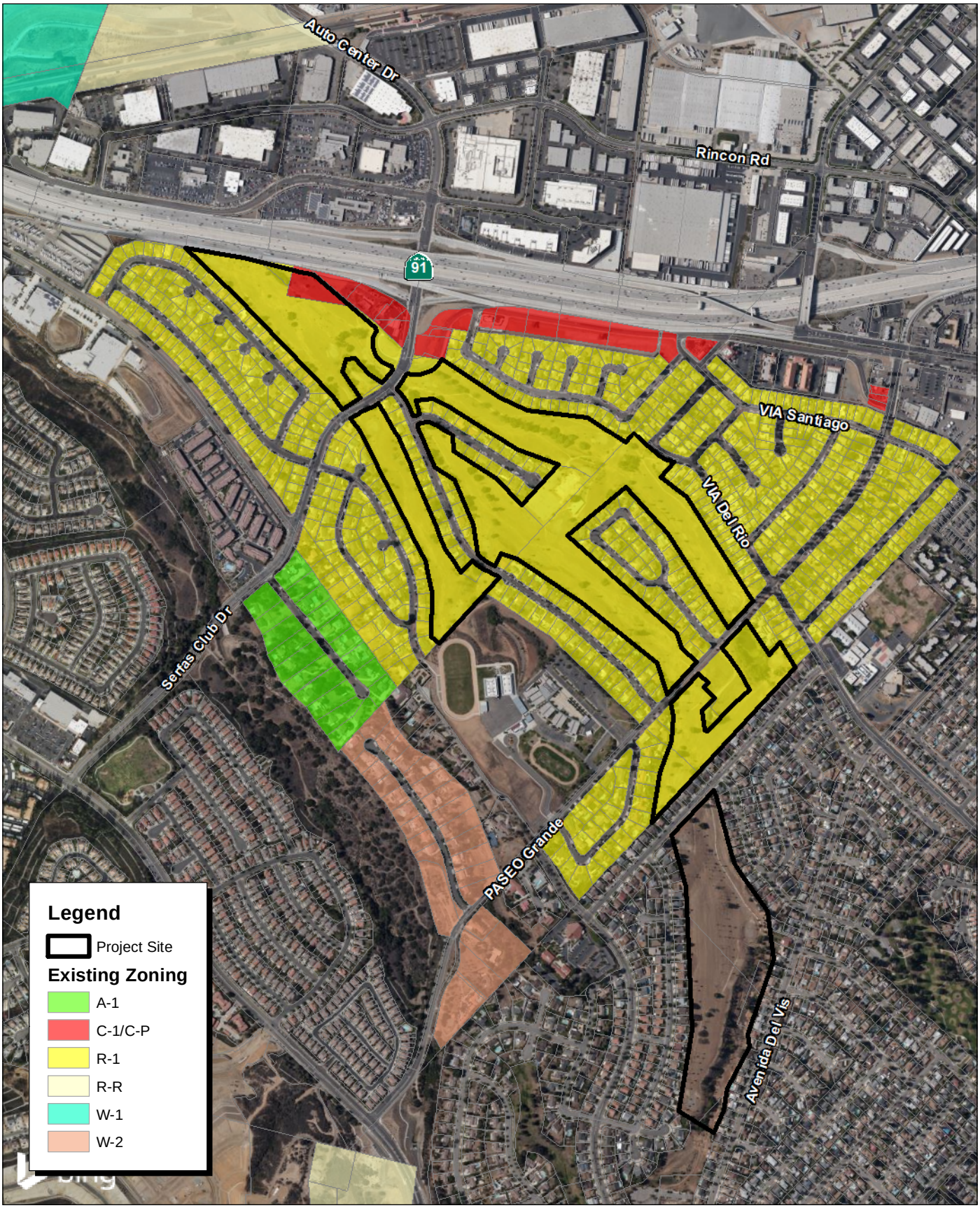

Source: Bing Aerial Imagery. Riverside County Existing Zoning Data.

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Exhibit 3.11-2a
Existing County of Riverside Zoning Designations

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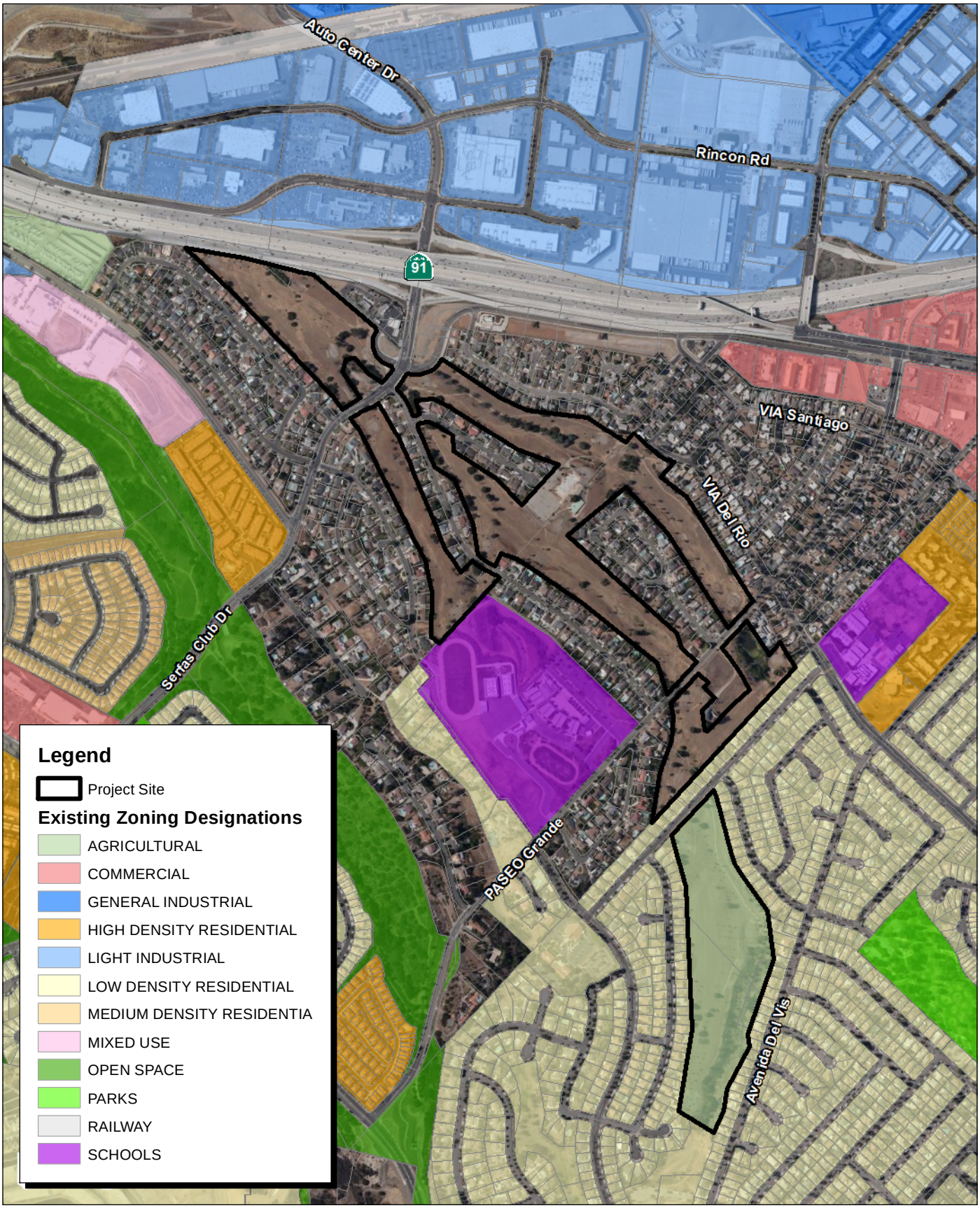

Source: Bing Aerial Imagery. City of Corona Existing General Plan Land Use Data.

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Exhibit 3.11-2b
Existing City of Corona Zoning Designations

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East

The majority of the land uses immediately to the east are residential, as well as a school facility (Cesar Chavez Academy).

- **County of Riverside General Plan Land Use Designation:** Medium Density Residential (MDR)
- **County of Riverside Zoning:** One-Family Dwellings (R-1).

South

The majority of land uses immediately to the south include residential uses, as well as vacant parcels (Planning Area 6 within the City of Corona).

- **The City of Corona General Plan Land Use Designation:** General Commercial (GC) and Light Industrial (LI).
- **The City of Corona Zoning:** Single-family Residential (R1-9.6) and Agricultural (A).

Planning Area 6

Planning Area 6 is within the City of Corona.

North

The majority of the land uses immediately to the east are residential, as well as vacant parcels (Planning Area 1 through Planning Area 5 within the Riverside County).

- **City of Corona General Plan Land Use Designation:** Low Density Residential (LDR)
- **City of Corona Zoning:** Single-family Residential (R1-9.6).
- **County of Riverside General Plan Land Use Designation:** Open Space Recreation (OS-REC)
- **County of Riverside Zoning:** One-Family Dwellings (R-1).

West, East, and South

Land uses immediately to the west, east, and south are all residential uses.

- **City of Corona General Plan Land Use Designation:** Low Density Residential (LDR)
- **City of Corona Zoning:** Single-family Residential (R1-9.6 and R1-7.2).

Table 3.11-1 shows the land use designations and zoning of the surrounding areas of the Planning Area 1 through Planning Area 5. Table 3.11-2 shows the land use designations and zoning of the surrounding areas of the Planning Area 6.

Table 3.11-2: Surrounding Land Use Designations–(Planning Area 1 through Planning Area 5)

Surrounding Area	Relationship to Project Site	Land Use Designation	Zoning
		General Plan	
Commercial and Industrial Land Uses	North	General Commercial (GC) and Light Industrial (LI)	Commercial (C-3) and Light Industrial (M-1)

Surrounding Area	Relationship to Project Site	Land Use Designation	
		General Plan	Zoning
Residential and Institutional Land Uses	East	Medium Density Residential (MDR)	One-family Residential (R-1)
Residential Land Uses	South	General Commercial (GC) and Light Industrial (LI)	Single-family Residential (R1-9.6)
Residential and Institutional Land Uses	West	Medium Density Residential (MDR)	One-family Residential (R-1)
Sources: City of Corona 2020-2040 General Plan. 2020; City of Corona Zoning Code. 2017; County of Riverside 2020 General Plan. 2020; and County of Riverside Zoning Ordinance. 2021.			

Table 3.11-3: Surrounding Land Use Designations—(Planning Area 6)

Surrounding Area	Relationship to Project Site	Land Use Designation	
		General Plan	Zoning
Residential Uses	North	City of Corona: Low Density Residential (LDR) County of Riverside: Open Space Recreation (OS-REC)	City of Corona: Single-family Residential (R1-9.6) Single-family Residential (R-1)
Residential and Institutional Land Uses	East, South, and West	Low Density Residential (LDR)	Single-family Residential (R-1)
Sources: City of Corona 2020-2040 General Plan. 2020; City of Corona Zoning Code. 2017; County of Riverside 2020 General Plan. 2020; and County of Riverside Zoning Ordinance. 2021.			

Cumulative Projects

There are several proposed and approved projects in the surrounding area near the proposed project that consist of single-family residential developments that could be characterized as urban and suburban densities. Table 3.11-4 below lists the cumulative projects identified by the County of Riverside and City of Corona.

Table 3.11-4: Cumulative Projects

No.	Project Name	Land Use	Quantity
1	148 Multi-family Units	Multi-family Housing	148 DU
2	45 Townhomes	Residential Condo/Townhouse	45 DU
3	86 Affordable Units	Single-family Detached Residential	86 DU

No.	Project Name	Land Use	Quantity
4	Corona Regional Medical Expansion	Hospital	212,000 SF
5	4 Industrial Buildings	General Light Industrial	95,500 SF
6	Sierra Bella	Single-family Residential	237 DU
7	Skyline Heights	Single-family Residential	297 DU
8	3 Industrial Buildings	General Light Industrial	731,000 SF
9	4 Industrial Buildings	General Light Industrial	47,643 SF
10	Taco Bell with Drive-through	Fast Food with Drive-through	2,080 SF
11	Peppermint Ridge Expansion	Assisted Living	3,840 SF
12	Drive-through Restaurant	Fast Food with Drive-through	2,400 SF
13	Green River Specific Plan	Industrial Park High-Cube Cold Storage Warehouse Super Convenience Market with Gas Station Fast Food Restaurant with Drive-through Hotel Single-family Detached Residential	634,481 SF 111,950 SF 12 VFP 2,500 SF 150 RM 32 DU
14	Skyline Village	Multi-family Housing Shopping Center	78 DU 27,334 SF
15	TTM No. 33135	Single-family Detached Residential	62 DU
16	TTM No. 36608	Single-family Detached Residential	23 DU
17	DPR2020-0014	Gas Station with Convenience Market	2,959 SF
18	PP2018-0005	Health/Fitness Center	37,000 SF
19	Prado Raceway	Racetrack	163.0 AC

Notes:
AC = acres
DU = Dwelling Units
RM = rooms
SF = square feet
VFP = Vehicle Fueling Positions
Source:
Urban Crossroads 2021.

3.11.2 - Regulatory Framework

Regional Regulations

Southern California Association of Governments

SCAG is the nation's largest Metropolitan Planning Organization, representing six counties, 191 cities, and over 18 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable Southern California. Over the past 40 years, SCAG has evolved as the largest of nearly 700 councils of government in the United States, functioning as the Metropolitan Planning Organization for the following six counties: Los Angeles, Orange, San Bernardino, Riverside,

Ventura, and Imperial. As the designated Metropolitan Planning Organization, SCAG is mandated by federal and State law to research and draw up plans for transportation, growth management, hazardous waste management, and air quality.

Regional Comprehensive Plan and Guide

The proposed project is located within the County of Riverside, and is located in the middle of a six-county metropolitan region composed of Orange, Los Angeles, Ventura, Riverside, San Bernardino, and Imperial Counties. SCAG has developed a Regional Comprehensive Plan and Guide (RCPG) to help coordinate transportation and infrastructure, open space and environmental planning with population, housing, and employment growth within the multicounty region. The RCPG, adopted in 2008, contains policies addressing planning priorities for the region adopted by the SCAG governing board, the Regional Council. Some of these are core policies that implement State or federal mandates, while most of the policies are ancillary or "advisory-only" guidance for local jurisdictions and public agencies.

SCAG's RCPG includes a package of policies related to growth and development that seek to coordinate infrastructure with projected population and housing growth. In general, SCAG policies encourage job and housing opportunities to be balanced at the county or Regional Statistical Area level (both much larger than the project level). SCAG policies also encourage job growth to be concentrated near transit services and transit nodes, and existing freeways, HOV lanes, and toll roads. Given the expansive scope of and general nature of the RCPG, not all of these policies apply to every project.

The proposed project is a project of region-wide significance according to SCAG Intergovernmental Review (IGR) criteria[1] and California Environmental Quality Act (CEQA) Guidelines (CEQA § 15206).

2020–2045 Regional Transportation Plan/Sustainable Communities Strategy

On June 5, 2020, SCAG adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Connect SoCal. The RTP/SCS is the culmination of a multi-year effort involving stakeholders from across the SCAG Region. The RTP is a long-range transportation plan that is developed and updated by SCAG every 4 years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality of life goals for the future, identifying regional transportation strategies to address our mobility needs.[2]

[1] Southern California Association of Governments (SCAG). 2021. Intergovernmental Review web page. Website: http://www.scag.ca.gov/programs/Pages/IGR.aspx. Accessed December 7, 2021.

[2] Southern California Association of Governments (SCAG). 2020. 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. Website: https://scag.ca.gov/post/2020-2045-rtpscs-connect-socal-transportation-conformity-determination. Accessed November 17, 2021

Local Regulations

Exhibits 3.11-3a and 3.11-3b show the proposed County of Riverside and City of Corona General Plan Land Use Designations and Exhibits 3.11-4a and 3.11-4b show the proposed zoning designations for the project site.

County of Riverside

General Plan

The proposed project involves a General Plan Amendment to change the land use designation from OS-REC to MDR. Pursuant to the County of Riverside 2020 General Plan Land Use Element, residential development in the County of Riverside is meant to accommodate demand for residential land uses, accommodate a range of housing styles, types, densities and affordability, and to ensure that new and rehabilitated residential structures enhance the quality of the neighborhood through sound construction techniques and architectural detail.

The MDR land use designation provides for the development of conventional single-family detached houses and suburban subdivisions. Limited agriculture and animal-keeping uses, such as horses, are also allowed within this category. The density range is 2 to 5 dwelling units per acre (DU/acre), which allows for a lot size that typically ranges from 5,500 to 20,000 square feet.

Temescal Canyon Area Plan

As discussed in Section 3.11.1, Existing Conditions, the project site lies within the Temescal Canyon Area Plan (TCAP), which is a component of the County of Riverside 2020 General Plan that provides area-specific policies and requirements to address local conditions and issues. The TCAP encompasses the City of Corona, as well as several unincorporated communities within Riverside County. Within the TCAP, some areas are identified as "policy areas." According to the TCAP, a policy area is a portion of an Area Plan that contains special or unique characteristics that merit detailed attention and focused policies. The area where the project site is located is not covered under a policy area.

County of Riverside Zoning Ordinance

The County of Riverside has zoned the project site as One-Family Dwellings (R-1). The project would establish a Specific Plan as a framework for the development of the residential development. As such, a Change of Zone from R-1 to Specific Plan (S-P) has been submitted to the County as part of the entitlements process for the project.

Trails at Corona Specific Plan

As part of the proposed project, the applicant proposes to establish the Trails at Corona Specific Plan.[3] A Specific Plan is designed to implement the General Plan within a certain area and, most importantly, to establish a set of development standards for the specific area. Thus, Riverside County Specific Plan No. 397–The Trails at Corona Specific Plan establishes the policies, standards and guidelines for land development within the project site in conformance with Section 65450 *et seq*. of the Government Code, the County of Riverside General Plan, and County Ordinance No. 348 (Land Use Ordinance).

[3] KWC Engineers. 2021. Trails at Corona Specific Plan (TSP). Accessed: November 17, 2021.

This section addresses the development standards and land use policies for the housing product types (detached traditional homes and attached paired developments), parks and open space areas (recreation, trails, community facilities, etc.), and commercial area within each of the Planning Areas. Development standards for the Planning Areas in Riverside County are in Tables 3.11-4 through Table 3.11-7.

Table 3.11-5: Planning Area 1 Design Standards

Typical Lot	
Minimum Lot Size	2,475 square feet
Lot Width	39 feet
Lot Depth	64 feet
Maximum Lot Coverage	85%
Building Height	
Maximum Building Height	30 feet
Parking	
Parking Requirements	Minimum 2-car garage for each unit (10 feet by 20 feet for each space), plus one guest space for each unit
Dwelling Units	
Minimum Size	1,000 square feet
Source: Trails at Corona Specific Plan (November 2021)	

The development standards for Planning Area 2 of Specific Plan No. 397 would be the same as those standards identified in the County of Riverside Article IX, Section 9.4 of Ordinance No. 348.4896 titled General Commercial. The maximum building height permitted would be 35 feet. Adequate on-site parking would be provided for vehicles and bicycles.

Table 3.11-6: Planning Area 3 Design Standards

Typical Lot	
Minimum Lot Size	2,254 square feet
Lot Width	30 feet
Lot Depth	52 feet
Maximum Lot Coverage	80%
Building Height	
Maximum Building Height	24 feet
Parking	
Parking Requirements	Minimum 2-car garage for each unit (10 feet by 20 feet for each space), plus one guest space for each unit

Dwelling Units	
Minimum Dwelling Unit Size	1,000 square feet
Source: Trails at Corona Specific Plan (November 2021).	

Table 3.11-7: Planning Area 4 Design Standards

Typical Lot	
Minimum Lot Size	2,475 square feet
Lot Width	48 feet
Lot Depth	52 feet
Maximum Lot Coverage	80%
Building Height	
Maximum Building Height	30 feet
Parking	
Parking Requirements	Minimum 2-car garage for each unit (10 feet by 20 feet for each space), plus one guest space for each unit
Dwelling Units	
Minimum Dwelling Unit Size	1,000 square feet
Source: Trails at Corona Specific Plan (November 2021).	

Table 3.11-8: Planning Area 5 Design Standards

Typical Lot	
Minimum Lot Size	2,254 square feet
Lot Width	45 feet
Lot Depth	60 feet
Maximum Lot Coverage	80%
Building Height	
Maximum Building Height	30 feet
Parking	
Parking Requirements	Minimum 2-car garage for each unit (10 feet by 20 feet for each space), plus one guest space for each unit
Dwelling Units	
Minimum Dwelling Unit Size	1,000 square feet
Source: Trails at Corona Specific Plan (November 2021)	

City of Corona

General Plan

The proposed project conforms to the City of Corona 2004 General Plan Land Use Designation of Low Density Residential (LDR). The LDR land use designation accommodates detached single-family homes and is characterized by lots up of 7,200 to 10,000 square feet. Density varies from 3–6 DU/acre. The proposed project has a target density of 2.25 DU/acre in Planning Area 6, the Planning Area is within the City of Corona.

City of Corona Zoning Ordinance

As discussed above, the proposed project would establish a Specific Plan as a framework for the development of the residential development; as such, a Change of Zone from Agriculture (A) to S-P under the Trails at Corona Specific Plan, which has been submitted to the County as part of the entitlements process for the proposed project.

Trails at Corona Specific Plan

As discussed in the Trails at Corona Specific Plan, Development Standards and Regulations section, Table 3.11-9 provides development standards developed for Planning Area 6.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Table 3.11-9: Planning Area 6 Design Standards

Typical Lot	
Minimum Lot Size	6,500 square feet
Lot Width	65 feet
Lot Depth	100 feet
Lot Coverage	
Single-story Home	60%
Single-story Home with porch/covered patio	70%
2-story Home	60%
2-story Home with porch/covered patio	70%
Building Height	
Maximum Building Height	30 feet

Parking	
Parking Requirements	Minimum 2-car garage for each unit (10 feet by 20 feet for each space), plus one guest space for each unit
Dwelling Units	
Minimum Dwelling Unit Size	1,000 square feet
Source: Trails at Corona Specific Plan (November 2021).	

Multiple Species Habitat Conservation Plan

The Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive multi-jurisdictional effort that includes Riverside County and 14 cities in western Riverside County. Rather than address sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, proposing a reserve system of approximately 500,000 acres and a mechanism to fund and implement the reserve system. Most importantly, the MSHCP allows participating entities to issue take permits for listed species so that individual applicants need not seek their own permits from the United States Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW). The MSHCP was adopted on June 17, 2003, by the Riverside County Board of Supervisors.[4]

The project site falls within the boundaries of the Western Riverside MSHCP. However, as the site consists of a formerly developed golf course, the site is excluded from the MSHCP survey areas, which include Narrow Endemic Plant Species Survey Area, Criteria Area Species Survey Area, and burrowing owl survey area. Consequently, assessments are not required for these species pursuant to the MSHCP. However, MSHCP policies regarding riparian/riverine areas apply to all properties located within the MSHCP and as such, the project site must be assessed for these habitat areas. Project development would be consistent with the policies set forth in the MSHCP.

3.11.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, land use impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) 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?

b) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?

3.11.4 - Project Impacts Mitigation Measures

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

[4] Multiple Species Habitat Conservation Plan (MSHCCP). 2012. Consistency Analysis

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Land Use Plan

Impact LUP-1:	**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?**

Source(s): Riverside County 2020 General Plan, GIS database, City of Corona 2020-2040 General Plan, Notice of Preparation (NOP) and Scoping Meeting Documents (Appendix A).

Impact Analysis

Present Land Use

The project site is currently vacant and has been vacant since the closing of the Mountain View Golf Course in 2009. Prior to closing in 2009, the site operated as a golf course beginning in 1964. Most of the property is currently covered with grass, weeds, and imported sand and topsoil, which limits the observable surface soils to less than 20 percent. The majority of the surrounding area consists of residential uses and also includes commercial, industrial, and institutional uses north of Planning Area 1, which borders SR-91. The project site is bordered by both County of Riverside and City of Corona parcels. In addition, approximately 1.2 miles northeast of the project site is the Corona Municipal Airport. The proposed project site is outside of both the airport's 65-decibel noise contour and the Corona Municipal Airport Land Use Compatibility (ALUC) Plan.

Proposed Land Use

The proposed project proposes to construct residential uses, along with 0.78 acre of commercial uses, open space, parks, and trails, as follows:

Residential Uses

The proposed project is divided into six Planning Areas, five of which are within the County of Riverside and one of which is in the City of Corona Several of the Planning Areas contain open space in the form of parks and trails open to the entire community. The following uses are proposed in each planning area:

- **Planning Area 1:** 66 two-family residences **Planning Area 2:** *At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas. However, the development of Planning Area 2 is no longer contemplated and this acreage would remain undeveloped as open space. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.*

- **Planning Area 3:** 115 single-family detached residences, 50 two-family residences, and one community center.
- **Planning Area 4:** 47 single-family detached residences.
- **Planning Area 5:** 31 single-family detached residences.
- **Planning Area 6 (City of Corona):** *At the time of this analysis, the project applicant proposed the development of 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 6.*

All 309 dwelling units would be 100 percent active adult and age-restricted to 60 years old and older under the proposed project.

Open Space, Parks, and Trails

As noted above, each Planning Area contains open space in the form of parks and trails open to the public. Parks would include a combination of the following: walking, running and biking trails, tot lots, active sport courts, or dog parks. Park benches and large greenspaces could also be provided for passive recreation. The parks would serve the purpose of water quality cleanup from storm and residential run-off, before it percolates into the ground or enters the storm drain system. Additionally, some park areas would serve as detention basins, providing increased flood protection and flow control.

Development of the project site would result in changes to current conditions. However, these changes do not represent a significant adverse impact when compared to present land uses adjoining the site. Potential adverse impacts of the proposed project that could affect land use compatibility with adjoining areas—including aesthetics, agricultural resources, air quality, cultural resources, geology and soils, greenhouse gas emissions, hazards, hydrology, mineral resources, noise, population and house, public services, recreation, transportation, tribal cultural resources, and utilities—have been evaluated in the respective sections of this Draft Environmental Impact Report (Draft EIR) and have been found to be less than significant, or less than significant with mitigation. The design and development of the project site with the uses proposed would be compatible with the existing land uses in the surrounding area.

For Planning Area 1 through Planning Area 5, the proposed project involves a General Plan Amendment to change the land use designation from R-1 to MDR. The proposed project includes the establishment of a Specific Plan as a framework for the development of the residential uses; as such, a Change of Zone from R-1 to S-P is proposed. With discretionary permit approval, impacts resulting from the General Plan Amendment and Change of Zone would be less than significant.

Thus, it is concluded that the proposed project would be compatible with the land uses located on the properties immediately surrounding the project site as the proposed project is similar in nature with the surrounding residential uses. Similarly, the proposed project would be compatible with

surrounding General Plan Land Use and Zoning Designations for both the County of Riverside and City of Corona parcels.

Consistency with the County of Riverside 2015 General Plan

A consistency analysis comparing the proposed project with the County of Riverside 2020 General Plan is provided in Table 3.11-10.

Table 3.11-10: Proposed Project Consistency with County of Riverside 2020 General Plan Policies

General Plan Policies	
The following policies apply to Land Use Development:	
Preceding Discussion	One of the primary purposes of land use planning is to minimize the impacts certain uses have on adjacent areas. This has been traditionally accomplished by providing separation between sensitive uses and uses whose byproducts may include noise, excessive traffic, odors, dust, or vibrations. For instance, a number of uses, including agriculture, industrial, commercial, landfills, mining operations, and transportation facilities, can have potentially adverse effects upon residential neighborhoods, sensitive habitat areas and schools. However, in order to achieve a more compact development pattern, improved accessibility between places of employment and residence, and improved access to transit as described in the Riverside County Integrated Project (RCIP) Vision, a strict reliance on physical separations is not practical. Instead, Riverside County must require construction techniques and enforce use regulations (e.g., restrictions on hours of operations) to help mitigate these impacts and achieve these aspects of the Vision. Compatibility is also associated with character. That is, the character of an area is often viewed in terms of the relationships between, and treatment of, the built and natural environment. The design of structures and their relationship to the surrounding natural and/or urban character plays a key role in creating the character or identity of a place.
General Plan Policy	**Project Consistency**
LU 7.3. Consider the positive characteristics and unique features of the project site and surrounding community during the design and development process.	**The proposed project conforms to this policy**. The proposed project has been designed to be integrated into the surrounding topography and existing land uses.
LU 7.4. Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.	**The proposed project conforms to this policy.** The proposed project retains and enhances the integrity of the existing surrounding residential areas, as the proposed project proposes residential, park, open space, and trail improvements. The potential impacts identified by this policy, including noise, air quality, light and glare, and traffic impacts, have all been addressed in respective sections of this Draft EIR and either have been determined to be less than significant or would be mitigated to the extent feasible.
LU 7.5. Require buffering to the extent possible between urban uses and adjacent rural/equestrian oriented land uses.	**The proposed project conforms to this policy.** The proposed project residential uses are similar to the existing surrounding uses and would be buffered

General Plan Policies	
	according to the County of Riverside Code of Ordinances through setbacks.
LU 7.6. Require buffering to the extent possible and/or the maintaining of a natural edge for proposed development directly adjacent to National Forests.	**This policy does not apply to the proposed project.** The proposed project is not located adjacent to a national forest.
LU 7.7. Require buffers to the extent possible between development and watercourses, including their associated habitat.	**The proposed project conforms to this policy.** The project site has jurisdictional features with associated habitat. Potential impacts to jurisdictional features would be mitigated to have a less than significant impact and would be mitigated in compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) as outlined in Section 3.4—Biological resources of this DEIR.
LU 7.8. Require new developments in Fire Hazard Severity Zones to provide for a fuel clearance/ modification zone, as required by the Fire Department.	**This policy does not apply to the proposed project.** The proposed project is not located in a Fire Hazard Severity Zone.
LU 7.9. Require buffers between urban uses and adjacent solid waste disposal facilities.	**This policy does not apply to the proposed project.** The proposed project is not located adjacent to solid waste disposal facilities.
LU 7.10. The proponent for new development proposals on forested lands with at least 10 percent coverage of mature conifer trees, forest land or timber in which three or more acres of forested lands will be cleared (removed) of trees must demonstrate to the County of Riverside compliance with any/all applicable State regulations regarding the protection and operation of said forest resources. As used here, the term, "native trees," shall only apply to naturally occurring conifers growing above 5,000 feet above mean sea level (AMSL) elevation. Additionally, replacement trees for all qualifying mature trees removed must be planted at a ratio of 1:1. The replacement trees must be planted on the project site or, where that is infeasible because the entire site must be permanently cleared, on property in an acceptable alternate location, preferably nearby.	**This policy does not apply to the proposed project.** The proposed project is not located on forested lands.
The following policies apply to Growth and Development:	
Preceding Discussion	The Western Riverside MSHCP encompasses approximately 1.26 million acres (approximately 1,997 square miles); of which the proposed project is within a criteria cell of the MSHCP. This MSHCP serves as a Habitat Conservation Plan pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act of 1973, as well as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 1991. It is used to allow incidental "take" of plant and animal species identified within the MSHCP. The purpose of the MSHCP is for the Wildlife Agencies to grant "take authorization" for otherwise lawful actions that may incidentally take or harm individuals of a species outside of preserve areas, in exchange for supporting assembly of a coordinated

General Plan Policies	
	reserve system. Conservation and management duties, as well as implementation assurances, will be provided by the County of Riverside and other signatory agencies or jurisdictions identified as permittees through a corresponding Implementation Agreement.
General Plan Policy	**Project Consistency**
OS 17.1. Enforce the provisions of applicable MSHCPs and implement related Riverside County policies when conducting review of possible legislative actions such as general plan amendments, zoning ordinance amendments, etc. including policies regarding the handling of private and public stand-alone applications for general plan amendments, lot line adjustments and zoning ordinance amendments that are not accompanied by, or associated with, an application to subdivide or other land use development application. Every stand-alone application shall require an initial Habitat Evaluation and Acquisition Negotiation Process (HANS) assessment and such assessment shall be made by the Planning Department's Environmental Programs Division. Habitat assessment and species-specific focused surveys shall not be required as part of this initial HANS assessment for stand-alone applications but will be required when a development proposal or land use application to subsequently subdivide, grade or build on the property is submitted to the County.	**The proposed project would conform to this policy** by being consistent with the MSHCP, described in detail in Section 3.4—Biological Resources of this DEIR.
OS 17.2. Enforce the provisions of applicable MSHCPs and implement related Riverside County policies when conducting review of development applications.	**The proposed project would conform to this policy** by being consistent with the MSHCP, described in detail in Section 3.4—Biological Resources of this DEIR.
OS 17.3. Enforce the provisions of applicable MSHCPs and implement related Riverside County policies when developing transportation or other infrastructure projects that have been designated as covered activities in the applicable MSHCP.	
OS 18.1. Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs and through implementing related Riverside County policies.	
The following policies apply to the Healthy Communities Element:	
Preceding Discussion	The Healthy Communities Element addresses areas where public health and planning intersect, including transportation and active living, access to nutritious foods, access to health care, mental health, quality of life, and environmental health.
General Plan Policy	**Project Consistency**
HC 8.2. Support cohesive neighborhoods, especially with lifecycle housing opportunities.	**The proposed project conforms to this policy.** The proposed project includes housing to be designed to

General Plan Policies	
	accommodate age-restricted (60+) homes in Planning Areas 1, 3, 4, 5, and 6.
HC 10.1. Provide residents of all ages and income levels with convenient and safe opportunities for recreation and physical activities.	**The proposed project conforms to this policy.** Each Planning Area contains open space in the form of parks and trails open to the public. Parks could include walking, running and biking trails, tot lots, active sport courts, or dog parks. Park benches and large greenspaces will be provided for passive recreation.
Source: County of Riverside 2020 General Plan; FirstCarbon Solutions (FCS) 2021.	

As outlined within Table 3.11-10, the proposed project would not conflict with any applicable General Plan policies. Therefore, impacts to the County of Riverside General Plan would be less than significant.

Consistency with the City of Corona General Plan

A consistency analysis comparing the proposed project with the City of Corona 2020-2040 General Plan is provided in Table 3.11-10.

Table 3.11-11: Proposed Project Consistency with City of Corona 2020-2040 General Plan Policies

General Plan Policies	
The following policies apply to Land Use Compatibility	
Preceding Discussion	Corona's diversity of uses includes housing, schools, parks, libraries, religious facilities, civic uses, and commercial and industrial uses. These provide shopping, employment opportunities, and open spaces for recreation. This mix evolved substantially during the last decade. In earlier years, Corona was primarily a "bedroom" community with few industrial and commercial uses, and residents had to travel to adjoining cities for these uses. Today, the City has achieved a greater balance of commercial, industrial, and residential uses that sustain revenue for essential City services to its residents.
General Plan Policy	**Project Consistency**
LU-1.1 Accommodate uses that support the diverse needs of Corona's residents, including opportunities for living, commerce, employment, recreation, education, culture, entertainment, civic engagement, and social and spiritual activity that are in balance with natural open spaces.	**The proposed project would conform to this policy.** The proposed project would be 100 percent active adult and age-restricted to 60 years and older, and therefore, would provide residential housing opportunities for a typically underserved community. Additionally, the proposed project has been designed to be integrated into the surrounding topography and land uses, including many **natural** open spaces throughout the Planning Areas.
LU-1.3 Accommodate uses that maintain or enhance Corona's fiscal viability and account for current and	**The proposed project would conform to this policy.** The proposed project accounts for market demands

General Plan Policies	
emerging market demands, while maintaining and improving the quality of life for current and future residents.	by providing new housing opportunities and replacing a vacant golf course, which is currently underutilized land. Additionally, the proposed project would be compatible with the surrounding land uses and provide new open space/trails, therefore maintaining and improving the quality of life of current residents.
LU-1.5 Accommodate land use development in balance with the preservation and conservation of open spaces for recreation, aesthetic relief, natural resource value, and public safety (such as floodways, seismic fault zones, and other).	**The proposed project would conform to this policy.** The proposed project has been designed to be integrated into the surrounding topography and land uses, including many natural open spaces throughout the Planning Areas. Additionally, the proposed project would provide new open space/trails.
LU-2.4 Maintain and reinforce the City's urban form and pattern of viable commercial and business centers and residential neighborhoods; prevent incompatibilities in land uses that could detract from the appearance, quality, or functioning of each area.	**The proposed project would conform to this policy, as** the proposed project would be compatible with the surrounding land uses, as the surrounding area is majority residential uses to east, west, and south.
The following policies apply to Land Use Compatibility	
LU-3.1 Permit land uses and development consistent with the Corona General Plan Land Use Designations.	**The proposed project would conform to this policy.** Planning Area 6 of the proposed project is currently designated as LDR. Implementation of the proposed project would be consistent with this General Plan Land Use Designation.
The following policies apply to Growth and Development:	
Preceding Discussion	The City of Corona has been one of the fastest growing cities in the United States during the past several decades. Now, the City is at a major crossroads as most of its lands suitable for development have been exhausted. Only a small percentage of the City's lands remain vacant and may be considered for development. The pace of future growth is likely to slow and occur on the limited vacant lands on the periphery of the City's existing urban development and the smaller remaining parcels within this pattern. Looking forward, the City will focus on strategic growth consistent with the current general plan that yields community-wide benefits.
General Plan Policy	**Project Consistency**
LU-4.3 Allow for the development of vacant lands on the periphery of existing development that complements the scale and pattern of existing uses; protects significant plant, animal, and other natural environmental resources by keeping vegetation management zones and emergency access roads within the project boundary; protects development and population from natural hazards; and where it is logical and feasible to extend infrastructure.	**The proposed project would conform to this policy, a**s the proposed project would replace a vacant, former golf course, with residential dwellings. Additionally, the proposed project would be compatible with the surrounding land uses and provide new open space/trails. As further discussed in Section 3.9, Hazards and Hazardous Materials, the proposed project would not interfere with emergency access roads. In addition to Section 3.9, Section 3.7, Geology and Soils, and Section 3.10, Hydrology and Water Quality further discusses natural hazards. However, impacts from the proposed project would

General Plan Policies	
	be less than significant or mitigated to be less significant as they relate to natural hazards.
LU-8.1 Promote the conservation of existing residential neighborhoods, permitting the infill of housing that is compatible in density and scale with existing uses, except where densities may be increased as depicted on the land use plan or as permitted by State law.	**The proposed project would conform to this policy.** The proposed project is primarily active adult residential housing which would be constructed on a former golf course. The project site is currently encompassed by residential uses. Therefore, the proposed project would be compatible with existing uses.
LU-8.7 Require that new single-family homes constructed in existing neighborhoods be designed to complement existing structures in their property setbacks, scale, building materials, and color palette, and exhibit a high quality of architectural design.	**The proposed project would conform to this policy.** The proposed project would be developed with design guidelines intended to ensure compatibility with the surrounding density, scale, building materials and would comply with any applicable regulations from the County of Riverside and City of Corona.
LU-9.1 Accommodate the development of new residential neighborhoods in areas depicted by the land use plan and growth and development policy plan that contain a diversity of housing and supporting schools, parks, and other amenities.	**The proposed project would conform to this policy.** Upon approval of the General Plan Amendment and Zone Change, the proposed project would be developed in accordance with the General Plans. Additionally, the proposed project would be 100 percent active adult and age-restricted to 60 years and older, and therefore, would provide residential housing opportunities for a typically underserved community.
Sources: City of Corona 2020-2040 General Plan; FirstCarbon Solutions (FCS) November 2021.	

As outlined within Table 3.11-11, the proposed project would not conflict with any applicable General Plan policies. Therefore, impacts to the City of Corona 2020-2040 General Plan would be less than significant.

Consistency with the SCAG Regional Comprehensive Plan and Guide

A consistency analysis comparing the proposed project with the SCAG RCPG Goals and Policies is provided in Table 3.11-12.

Table 3.11-12: SCAG 2008 Regional Comprehensive Plan and Guide Consistency Analysis

RCPG Policy	Project Consistency Analysis
Open Space and Habitat Chapter	
LU-4 Local governments should provide for new housing, consistent with State Housing Element law, to accommodate their share of forecast regional growth.	**The proposed project would conform to this policy.** The proposed project would construct new housing, consisted with State Housing Element law. Providing a share of housing to the County of Riverside and the City of Corona housing needs.
Source: FirstCarbon Solutions (FCS) 2018.	

As outlined within Table 3.11-12, the proposed project would not conflict with any applicable 2008 RCPG policy. Therefore, impacts to the RCPG would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Divide an Established Community

Impact LUP-2:	**Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?**

Source(s): Riverside County 2020 General Plan, GIS database, City of Corona 2020-2040 General Plan, Notice of Preparation (NOP) and Scoping Meeting Documents (Appendix A).

Impact Analysis

Existing Project Site Land Uses, Land Use Designation and Zoning

As discussed above, the project site is currently vacant and has been vacant since the closing of the Mountain View Golf Course in 2009. As such, Planning Areas 1, 2, 3, 4, and 5 of the project site still have a County of Riverside 2020 General Plan Land Use Designation of OS-REC. However, the County of Riverside has zoned the project site as R-1. A proposed General Plan Amendment from OS-REC to Medium Density Residential (MDR), as well as a change of zoning from R-1 to S-P has been submitted to the County as part of the entitlements process for the project.

Planning Area 6, in the City of Corona, has a General Plan Land Use Designation of LDR and is zoned as Agricultural (A). Implementation of the proposed project would require a Change of Zone from Agriculture (A) to S-P under the Trails at Corona Specific Plan, which has been submitted as part of the entitlements process for the proposed project.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

As described in detail in Section 3.11.1–Existing Conditions, above, the project site is surrounded by residential, commercial, industrial, and institutional development under the jurisdictions of Riverside County and the City of Corona. The applicant proposes the construction of a medium density residential development in Planning Area 1 through Planning Area 5, which would complement the existing residential area adjacent to the proposed project. In Planning Area 6, the proposed project

proposes a low density, single-family residential area, which also complements the existing surrounding residential area.

County of Riverside (Planning Area 1–5)

The County of Riverside 2020 General Plan designates the proposed project site as OS-REC. However, the County of Riverside has zoned the project site as R-1. The current land use designation for the project site does not allow for residential development, while the zoning designation does allow for single-family residential. As such, the proposed project would not be consistent with existing permitted land uses on-site. However, as a part of the entitlement process, a proposed General Plan Amendment from OS-REC to MDR, as well as a change of zoning from R-1 to S-P, for the project site, has been submitted to the County. Additionally, there are currently no residential dwellings on the project site, and each Planning Area of the proposed project contains open space in the form of parks and trails open to the public. The parks and trails unify the existing neighborhood and the proposed project by providing park space for existing and new residents to use. Furthermore, implementation of the proposed project would not include any roadway, structure, or other land use that would physically divide an existing community. Temporary closures of adjacent roadways during construction would not significantly impact the community because a traffic control plan would be required by the County. As such, the proposed project would not divide any established community in Riverside County.

City of Corona (Planning Area 6)

The proposed project conforms to the City of Corona 2020-2040 General Plan Land Use Designation of LDR, however, the proposed project proposes a Change of Zone from Agriculture (A) to the Specific Plan Zone under the Trails at Corona Specific Plan. As the City of Corona General Plan has analyzed and included Planning Area 6 as single-family residential in the full General Plan buildout, potential impacts from the Change of Zone would be less than significant. Additionally, there are currently no residential dwellings on the project site, and each Planning Area of the proposed project contains open space in the form of parks and trails open to the public. The parks and trails unify the existing neighborhood and the proposed project by providing park space for existing and new residents to use. As such, the proposed project would not divide any established community in the City of Corona.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

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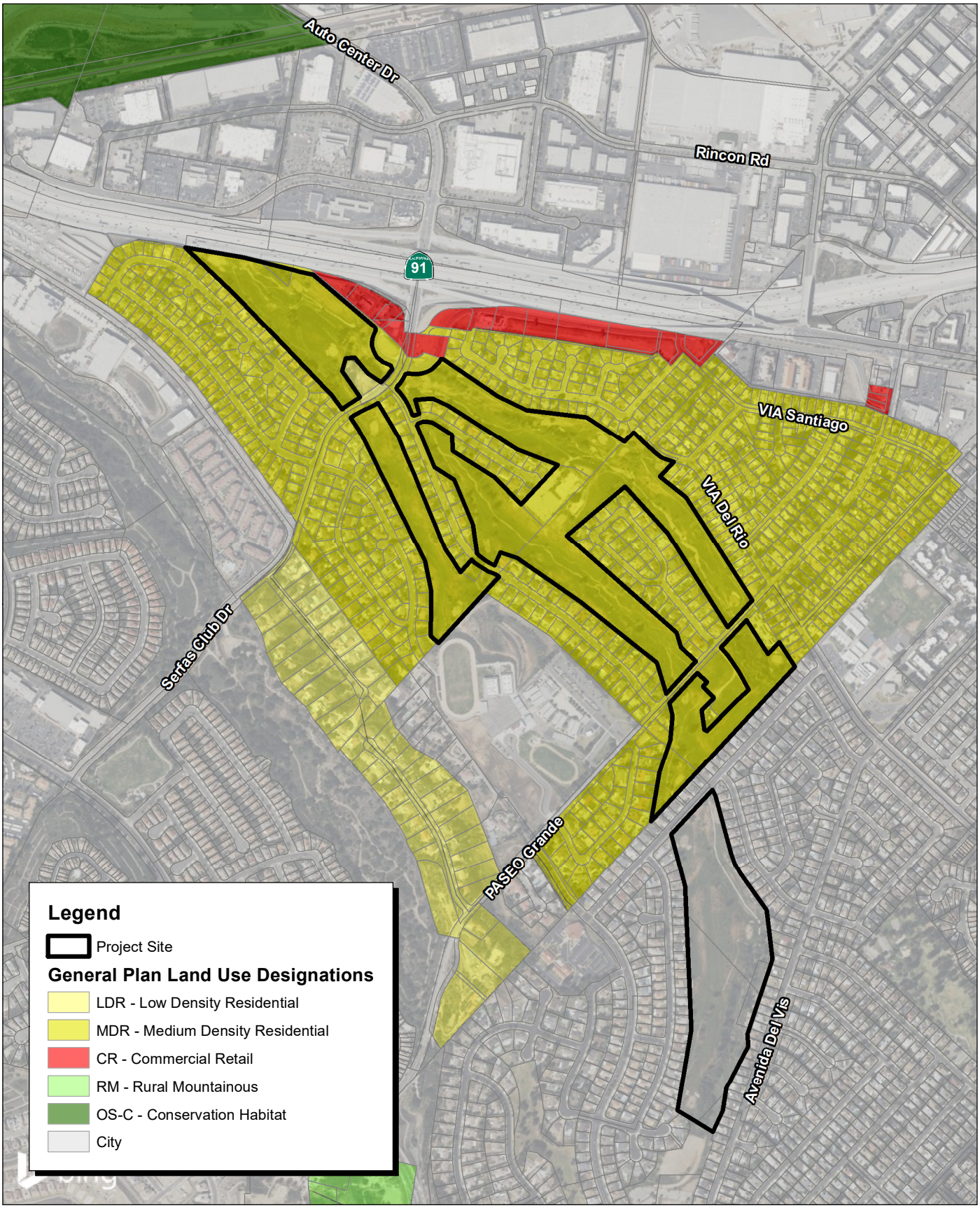

Source: Bing Aerial Imagery. Riverside County Existing General Plan Land Use Data.

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Exhibit 3.11-3a
Proposed County of Riverside General Plan Land Use Designations

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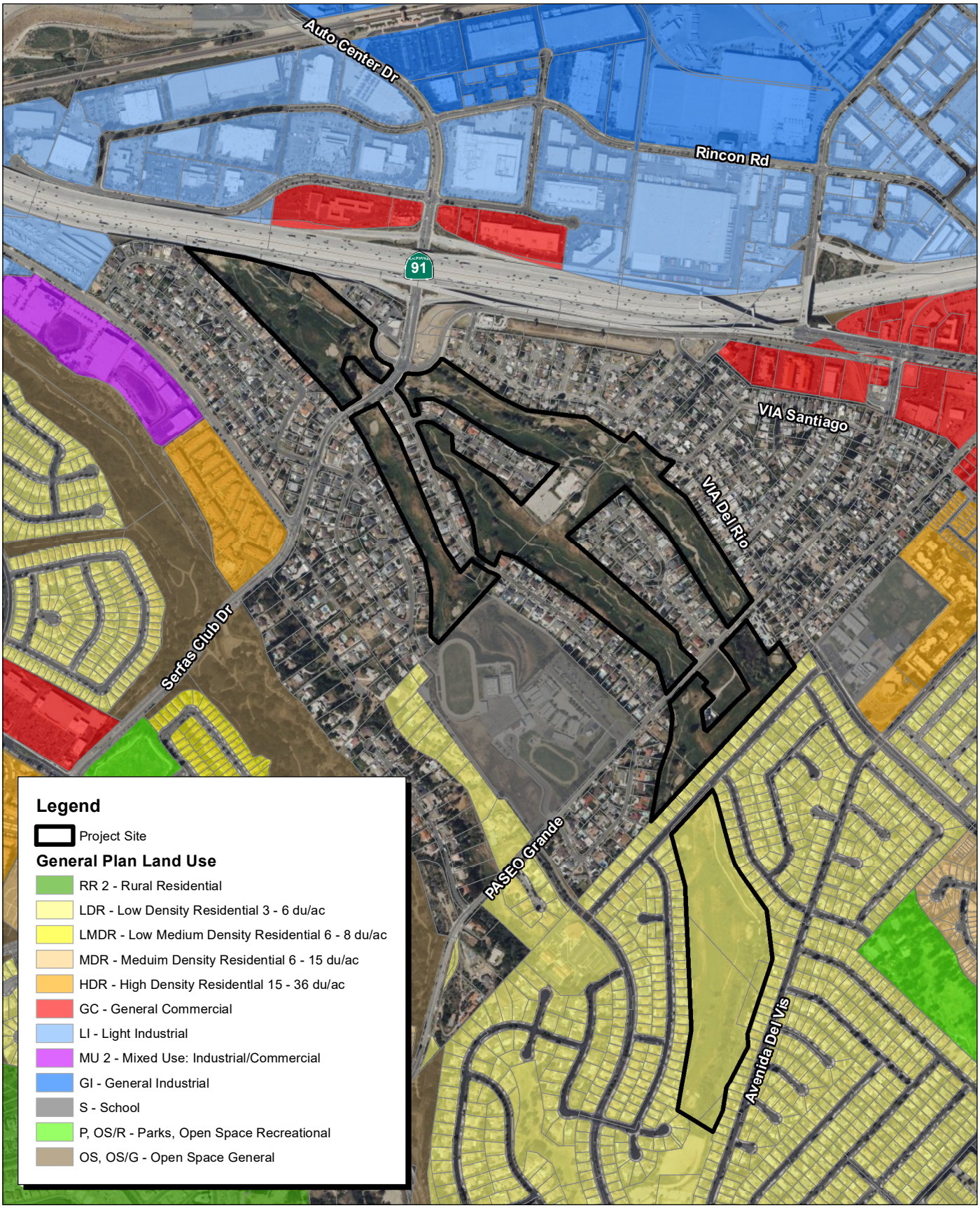

Source: Bing Aerial Imagery. City of Corona Existing General Plan Land Use Data.

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Exhibit 3.11-3b
Proposed City of Corona General Plan Land Use Designations

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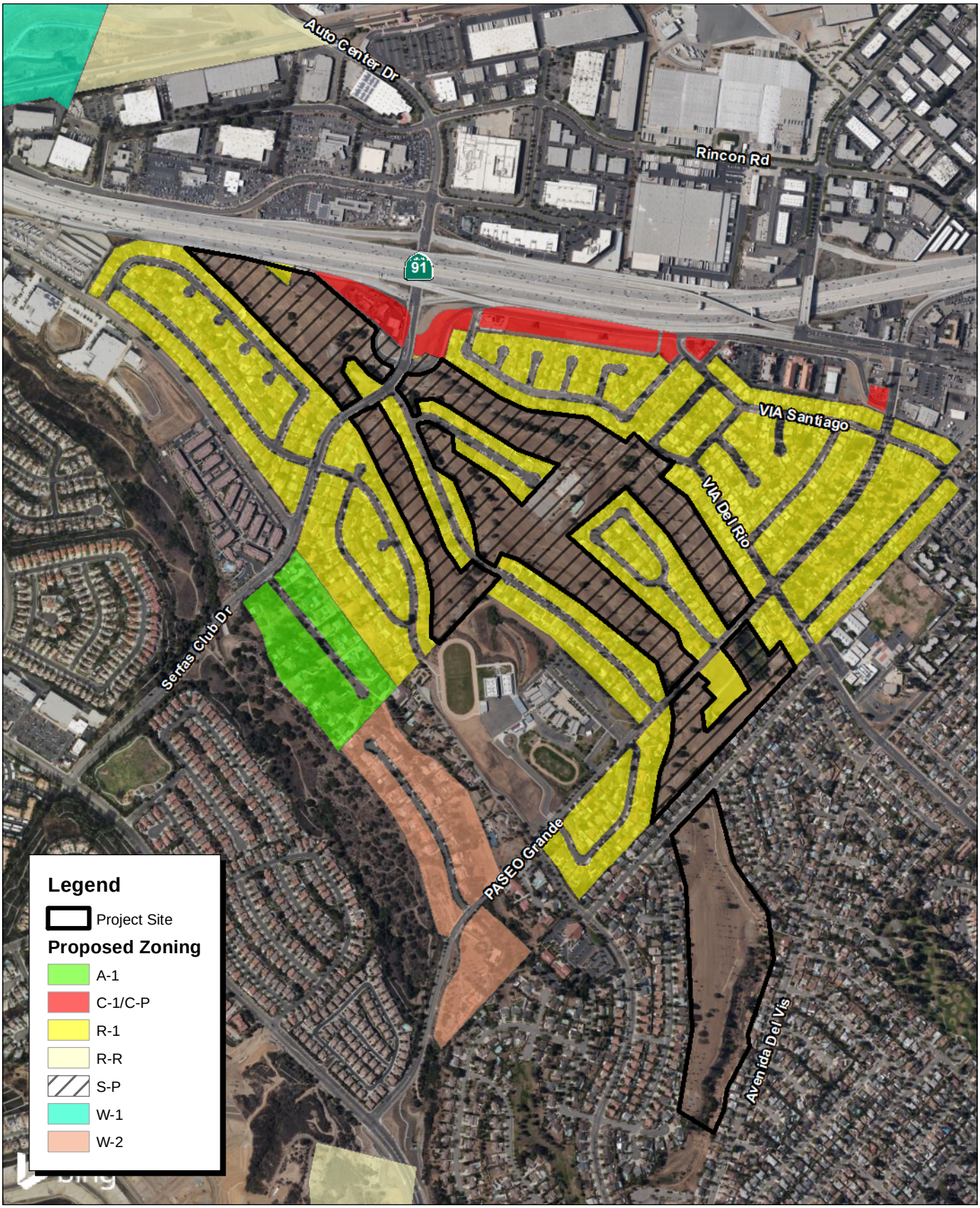

Source: Bing Aerial Imagery. Riverside County Existing Zoning Data.

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Exhibit 3.11-4a
Proposed County of Riverside Zoning Designations

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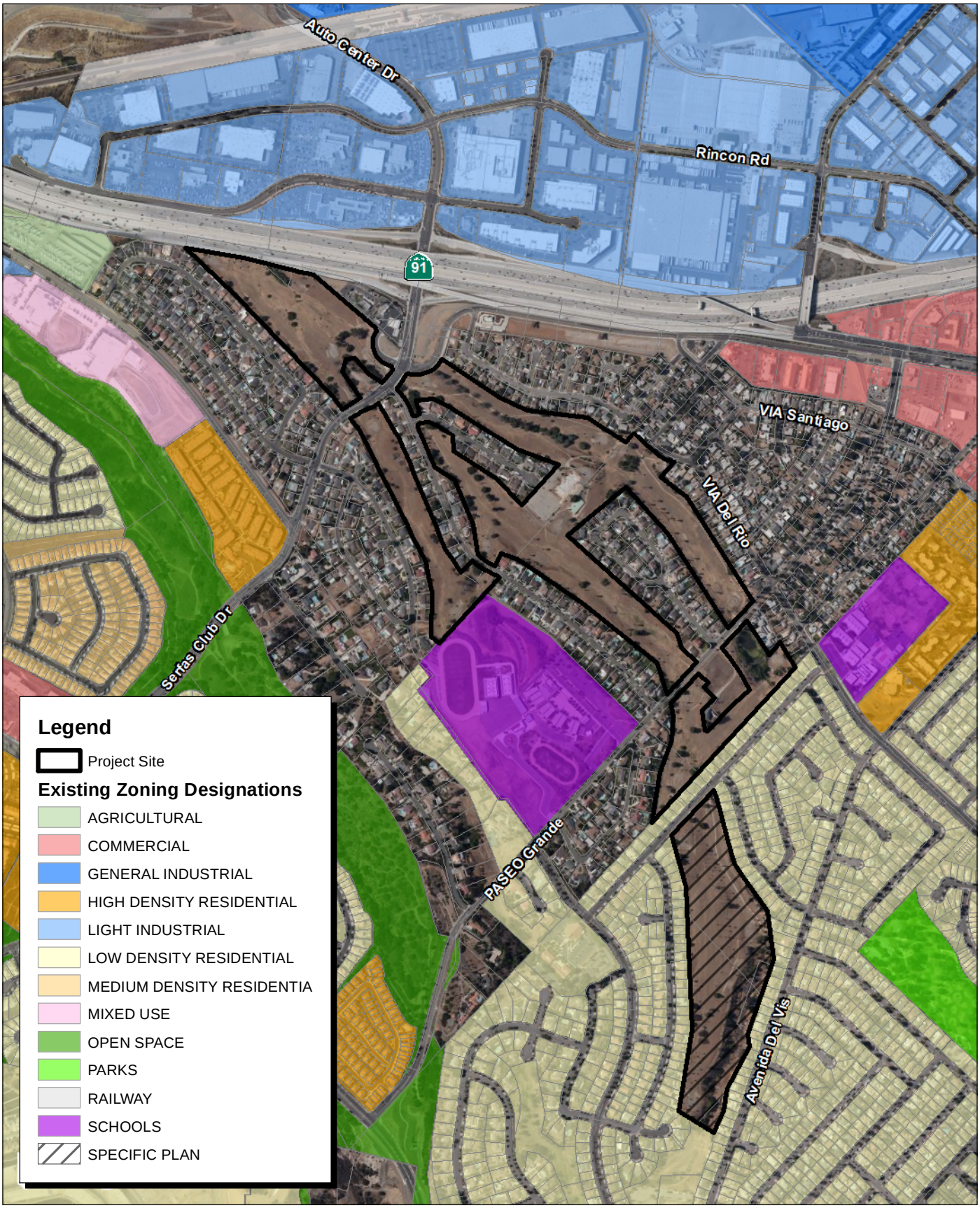

Source: Bing Aerial Imagery. City of Corona Existing General Plan Land Use Data.

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Exhibit 3.11-4b
Proposed City of Corona Zoning Designations

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3.12 - Mineral Resources

This section of the Draft Environmental Impact Report (Draft EIR) describes mineral resources in relation to the project site and discusses the potential impacts to these resources that would occur with implementation of the proposed project. Descriptions and analysis in this section are based upon existing site conditions, project site plans/exhibits, the County of Riverside 2020 General Plan, and the City of Corona 2020-2040 General Plan.

3.12.1 - Existing Conditions

As discussed in the County of Riverside 2020 General Plan, classification of land within California takes place according to a priority list that was established by the State Mining and Geology Board (SMGB) in 1982, or when the SMGB is petitioned to classify a specific area. The SMGB established Mineral Resources Zones (MRZ) to designate lands that contain mineral deposits. The State of California has also designated Aggregate Mineral Resource areas within the County. Based on a review of the Multipurpose Open Space Element of the County of Riverside 2020 General Plan, the proposed project site is designated MRZ-3, which are areas where the available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposit in these areas is undetermined. The area surrounding the project site is also classified as MRZ-3.

Neither the County of Riverside 2020 General Plan nor the City of Corona 2020-2040 General Plan identify any significant mineral resources on the project site or in the project vicinity, as the project site and surrounding area does not have an MRZ-2a or MRZ-2b designation. These designations indicate areas where the available geologic information indicates that there are significant mineral deposits or that there is a likelihood of significant mineral deposits.

3.12.2 - Regulatory Framework

State Regulations

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) was enacted by the California Legislature to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. The Department of Conservation's Office of Mine Reclamation and the SMGB jointly ensure proper administration of the SMARA requirements. The SMGB promulgates regulations to clarify and interpret the Act's provisions and serves as a policy/appeals board. The Office of Mine Reclamation provides an ongoing technical assistance program for lead agencies and operators, maintains a database of mine locations and operational information Statewide, and is responsible for compliance related matters.

The California Geological Survey has produced a report and a series of Mineral Land Classification Maps for the area that designate MRZs as follows:

MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2 Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

MRZ-3 Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

MRZ-4 Areas where available information is inadequate for assignment to any other MRZ zone.

Local Regulations

County of Riverside 2020 General Plan

Mineral extraction is an important component of Riverside County's economy. The Multipurpose Open Space Element of the County of Riverside 2020 General Plan Element states that the County has extensive deposits of clay, limestone, iron, sand, and aggregates.

The nonrenewable resources discussed in this element are mineral resources and energy resources. The Mineral Resources section of this element addresses those resources that are classified under SMARA.

In addition to agricultural production, mineral extraction is an important component of Riverside County's economy. The County has extensive deposits of clay, limestone, iron, sand, and aggregates. Classification of land within California takes place according to a priority list that was established by the SMGB in 1982, or when the SMGB is petitioned to classify a specific area. The SMGB has also established MRZs to designate lands that contain mineral deposits. The State of California has also designated Aggregate Mineral Resource areas within the County.

The Multipurpose Open Space Element of the County's General Plan identifies the classifications to define MRZs are as follows:

MRZ-1 Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.

MRZ-2a Areas where the available geologic information indicates that there are significant mineral deposits.

MRZ-2b Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits.

MRZ-3 Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined.

MRZ-4 Areas where there is not enough information available to determine the presence or absence of mineral deposits.

City of Corona 2020-2040 General Plan

The City of Corona has a vast history of mineral extraction dating back to 1888. The most predominant mineral resources generally consist of clay and construction aggregates—crushed rock, sand, and gravel. Much smaller amounts of silver, lead, zinc, coal, and gypsum have also been identified. In terms of mineral resources in the Planning Area, the active mines within the City of Corona are mostly located directly east of Interstate 15 (I-15) and State Route (SR) 91. According to the City of Corona 2020-2040 General Plan, the City has two active mining operations, All American Asphalt and Vulcan/Calmat, which were granted their 100-year permits in 2018 and 2014, respectively. The Sphere of Influence (SOI) has 10 active mining operations under the jurisdiction of the County of Riverside. Several significant mineral resources are located in the City of Corona and can be categorized by the now-standard method for classifying areas that may contain mineral resources of local or Statewide importance by the California Department of Conservation, in accordance with the Surface Mining and Reclamation Act of 1975. As part of its mandate, the State Geologist is required to identify and classify lands in every community with potential mineral resources, which may be further designated as lands of regional or Statewide significance, including:

MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their feasible production.

MRZ-2 Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists. This classification may contain additional subcategories.

MRZ-3 Areas containing mineral deposits whose significance cannot be evaluated from available data. MRZ-3 areas may be classified 3a or 3b based on their potential for resources.

MRZ-3a Areas that have the potential for aggregate resources mineral deposits, but no resources have been identified.

MRZ-4 Areas where available information is inadequate for assignment to any other zone. Unlike MRZ-1, minerals may be present, but information is not available to make a determination.

The City is primarily underlain by MRZ-2 lands, which are known to contain valuable mineral resources, specifically construction aggregate and industrial minerals. The City of Corona 2020-2040 General Plan provides three maps: (1) Figure ER-8, Industrial Minerals, which classifies the project site as MRZ-4; (2) Figure ER-9, Aggregate Resources, which classified the project site as MRZ-3; and (3) Figure ER-10, Areas of Regional Significance, which did not identify areas of regional significance within the project site.

3.12.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, as well as Riverside County's environmental checklist, mineral resources impacts

resulting from the implementation of the proposed project would be considered significant if the project would:

a) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State.

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

c) Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines.

3.12.4 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Loss of Known Mineral Resource

Impact MIN-1:	**Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?**

Source(s): Riverside County 2020 General Plan, including Figure OS-6 “Mineral Resources Area,” and the City of Corona 2020-2040 General Plan.

Impact Analysis

The project site does not contain any known mineral resources. The County of Riverside 2020 General Plan’s Multipurpose Open Space Element (Figure OS-6) identifies the project site, as well as most of western Riverside County, as being within MRZ-3 (significance of mineral deposits undetermined). Areas with this designation are described in the General Plan as “areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined.” The County of Riverside 2020 General Plan provides no specific policies regarding property identified as “MRZ-3” and does not designate the project site for mineral resource-related uses (for example, MRZ-2b, which comprises areas where the available geologic information indicates that there is a likelihood of significant mineral deposits). The City of Corona 2020-2040 General Plan classifies the Planning Area 6 site as MRZ-4 in terms of industrial mineral resources, which indicates that the project site is located within an area with inadequate information to assign it as MRZ-1, MRZ-2, or MRZ-3. The City of Corona designates the Planning Area 6 site as MRZ-3 in terms of aggregate resources, which indicates the project site is located within area containing mineral deposits, but the significance cannot be evaluated based on the information

available. There is no indication that the project site contains any mineral resources that would be of value to the region or residents of the State.

The proposed project site is also not located adjacent to a State-classified or designated area or existing surface mine. The land adjacent to the project site to the north, south, east, and west does not have an Open Space-Mineral Resource (OS-MIN) land use designation by the County of Riverside, which allows for mineral extraction and processing facilities; likewise, the City of Corona does not classify the area around the project site as containing mineral resources. According to the City of Corona 2020-2040 General Plan, the closest area with a different designation than the Planning Area 6 site in terms of industrial minerals is approximately 0.3 mile southwest from the project site and is designated as MRZ-3a, which indicates that the area has the potential for significant resources, but none have been identified. The closest area with a different designation to the Planning Area 6 site in terms of aggregate resources is approximately 0.65 miles west and is designated as MRZ-1, which indicates an area where adequate information indicates that no significant mineral deposits are present. Further, the construction or operation of the proposed project would not impact any ongoing mining operations.

The project applicant does not propose any quarries or mines on-site. There are no existing quarries or mines on-site that were identified in any of the technical reports prepared for the project. Additionally, the County of Riverside does not designate the site as having mineral resources in either the General Plan land use or zoning designations for the project site. The project site does not have an OS-MIN land use designation, which would allow for mineral extraction and processing facilities; likewise, the City of Corona does not classify the project site as containing mineral resources. The proposed project would not expose people or property to hazards from proposed, existing, or abandoned quarries or mines. Therefore, impacts are considered less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Impact MIN-2: 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?

Source(s): Riverside County 2020 General Plan, including Figure OS-6 “Mineral Resources Area” and the City of Corona 2020-2040 General Plan.

Impact Analysis

The County of Riverside 2020 General Plan’s Multipurpose Open Space Element (Figure OS-6) identifies the project site, as well as most of western Riverside County, as being within MRZ-3 (significance of mineral deposits undetermined). Areas with this designation are described in the

General Plan as "areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined." The County of Riverside 2020 General Plan provides no specific policies regarding property identified as "MRZ-3" and does not designate the project site for mineral resource-related uses (for example, MRZ-2b, which comprises areas where the available geologic information indicates that there is a likelihood of significant mineral deposits). Similarly, the City of Corona 2020-2040 General Plan designates Planning Area 6 as MRZ-4 for industrial minerals and MRZ-3 for aggregate resources. These designations indicate that the Planning Area 6 site is within the classification of "areas where available information is inadequate for assignment to any other zone" and "areas containing mineral deposits whose significance cannot be evaluated from available data," respectively. There is no indication that the project site contains any mineral resources that would be of value to the region or residents of the State. Additionally, the proposed project would not be an incompatible land use located adjacent to a State-classified or designated area or existing surface mine, nor would it expose people or property to hazards from proposed, existing, or abandoned quarries or mines. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Impact MIN-3:	**Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?**

Source(s): Riverside County 2020 General Plan, including Figure OS-6 "Mineral Resources Area," and the City of Corona 2020-2040 General Plan.

Impact Analysis

The project site does not contain any known mineral resources, and the project site does not contain existing or abandoned quarries or mines. Furthermore, the project does not propose quarries, mines, or mining activity on the site. The County of Riverside 2020 General Plan's Multipurpose Open Space Element (Figure OS-6) identifies the project site, as well as most of western Riverside County, as being within MRZ-3 (significance of mineral deposits undetermined). Areas with this designation are described in the General Plan as "areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined."

Similarly, the City of Corona 2020-2040 General Plan designates Planning Area 6 as MRZ-4 for industrial minerals and MRZ-3 for aggregate resources. These designations indicate that the Planning Area 6 site is within the classification of "areas where available information is inadequate for

assignment to any other zone" and "areas containing mineral deposits whose significance cannot be evaluated from available data," respectively. The proposed project site is also not located adjacent to a State-classified or designated area or existing surface mine. Because there are no existing quarries or mines on-site, and no such activity is proposed for the site, there would be no impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

No impact.

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3.13 - Noise

3.13.1 - Introduction

This section describes the existing noise setting and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on noise modeling performed by FirstCarbon Solutions (FCS). The noise modeling output is included in this Draft Environmental Impact Report (Draft EIR) as Appendix H.

3.13.2 - Environmental Setting

Characteristics of Noise

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit, which expresses the ratio of the sound pressure level being measured to a standard reference level. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Only audible changes in existing ambient or background noise levels are considered potentially significant.

A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear.

Because decibels are logarithmic units, they cannot be added or subtracted by ordinary arithmetic means. For example, if one noise source produces a noise level of 70 dB, the addition of another noise source with the same noise level would not produce 140 dB; rather, they would combine to produce a noise level of 73 dB.

Noise Descriptors

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and Community Noise Equivalent Level (CNEL) or the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source, as well as ground absorption, atmospheric conditions (wind, temperature gradients, and humidity) and refraction, and shielding by natural and manmade features. Sound from point sources, such as an air conditioning condenser, a piece of construction equipment, or an idling truck, radiates uniformly outward as it travels away from the source in a spherical pattern.

The attenuation or sound drop-off rate is dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in noise models: soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA per each doubling of the distance (dBA/DD) is typically observed over soft ground with landscaping, as compared with a 6 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone, and very hard packed earth. For line sources, such as traffic noise on a roadway, a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3 dBA/DD drop-off rate for hard-site conditions.

Traffic Noise

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of noise levels, a doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the Federal Highway Administration (FHWA) community noise assessment criteria, this change is “barely perceptible.” For reference, a doubling of perceived noise levels would require an increase of approximately 10 dBA. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

Stationary Noise

A stationary noise producer is any entity in a fixed location that emits noise. Examples of stationary noise sources include machinery, engines, energy production, and other mechanical or powered equipment and activities such as loading and unloading or public assembly that may occur at commercial, industrial, manufacturing, or institutional facilities. Furthermore, while noise generated by the use of motor vehicles over public roads is preempted from local regulation, the County

considers the use of these vehicles to be a stationary noise source when operated on private property such as at a truck terminal or warehousing facility. The emitted noise from the producer can be mitigated to acceptable levels either at the source or on the adjacent property through the use of proper planning, setbacks, block walls, acoustic-rated windows, dense landscaping, or by changing the location of the noise producer.

The effects of stationary noise depend on factors such as characteristics of the equipment and operations, distance and pathway between the generator and receptor, and weather. Stationary noise sources may be regulated at the point of manufacture (e.g., equipment or engines), with limitations on the hours of operation, or with provision of intervening structures, barriers, or topography.

Construction activities are a common source of stationary noise. Construction-period noise levels are higher than background ambient noise levels but eventually cease once construction is complete. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on each construction site, and therefore, would change the noise levels as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 3.13-1 shows typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

Table 3.13-1: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Impact Pile Driver	95
Auger Drill Rig	85
Vibratory Pile Driver	95
Jackhammers	85
Pneumatic Tools	85
Pumps	77
Scrapers	85
Cranes	85
Portable Generators	82
Rollers	85
Dozers	85
Tractors	84
Front-End Loaders	80
Backhoe	80
Excavators	85

Type of Equipment	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Graders	85
Air Compressors	80
Dump Truck	84
Concrete Mixer Truck	85
Pickup Truck	55
Source: FHWA 2006. Highway Construction Noise Handbook, August.	

Characteristics of Vibration

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of groundborne vibrations typically only cause a nuisance to people, but in extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room, and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Because of the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels—denoted as LV—and is based on the reference quantity of 1 microinch per second. To distinguish vibration levels from noise levels, the unit is written as “VdB.”

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as rms velocity in units of decibels of 1 microinch per second, with the unit written in VdB. Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. Human perception of vibration starts at levels as low as 67 VdB. Annoyance due to vibration in residential settings starts at approximately 70 VdB.

Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible groundborne noise or vibration. Construction activities, such as blasting, pile driving and operating heavy earthmoving equipment, are common sources of groundborne vibration. Construction vibration impacts on building structures are generally assessed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 3.13-2.

Table 3.13-2: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	rms Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer–Small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer–Large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller–Small	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller-Large	0.210	94
Pile Driver–Impact Typical	0.644	104
Pile Driver–Impact Upper Range	1.518	112

Notes:
PPV = peak particle velocity
rms = root mean square
Source: Compilation of scientific and academic literature, generated by Federal Transit Administration (FTA) and Federal Highway Administration (FHWA).

The propagation of groundborne vibration is not as simple to model as airborne noise. This is because noise in the air travels through a relatively uniform medium, while groundborne vibrations travel through the earth, which may contain significant geological differences. Factors that influence groundborne vibration include:

- **Vibration source:** Type of activity or equipment, such as impact or mobile, and depth of vibration source.
- **Vibration path:** Soil type, rock layers, soil layering, depth to water table, and frost depth.
- **Vibration receiver:** Foundation type, building construction, and acoustical absorption.

Among these factors that influence groundborne vibration, there are significant differences in the vibration characteristics when the source is underground compared to at the ground surface. In addition, soil conditions are known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Vibration propagation is more efficient in stiff clay soils than in loose sandy soils, and shallow rock seems to concentrate the vibration energy close to the surface and can result in groundborne vibration problems at a large distance from the source. Factors such as layering of the soil and depth to the water table can have significant effects on the propagation of groundborne vibration. Soft, loose, sandy soils tend to attenuate more vibration energy than hard, rocky materials. Vibration propagation through groundwater is more efficient than through sandy soils. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil type, but it has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests. The vibration level (PPV) at a distance from a point source can generally be calculated using the vibration reference equation:

$$PPV = PPV_{ref} * (25/D)^n \text{ (in/sec)}$$

Where:

PPV_{ref} = reference measurement at 25 feet from vibration source
D = distance from equipment to the receptor
n = vibration attenuation rate through ground

According to Chapter 12 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual, an "n" value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.

Existing Ambient Noise Levels

To understand the current ambient noise environment at the project site and in the proposed project vicinity, a total of three short-term noise measurements and one long-term noise measurement were taken in the general project vicinity. These measurements provide a baseline for any potential noise impacts that may be created by development of the proposed project. The results of these measurements are described below, and the noise survey sheets are provided in Appendix H of this Draft EIR.

Short-Term Noise Measurements

Short-term noise monitoring was conducted on June 14, 2018, between 10:33 a.m. and 11:57 a.m. The noise measurements were taken during the midday hours, which typically have the highest daytime noise levels in urban environments. At the start of the noise monitoring, the sky was clear with average wind conditions ranging between 1 and 5 miles per hour (mph). The field survey noted that noise within the project area is generally characterized by local roadway traffic. The short-term measurement results are summarized in Table 3.13-3. The noise measurement locations are shown in Exhibit 3.13-1.

Table 3.13-3: Existing Noise Level Measurements

Site ID #	Description	L_{eq}	L_{min}	L_{max}
ST-1	In Planning Area 3, between Frontage Road and Pine Crest Drive, approximately 250 feet east of Serfas Club Drive.	68.8	64.5	80.9
ST-2	In Planning Area 4, between Pine Crest Drive and Monterey Peninsula, approximately 100 feet east of Serfas Club Drive.	56.7	52.2	68.2
ST-3	In Planning Area 3.2, between Frontage Road and Via Santiago, approximately 250 feet south of Ridgeview Terrace.	58.1	55.0	62.3

Notes:
L_{eq} = equivalent continuous sound level
L_{min} = minimum noise/sound level
L_{max} = maximum noise/sound level
The Site ID corresponds to locations shown in Exhibit 3.13-1.
Source: FirstCarbon Solutions (FCS) 2018.

Long-Term Noise Measurement

A long-term ambient noise measurement was conducted on Thursday, June 14, 2018, from 12:34 p.m. to 1:40 p.m., on Thursday, June 15, 2018. The long-term measurement was taken in Planning Area 1 approximately 200 feet south of the State Route (SR) 91 eastbound off-ramp. The long-term noise measurement location is shown in Exhibit 3.13-1 and the long-term noise measurement data is provided in Appendix H. The results show that weekday, 24-hour average day/night noise levels at this location ranged up to 69.7 dBA CNEL. The documented daytime hourly average noise level was 64.7 L_{eq} with a nighttime hourly average noise level of 62.2 L_{eq}.

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Source: Bing Aerial Imagery.

FIRSTCARBON SOLUTIONS™

1,000 500 0 1,000 Feet

Exhibit 3.13-1
Noise Monitoring Locations

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When the long-term noise measurement was started, the sky was clear and the temperature ranged up to 85.4°F (degrees Fahrenheit), with average wind speeds of 1 mph.

Existing Traffic Noise Levels

Existing traffic noise levels along selected roadway segments in the project vicinity were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). Site-specific information is entered, such as roadway traffic volumes, roadway active width, source-to-receiver distances, travel speed, noise source and receiver heights, and the percentages of automobiles, medium trucks, and heavy trucks that the traffic is made up of throughout the day, among other variables. The modeled Average Daily Traffic (ADT) volumes were obtained by multiplying the PM peak-hour intersection traffic volumes from the project-specific traffic study by a factor of 10).[1] The model inputs and outputs, including the 60 dBA, 65 dBA, and 70 dBA CNEL traffic noise contour distances, are provided in Appendix H. A summary of the modeling results is shown in Table 3.13-4.

Table 3.13-4: Existing Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Serfas Club Drive–SR-91 Eastbound Ramps to Frontage Road	16,200	< 50	72	148	64.8
Serfas Club Drive–Frontage Road to Pine Crest Drive	16,400	< 50	72	149	64.8
Serfas Club Drive–Pine Crest Drive to Monterey Peninsula Drive	15,000	< 50	69	141	64.5
Serfas Club Drive–Monterey Peninsula Drive to Palisades Drive	14,100	< 50	66	135	64.2
Serfas Club Drive–Palisades Drive to Green River Road	10,100	< 50	< 50	109	62.7
Pine Crest Drive–Serfas Club Drive to Paseo Grande	1,900	< 50	< 50	< 50	53.5
Paseo Grande–Via Santiago to Via Del Rio	8,700	< 50	56	120	65.0
Paseo Grande–Via Del Rio to Pine Crest Drive	8,400	< 50	55	117	64.9
Paseo Grande–Pine Crest Drive to Ontario Avenue	4,500	< 50	< 50	78	62.1
Paseo Grande–Ontario Avenue to Green River Road	5,900	< 50	< 50	93	63.3
SR-91–East of Serfas Club Drive	257,000	563	1,203	2,586	80.9
SR-91–West of Serfas Club Drive	256,000	562	1,200	2,580	80.9

[1] Urban Crossroads. 2024. Trails at Corona Traffic Analysis. February.

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Notes: ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted decibel Source: FirstCarbon Solutions (FCS) 2018.					

The modeling results indicate that existing traffic noise levels range up to approximately 63.3 dBA CNEL along Serfas Club Drive between Pine Crest Drive and Monterey Peninsula Drive. Additionally, the modeling results indicate that existing traffic noise levels range up to approximately 80.9 dBA CNEL north of the project site along SR-91, as measured at 50-feet from the centerline of the outermost travel lane.

3.13.3 - Regulatory Framework

Federal

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting State and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency limits noise exposure of workers to 90 dB L_{eq} or less for 8 continuous hours, or 105 dB L_{eq} or less for 1 continuous hour. The Department of Transportation assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the FTA. Transit noise is regulated by the federal Urban Mass Transit Administration, while freeways that are part of the interstate highway system are regulated by the FHWA. Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise-sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that may be emitted by transportation sources, the County of Riverside is restricted to regulating noise generated by the transportation system through nuisance abatement ordinances and land use planning.

The FTA has established industry accepted standards for groundborne vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment document.[2] The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 3.13-5.

Table 3.13-5: Federal Transit Administration Construction Vibration Impact Criteria

Building Category		PPV (in/sec)	Approximate VdB
I.	Reinforced Concrete, Steel, or Timber (no plaster)	0.5	102
II.	Engineered Concrete and Masonry (no plaster)	0.3	98
III.	Nonengineered Timber and Masonry Buildings	0.2	94
IV.	Buildings Extremely Susceptible to Vibration Damage	0.12	90

Notes:
PPV = peak particle velocity
VdB = velocity in decibels
Source: Federal Transit Administration (FTA) 2006. Transit Noise and Vibration Impact Assessment.

State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to delineate compatibility of sensitive uses with various incremental levels of noise.

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL as measured from within the structure's interior. When such structures are located within a 60 dBA CNEL (or greater) exterior noise contour associated with a traffic noise along a roadway, an acoustical analysis is required to ensure that interior levels do not exceed the 45 dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise/land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

[2] Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. May.

California Building Standards Code

The State of California has established noise insulation standards for new hotels, motels, apartment houses, and dwellings (other than single-family detached housing). These requirements are provided in the current California Building Standards Code (California Code of Regulations [CCR], Title 24). As provided in the California Building Standards Code, the noise insulation standards set forth an interior standard of 45 dBA CNEL as measured from within the structure's interior. When such structures are located within a 65 dBA CNEL (or greater) exterior noise contour associated with a traffic noise along a roadway, an acoustical analysis is required to ensure that interior levels do not exceed the 45 dBA CNEL threshold. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

The proposed project is also subject to review under the California Environmental Quality Act (CEQA) Guidelines. Appendix G of CEQA Guidelines provides impact thresholds for potential noise and vibration impacts. The County of Riverside had developed its own CEQA thresholds, which are listed in the Thresholds of Significance section below.

Local Regulations

The project site is located in both the County of Riverside and the City of Corona. The County of Riverside addresses noise in the Noise Element of its County of Riverside 2020 General Plan and in its County Code.[3,4] Additionally, because one of the proposed planning areas lies within the City of Corona, the City's noise policies and standards would also apply to this project. The City of Corona addresses noise in the Public Health and Safety chapter of its City of Corona 2020-2040 General Plan and in its Municipal Code.[5]

Riverside County 2020 General Plan

The County of Riverside General Plan was updated in 2020 and includes a Noise Element that was most recently updated in December 2015. The objective of the General Plan's Noise Element is to provide a systematic approach to identifying and appraising noise problems in the community; quantifying existing and projected noise levels; addressing excessive noise exposure; and community planning for the regulation of noise. To assist with meeting these objectives, the County's Plan establishes Land Use Compatibility for Community Noise Exposure standards, acceptable interior noise levels for noise-sensitive land uses. These standards are summarized below:

The Noise Element identifies noise impact criteria depending on the noise source. Impact criteria that apply to the proposed project include criteria for transportation noise impacts to noise-sensitive land uses (e.g., an airport, freeway, or arterial traffic noise in residential areas); and criteria that apply to stationary noise impacts to sensitive land uses (e.g., stationary noise impacting neighboring communities). The County of Riverside has also adopted noise criteria for land use planning

[3] County of Riverside. 2015. Riverside County General Plan Noise Element. Website: https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-Plan-2017-elements-OCT17-Ch07-Noise-120815.pdf. Accessed March 11, 2024.

[4] County of Riverside. 2024. Riverside County Code of Ordinances. Website:https://library.municode.com/ca/riverside_county/codes/code_of_ordinances. Accessed March 11, 2024.

[5] City of Corona. 2024. Corona, California Municipal Code. Website: https:// codelibrary.amlegal.com/codes/corona/latest/corona_ca/0-0-0-33686. Accessed March 11, 2024.

purposes, as shown in Table 3.13-6. These criteria set outdoor noise level standards that are acceptable, conditionally acceptable, and unacceptable for a variety of land uses.

The following policies from the County of Riverside 2020 General Plan are applicable to the proposed project:

N 1.4 Determine if existing land uses will present noise compatibility issues with proposed projects by undertaking site surveys.

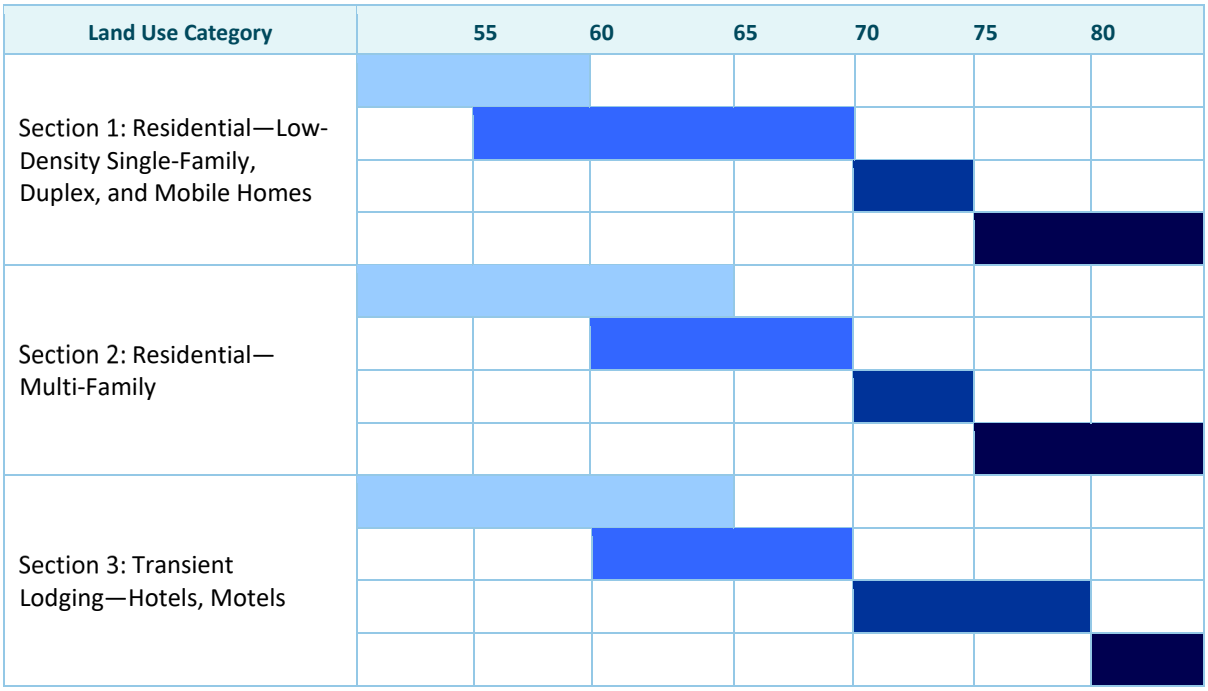
N 1.5 Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.

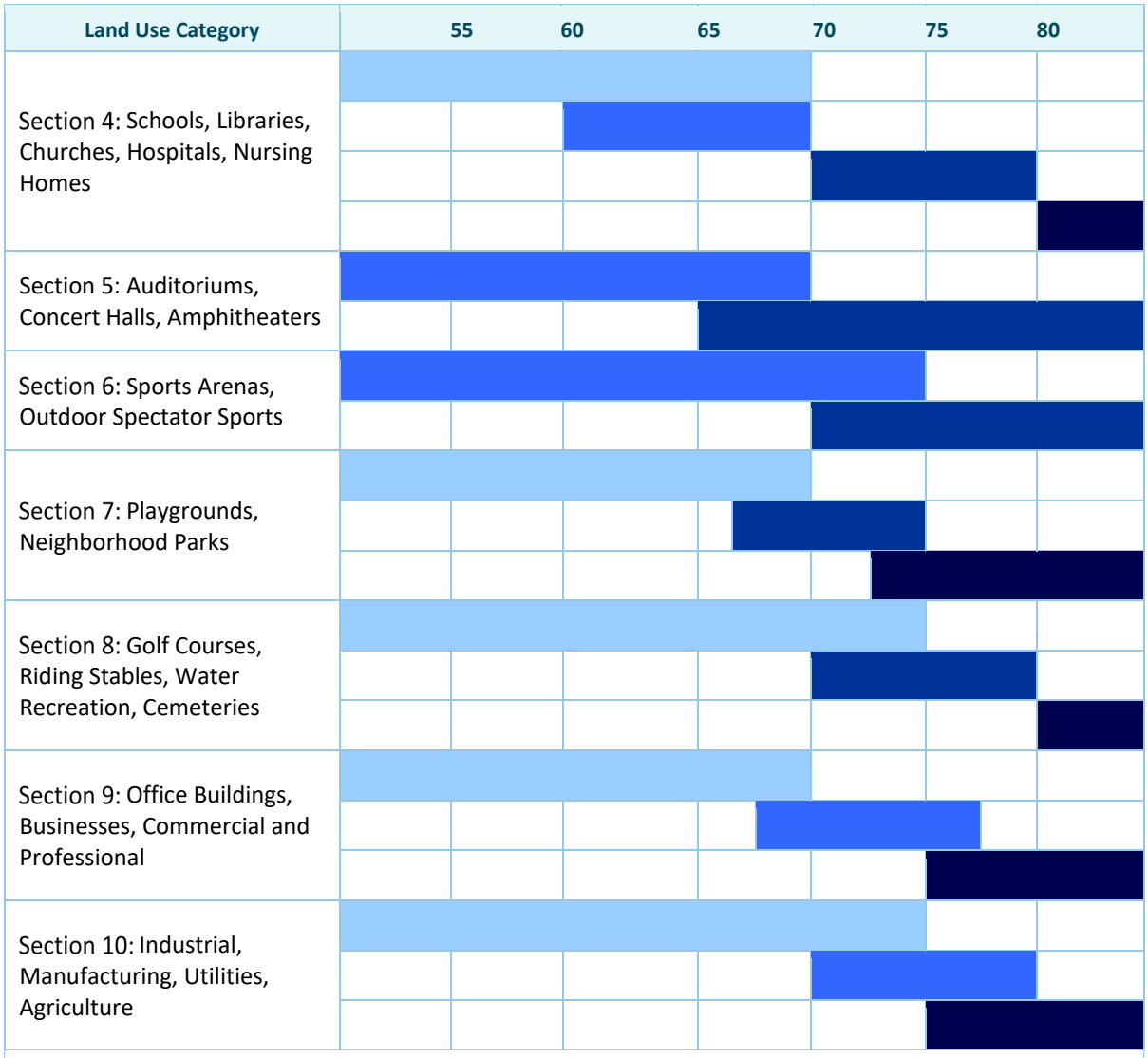
N 1.6 Minimize noise spillover or encroachment from commercial and industrial land uses into adjoining residential neighborhoods or noise-sensitive uses.

N 4.1 Prohibit facility-related noise received by any sensitive use from exceeding the following worst-case noise levels:

- 45 dBA L_{eq} (10 minute), between the hours of 10:00 p.m. and 7:00 a.m. (nighttime standard).
- 65 dBA L_{eq} (10 minute), between the hours of 7:00 a.m. and 10:00 p.m. (daytime standard).

Table 3.13-6: State of California Community Noise Exposure (dBA CNEL or L_{dn})





Source: Governor's Office of Planning and Research. 2003. State of California General Plan Guidelines, Appendix C, Guidelines for the Preparation and Content of the Noise Element of the General Plan. October 2003.

Key:

NORMALLY ACCEPTABLE
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

NORMALLY UNACCEPTABLE
New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.

CLEARLY UNACCEPTABLE
New construction or development clearly should not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

County of Riverside County Code

The generation of noise from one property to another is regulated in Riverside County by Ordinance No. 847, Regulating Noise in Riverside County, which establishes noise level limits based on land use categories. Private construction projects located within 0.25 mile from an inhabited dwelling are exempt from these noise level limits, provided that construction does not occur between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September; or between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May.

If project construction occurs outside of these hours, construction activities will need to comply with the noise level limits that apply to the adjacent occupied properties. For receiving residential land uses, noise level limits for activities occurring outside of the above listed hours must not exceed 55 dBA L_{max} between the hours of 6:00 p.m. and 10:00 p.m. The proposed project is also prohibited from causing noise levels at receiving residential land uses that exceed 45 dBA L_{max} between the hours of 10:00 p.m. and 6:00 a.m. during the months of June through September, and between the hours of 10:00 p.m. and 7:00 a.m. between the months of October through May.

Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., is also exempt from Ordinance No. 847 provided such maintenance occurs between the hours of 7:00 a.m. and 8:00 p.m. Heating and air conditioning equipment and safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare are also exempt from the ordinance.

City of Corona 2020-2040 General Plan

The City of Corona updated its General Plan in 2020. Part of the update was the inclusion of a Noise chapter. The objective of the City of Corona 2020-2040 General Plan Noise chapter is to preserve the quality of life by protecting the community from the obtrusive impacts of noise- and vibration-generating uses such as traffic, construction, airplanes, and industrial uses, as well as other sources within the City.

Applicable noise policies from the City of Corona 2020-2040 General Plan are listed below:

Policies

N-1.1 Reduce noise impacts from transportation noise sources through the design and daily operation of arterial road improvements, enforcement of state motor vehicle noise standards, and other measures consistent with funding capabilities.

- Require site design features and structural building enhancements in the development of residential and other “noise-sensitive” land uses that are to be located adjacent to major roads or railroads.

N-2.2 Require that in areas where existing or future ambient noise levels exceed an exterior noise level of 65 dBA CNEL, all development of new housing, health care facilities, schools, libraries, religious facilities, and other “noise-sensitive” uses shall include site design, building enhancements, buffering, and/or mitigation to reduce noise exposure to within acceptable limits.

N-2.3 Require new industrial and new commercial land uses or the major expansion of such uses to demonstrate that ambient noise levels will not exceed an exterior noise level of 65 dBA CNEL on areas containing "noise-sensitive" land uses as depicted in Table N-1, N-2, and N-3.

N-2.4 Require development in all areas where the existing or future ambient noise level exceeds 65 dBA CNEL to conduct an acoustical analysis and incorporate special design measures in their construction to reduce interior noise levels to the 45 dBA CNEL level as depicted on Table N-1, N-2, and N-3.

N-2.5 Encourage existing "noise-sensitive uses," including schools, libraries, health care facilities, and residential uses, in areas where existing or future noise levels exceed 65 dBA CNEL to incorporate fences, walls, landscaping, and/or other noise buffers and barriers, where appropriate and feasible.

N-2.6 Require development that generates increased traffic and substantial increases in ambient noise levels adjacent to noise-sensitive land uses to provide appropriate mitigation measures in accordance with the acceptable limits of the City Noise Ordinance.

N-2.7 Require construction activities that occur in close proximity to existing "noise-sensitive" uses, including schools, libraries, health care facilities, and residential uses, to limit the hours and days of operation in accordance with the City Noise Ordinance.

N-3.5 Require mixed-use structures incorporating commercial or institutional and residential uses, or industrial uses adjacent to noise and vibration sensitive uses minimize, through design and construction technology, the transfer or transmission of noise and vibration from the commercial, institutional, or industrial use to the residential land use.

N-4.4 Restrict development of land uses within the 65 dBA CNEL contour of the Corona Municipal Airport to industrial, agricultural, or other open space activities; require that all development in the vicinity of the Airport comply with the noise standards in the Airport Master Plan.

City of Corona Municipal Code

Chapter 17.84 of the Corona Municipal Code establishes noise performance standards for residential, commercial, agricultural, and industrial land uses affected by noise within the City of Corona. Additionally, the ordinance establishes acceptable groundborne vibration levels and permissible hours for construction activities. These standards are summarized below.

Noise Standards (Section 17.84.040)

According to the City's Municipal Code, stationary noise sources, such as industrial or construction noise that may be intrusive to a neighboring private property are subject to the City's noise performance standards listed in Table 1 of Section 17.84.040. According to this standard, the

maximum allowable noise level for stationary noise sources is 55 dBA L_{eq} during daytime hours, and 50 dBA L_{eq} during nighttime hours as measured at a receiving residential land use.

The City has established thresholds for temporary substantial increases in ambient noise levels. The City has established that it shall be unlawful for any person, entity, or operation at any location within the incorporated area of the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the exterior noise level when measured on any other property to exceed:

a) The noise standard for a cumulative period of more than 30 minutes in any hour.
b) The noise standard plus 5 dB for a cumulative period of more than 15 minutes in any hour.
c) The noise standard plus 10 dB for a cumulative period of more than five minutes in any hour.
d) The noise standard plus 15 dB for a cumulative period of more than one minute in any hour.
e) The noise standard plus 20 dB for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to the category shall be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

The City has established special provision standards for construction noise. Construction noise is prohibited between the hours of 8:00 p.m. to 7:00 a.m., Monday through Saturday and 6:00 p.m. to 10:00 a.m. on Sundays and federal holidays. Construction noise is defined as noise that is disturbing, excessive, or offensive and constitutes a nuisance involving discomfort or annoyance to persons of normal sensitivity residing in the area, which is generated by the use of any tools, machinery or equipment used in connection with construction operations.

The City has also established design requirements for new mechanical equipment, such as air conditioners or pool equipment, to reduce potential operational noise impacts. The City requires that such equipment shall be set back a minimum of 10 feet from an adjoining property line except where a 5-foot block sound wall is maintained that extends 2 feet on each side of such equipment and is situated between the equipment and the property line or on the property line.

The City also establishes thresholds for ongoing operational groundborne vibration levels. According to the City's Municipal Code, it shall be unlawful for any person to create, maintain or cause any ground vibration that is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. The City establishes the perception threshold to be more than 0.05 inches per second rms vertical velocity.

3.13.4 - Methodology

Noise Measurement Methodology

To ascertain the existing noise at and adjacent to the project site, field monitoring was conducted on Thursday, June 14, 2018. The purpose of this noise monitoring was to document the existing noise environment and capture the noise levels associated with operations or activities in the project area.

The average ambient noise levels documented at the site ranged up to 69.7 dBA CNEL. The field surveys (Appendix H) noted that noise within the project study area is generally characterized by vehicle traffic on the local roadways.

The short-term noise measurements were taken using Larson-Davis Model LxT2 Type 2 precision sound level meters programmed in "slow" mode to record noise levels in "A" weighted form (dBA). The sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 150. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National Bureau of Standards. All noise level measurement equipment meets American National Standards Institute specifications for sound level meters (S1.4 1983 identified in Chapter 19.68.020.AA).

Traffic Noise Modeling Methodology

The FHWA highway traffic noise prediction model (FHWA-RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. Traffic data used in the model was obtained from the Urban Crossroads Traffic Impact Study (TIS) prepared for the proposed project (Appendix H). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the CNEL values. The FHWA-RD-77-108 Model arrives at a predicted noise level through a series of adjustments to the reference energy mean emission level. Adjustments are then made to the reference energy mean emission level to account for the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway); the total ADT; and the percentage of ADT that flows during the day, evening, and night; the travel speed; the vehicle mix on the roadway; a percentage of the volume of automobiles, medium trucks, and heavy trucks; the roadway grade; the angle of view of the observer exposed to the roadway; and the site conditions ("hard" or "soft") as they relate to the absorption of the ground, pavement, or landscaping.

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of traffic noise levels, a doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the FHWA community noise assessment criteria, this change is "barely perceptible." For reference, a doubling of perceived noise levels would require an increase of approximately 10 dBA. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

The model analyzed the noise impacts from the nearby roadways onto the project vicinity, which consists of the area that has the potential of being impacted from the on-site noise sources as well as the project-generated traffic on the nearby roadways. The roadways were analyzed based on a single-lane-equivalent noise source combining both directions of travel. A single-lane-equivalent noise source exists when the vehicular traffic from all lanes is combined into a theoretical single lane

that has a width equal to the distance between the two outside lanes of a roadway, which provides almost identical results to analyzing each lane separately where elevation changes are minimal.

3.13.5 - Thresholds of Significance

While a majority of the project site is located within the County of Riverside, Planning Area 6 is located within the City of Corona. Therefore, potential construction and operational noise impacts are discussed in terms of County of Riverside and City of Corona Standards. For purposes of this analysis, the more conservative standard of the two municipalities has been applied to assess potential noise impacts.

Riverside County has established the following thresholds of significance impact criteria which are utilized in this analysis.

Airport Noise

a) 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 expose people residing or working in the project area to excessive noise levels?

b) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Noise Effects by the Project

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

b) Generation of excessive groundborne vibration or groundborne noise levels?

3.13.6 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Airport Noise Impacts

Impact NOI-1:	**For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise levels?**

Source(s): Riverside County 2020 General Plan Figure S-20 "Airport Locations," County of Riverside Airport Facilities Map

Impact Analysis

The nearest public airport to the project site is the Corona Municipal Airport, located approximately 1.3 miles north of the project site. Because of the orientation of the airport's runways—the airport's runways are oriented east and west—the project site is located outside of the 55 dBA CNEL airport noise contours. Therefore, implementation of the proposed project would not expose persons residing or working at the project site to noise levels from airport activity that would be in excess of normally acceptable standards. Therefore, no impact would occur.

Level of Significance Before Mitigation No impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

No Impact.

Private Airstrip Noise Impacts

Impact NOI-2:	**For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

Source(s): Riverside County 2020 General Plan Figure S-20 "Airport Locations," County of Riverside Airport Facilities Map

Impact Analysis

There are no private airstrips within 2 miles of the project site. Therefore, no impact would occur.

Level of Significance Before Mitigation No impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation No impact.

Project Noise Impacts

Impact NOI-3:	**Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies?**

Source(s): Riverside County 2020 General Plan, Table N-1 ("Land Use Compatibility for Community Noise Exposure"), Project Application Materials

Impact Analysis

Short-term Construction Impacts

A significant impact would result if project-related noise producing construction activities would result in a substantial temporary increase in ambient noise levels outside of the hours permitted by the County of Riverside. The combined most restrictive hours for these two jurisdictions permits construction activities between 7:00 a.m. and 6:00 p.m. on non-holiday weekdays and Saturdays, and between 10:00 a.m. and 6:00 p.m. on Sundays and federal holidays. If project construction occurs outside of these hours, construction activities will need to comply with the noise level limits that apply to the adjacent occupied properties.

Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities.

Two types of short-term noise impacts would occur during site preparation and project construction. The first type would result from the increase in traffic flow on local streets, associated with the transport of workers, equipment, and materials to and from the project site. The transport of workers and construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the site. Because workers and construction equipment would use existing routes, noise from passing trucks would be similar to existing vehicle-generated noise on these local roadways. For this reason, short-term intermittent noise from trucks would be minor when averaged over a longer time and would not be expected to exceed existing peak noise levels in the project vicinity. Therefore, short-term construction-related noise impacts associated with worker and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during site preparation, grading, and construction activities. Construction is performed in discrete steps, each of which has its own mix of equipment, and consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on-site. Thus, the noise levels vary as construction progresses. Despite the variety in the types and sizes of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction noise ranges to be categorized by work phase. Table 3.13-1 shows typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

The site preparation phase, which includes excavation and grading activities, generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving

equipment includes excavating machinery and compacting equipment, such as bulldozers, draglines, backhoes, front loaders, roller compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings. Operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings.

The proposed project is expected to require the use of scrapers, rubber-tired dozers, loaders, backhoes, excavators, water trucks, haul trucks, and pickup trucks during the site preparation phase of construction. Based on the information provided in Table 3.13-1, the maximum noise level generated by each scraper is assumed to be 85 dBA L_{max} at 50 feet from this equipment. Each bulldozer would generate 85 dBA L_{max} at 50 feet. The maximum noise level generated by graders is approximately 85 dBA L_{max} at 50 feet. Similarly, all other pieces of heavy construction equipment would generate maximum noise levels of 85 dBA L_{max} or lower as measured at 50 feet. Each doubling of sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, a reasonable worst-case combined noise level during this phase of construction would be 90 dBA L_{max} at a distance of 50 feet from the acoustical center of a construction area. This would result in a reasonable worst-case hourly average of 86 dBA L_{eq}. The acoustical center reference is used because construction equipment must operate at some distance from one another on a project site, and the combined noise level as measured at a point equidistant from multiple sources operating simultaneously would represent the worst-case noise levels.

Existing noise-sensitive receptors could be located as close as 50 feet from the project site's proposed construction areas where multiple pieces of heavy construction equipment would operate simultaneously. At this distance, worst-case construction noise levels could range up to approximately 90 dBA L_{max}, intermittently, and could have an hourly average of up to 86 dBA L_{eq}, at the façade of the closest single-family residential homes.

Although there could be a relatively high single event noise exposure potential causing an intermittent noise nuisance, the effect on longer-term (hourly or daily) ambient noise levels would be small but could result in annoyance or sleep disturbances at nearby sensitive receptors. Therefore, noise producing construction activities shall be restricted to the hours established by the City of Corona and the County of Riverside Municipal Code. These ordinances limit construction noise to the hours between 7:00 a.m. and 6:00 p.m. on non-holiday weekdays and Saturdays, and between 10:00 a.m. and 6:00 p.m. on Sundays and federal holidays. Limiting construction activities to these stated permissible time periods, as well as implementing the best management noise reduction techniques (both outlined in Mitigation Measure [MM] NOI-1a), would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors. Therefore, the potential short-term construction noise impacts to noise-sensitive receptors in the project vicinity would be reduced to a less than significant level.

Traffic Noise Impacts

A significant impact would occur if the project would result in a substantial increase in traffic noise levels above levels that would exist without the project, or if the project would expose proposed

residential noise-sensitive land uses to traffic noise levels in excess of 60 dBA CNEL. For purposes of this analysis, a 3 dBA increase is conservatively considered a substantial increase in traffic noise levels compared to noise levels that would exist without the project.

The FHWA highway traffic noise prediction model (FHWA-RD-77-108) was used to evaluate existing and future project-related traffic noise conditions along modeled roadway segments in the vicinity of the project site. The projected future traffic noise levels on roadways adjacent to the site were analyzed to determine compliance with the City's noise and land use compatibility standards. Traffic modeling was performed using the data obtained from the project-specific TIS conducted by Urban Crossroads (2018). The resultant noise levels were weighed and summed over a 24-hour period to determine the CNEL values. The traffic noise modeling input and output files—including the 60 dBA, 65 dBA, and 70 dBA CNEL noise contour distances—are included in Appendix H. Table 3.13-7 shows a summary of the traffic noise levels for Existing Plus Project conditions, Existing Plus Ambient Growth Plus Project conditions (EAP) (2022), Existing Plus Ambient Growth Plus Project Plus Cumulative conditions (EAPC) (2022), Horizon Year (2040) with project conditions, and Horizon Year (2040) without project conditions, as measured at 50 feet from the centerline of the outermost travel lane. These traffic scenarios are defined in the TIS prepared for the proposed project by Urban Crossroads.

As shown in Table 3.13-7, the highest increase in traffic noise levels with implementation of the project would be a less than 1 dBA increase compared to noise levels that would exist without the project. Therefore, traffic noise increases with implementation of the project would be less than significant.

Table 3.13-7: Without and With Project Modeled Roadway Noise Levels

Roadway Segment	CNEL (dBA) 50 feet from Centerline of Outermost Lane							
	Existing Plus Project	Increase over Existing No Project (dBA)	EAP (2022)	EAPC (2022)	Increase over EAP No Project (dBA)	Horizon Year (2040) Without Project	Horizon Year (2040) Plus Project	Increase over Horizon Year (2040) No Project (dBA)
Serfas Club Drive–SR-91 Eastbound Ramps to Frontage Road	64.9	0.1	65.2	65.3	0.1	68.0	68.0	0.0
Serfas Club Drive–Frontage Road to Pine Crest Drive	64.8	0.0	65.0	65.1	0.1	68.0	68.0	0.0
Serfas Club Drive–Pine Crest Drive to Monterey Peninsula Drive	64.5	0.0	64.8	65.1	0.3	65.5	65.6	0.1
Serfas Club Drive–Monterey Peninsula Drive to Palisades Drive	64.3	0.1	64.6	64.8	0.2	65.5	65.6	0.1

Roadway Segment	CNEL (dBA) 50 feet from Centerline of Outermost Lane							
	Existing Plus Project	Increase over Existing No Project (dBA)	EAP (2022)	EAPC (2022)	Increase over EAP No Project (dBA)	Horizon Year (2040) Without Project	Horizon Year (2040) Plus Project	Increase over Horizon Year (2040) No Project (dBA)
Serfas Club Drive–Palisades Drive to Green River Road	62.8	0.1	63.1	63.3	0.2	65.0	65.1	0.1
Pine Crest Drive–Serfas Club Drive to Paseo Grande	53.7	0.2	54.1	54.1	0.0	58.0	58.0	0.0
Paseo Grande–Via Santiago to Via Del Rio	65.3	0.3	65.7	66.3	0.6	66.5	66.7	0.2
Paseo Grande–Via Del Rio to Pine Crest Drive	65.2	0.3	65.5	66.2	0.7	66.8	67.0	0.2
Paseo Grande–Pine Crest Drive to Ontario Avenue	62.3	0.2	62.6	63.8	1.2	66.8	66.9	0.1
Paseo Grande–Ontario Avenue to Green River Road	63.4	0.1	63.7	64.1	0.4	65.9	65.9	0.0
SR-91–East of Serfas Club Drive	80.9	0.0	81.0	81.0	0.0	81.3	81.3	0.0
SR-91–West of Serfas Club Drive	80.9	0.0	81.0	81.0	0.0	81.3	81.3	0.0

Notes:
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
EAP = Existing Plus Ambient Growth Plus Project
EAPC = Existing Plus Ambient Growth Plus Project Plus Cumulative
Source: FirstCarbon Solutions (FCS) 2021.

As shown in Table 3.13-7, projected traffic noise levels along SR-91, west of Serfas Club Drive, would range up to 81.3 dBA CNEL as measured at 50 feet from the centerline of the outermost travel lane under year 2040 conditions. The outdoor active use areas of the nearest proposed residential home, in Planning Area 1, would be setback approximately 270 feet from the centerline of SR-91. Additionally, there is an existing sound wall along the proposed project's northern boundary that would block the line of sight to the nearest proposed residential receptor in the proposed planning areas. At this distance and assuming a conservative minimal noise reduction shielding provided by the existing 14-foot high sound wall, calculated traffic noise levels from SR-91 would attenuate to approximately 69 dBA CNEL at the sensitive outdoor areas of this nearest residence. These calculated traffic noise levels are confirmed by the long-term weekday 24-hour average day/night noise measurement results of 69.7 dBA CNEL. These noise levels are in excess of the County's

normally acceptable land use compatibility standard of 60 dBA CNEL. Therefore, design measures must be incorporated into the proposed project to ensure that the interior noise level standard of 45 dBA CNEL is maintained.

Based on the United States Environmental Protection Agency (EPA) Protective Noise Levels, with a combination of walls, doors, and windows, standard construction in accordance with building code requirements for residential developments would provide 25 dBA in exterior-to-interior noise reduction with windows closed and 15 dBA or more with windows open. With windows open, the interior noise levels of the proposed units nearest to SR-91 would not meet the County's interior noise standard of 45 dBA CNEL (69 dBA–15 dBA = 54 dBA). However, with implementation of air conditioning systems that would allow windows to remain closed for prolonged periods, the proposed units nearest to SR-91 would meet the County's interior noise standard of 45 dBA CNEL (69 dBA–25 dBA = 44 dBA). It should be noted that at a distance of 1,800 feet from the centerline of SR-91, traffic noise levels would attenuate to below 60 dBA CNEL at which point standard construction with windows open would suffice to meet the interior noise standard of 45 dBA CNEL (60 dBA–15 dBA = 45 dBA).

Therefore, implementation of MM NOI-1b, requiring proposed residences located within 1,800 feet of the centerline of SR-91 to implement air conditioning systems that would allow windows to remain closed for prolonged periods, would reduce traffic noise impacts to less than significant.

The highest projected traffic noise levels along modeled surface roadway segments in the proposed project vicinity would occur along Serfas Club Drive. Projected traffic noise levels along Serfas Club Drive, between Frontage Road and Pine Crest Drive, would range up to 68 dBA CNEL as measured at 50 feet from the centerline of the outermost travel lane under Horizon Year (2040) plus project conditions. The outdoor activity area of the nearest proposed residential home in Planning Area 1, would be setback approximately 400 feet from the centerline of this roadway. At this distance, traffic noise levels from Serfas Club Drive would attenuate to approximately 54 dBA CNEL at the outdoor active use areas of this nearest residence.

Traffic noise levels along Paseo Grande adjacent to the project site would range up to 67 dBA CNEL as measured at 50 feet from the centerline of the outermost travel lane under Horizon Year (2040) plus project conditions. The nearest proposed residential lot would be located over 220 feet from the centerline of this roadway. At this distance, traffic noise levels would attenuate to below 54 dBA CNEL.

Therefore, the resulting traffic noise levels along surface roadways in the project vicinity would not exceed the County's threshold of 60 dBA CNEL when measured from the sensitive outdoor areas of any of the proposed project's proposed noise-sensitive land use developments.

However, implementation of MM NOI-1b would be required to ensure traffic noise impacts from SR-19 would be reduced to less than significant and would ensure receptors are not exposed to noise levels in excess of acceptable standards.

Stationary Operational Noise Impacts

The City of Corona has more restrictive performance standards for operational noise levels produced by stationary noise sources than the County of Riverside. As such, the City of Corona's stationary operational noise standards were utilized for the entire proposed project. According to the City of Corona, a significant impact would occur if operational noise levels generated by stationary noise sources at the project site would exceed the following noise levels at the property line of any residential land use in the proposed project vicinity:

- 55 dBA L_{eq} (30 minutes) between the hours of 7:00 a.m. and 10:00 p.m.; or
- 50 dBA L_{eq} (30 minutes) between the hours of 10:00 p.m. and 7:00 a.m.

However, the City of Corona's standard indicates that if the ambient noise level exceeds these standards, the ambient noise level shall be the base standard. Based on the noise monitoring results, the documented existing ambient noise level in the project vicinity is 69.7 dBA CNEL; with AM average noise levels of 64.7 dBA L_{eq}; PM average noise levels of 62.2 dBA L_{eq}; and maximum noise levels ranging up to 78.5 dBA L_{max}. Therefore, because the documented existing ambient noise levels exceed the City's exterior noise performance thresholds, the measured ambient noise levels shall be the base standard to which noise levels from project stationary noise sources are compared.

Furthermore, the City of Corona has established design standards for new mechanical equipment, such as air conditioners or pool equipment, to reduce potential operational noise impacts.

The proposed project would include new stationary noise sources such as parking lot activities, and mechanical ventilation system equipment. These would be potential point sources of noise that could affect noise-sensitive receptors in the proposed project vicinity.

Parking Lot Activities

Customer and employee parking activities including vehicles cruising at slow speeds, doors shutting, or cars starting, would generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet. Conversation between two persons at a distance of 3 to 5 feet apart would generate a noise level of 60 dBA L_{eq} at 5 feet, or approximately 40 dBA L_{eq} as measured at 50 feet.

The proposed project would include a small commercial development (coffee and bagel shop) with an associated parking area. The nearest noise-sensitive receptor to the proposed commercial development's parking area would be a proposed single-family residence located west of Serfas Club Drive between Pine Crest Drive and Frontage Road. This proposed residence would be located approximately 200 feet from the proposed project's commercial parking area. At this distance, noise levels from parking lot activities would attenuate to below 58 dBA L_{max} at the property line of the nearest proposed residential receptor. As a result, noise from these activities, when averaged over a period of time such as minutes or hours would not exceed documented existing daytime (64.7 dBA L_{eq}) or nighttime (62.2 dBA L_{eq}) background ambient noise levels at any off-site noise-sensitive receptor. Therefore, noise levels generated by project-related parking lot activities would have a less than significant impact to off-site noise-sensitive receptors in the proposed project vicinity.

Mechanical Equipment Operations

At the time of this analysis, details were not available pertaining to proposed mechanical ventilation systems for the project; therefore, a reference noise level for typical mechanical ventilation systems was used. Noise levels from typical residential mechanical ventilation equipment range from 50 dBA to 70 dBA L_{eq} at a distance of approximately 3 feet.

Proposed mechanical ventilation systems could be located as close as approximately 10 feet from the nearest off-site receptors. At this distance, noise generated by proposed mechanical ventilation equipment would attenuate to below 60 dBA L_{eq}. These noise levels would not exceed the documented existing daytime (64.7 dBA L_{eq}) or nighttime (62.2 dBA L_{eq}) background ambient noise levels.

However, the City of Corona has also established design requirements for new mechanical equipment, such as air conditioners or pool equipment, to reduce potential operational noise impacts. The City requires that, upon application for a building permit to install mechanical equipment such as air conditioners in a residential zone, such equipment shall be setback at least 10 feet from an adjoining property line except where a 5-foot block sound wall is maintained extending a distance of 2 feet on each side of such equipment and situated either between such equipment and the property line or on said property line.

Therefore, operational noise levels generated by stationary noise sources at the project site would have a less than significant impact to off-site receptors in the proposed project vicinity.

Level of Significance Before Mitigation Potentially significant impact.

Mitigation Measures

MM NOI-1a To reduce potential construction noise impacts, the following best management practices, standard to all grading permits, shall be implemented:

- The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment.
- The construction contractor shall locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- The construction contractor shall prohibit unnecessary idling of internal combustion engines.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

- The construction contractor shall limit construction activities to hours between 7:00 a.m. and 6:00 p.m. during non-holiday weekdays and Saturdays, and between 10:00 a.m. and 6:00 p.m. on Sundays and federal holidays.

MM NOI-1b To ensure that the project will meet the interior noise level standard of 45 dBA CNEL, the proposed project shall ensure all habitable rooms located within 350 feet of the centerline of SR-91 are supplied with a mechanical ventilation system (heating, ventilation, and air conditioning [HVAC] system) to allow the windows to remain closed for prolonged periods of time.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Groundborne Vibration Impacts

Impact NOI-4:	**Generation of excessive groundborne vibration or groundborne noise levels?**

Source(s): Riverside County 2020 General Plan, Table N-1 ("Land Use Compatibility for Community Noise Exposure"), Project Application Materials

Impact Analysis

This section analyzes both construction and operational groundborne vibration impacts. The City of Corona and Riverside County have not adopted criteria for construction groundborne vibration impacts. Therefore, for purposes of this analysis, the FTA's vibration impact criteria are utilized. The FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment document and are summarized in Table 3.13-5 in the regulatory section above.[6]

According to the City's Municipal Code, a threshold of 0.05 inches per second (in/sec) PPV is used to evaluate the significance of operational groundborne vibration impacts. According to the Noise Element of the County's General Plan, the County considers vibration levels of 0.0059-0.0188 in/sec PPV to correspond with the threshold of perception, and levels of 0.0787 in/sec PPV to correspond with vibration that is considered readily perceptible. For purposes of this analysis, the more restrictive threshold of 0.05 in/sec PPV is used to evaluate the significance of operational groundborne vibration impacts.

Short-term Construction Vibration Impacts to Off-site Receptors

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of a construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels,

[6] Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. May.

to slight damage at the highest levels. As shown in Section 3.13.2, Environmental Setting, Table 3.13-2 provides approximate vibration levels for particular construction activities.

Of the variety of equipment used during construction, the small vibratory rollers that would be used in the site preparation phase of construction would produce the greatest groundborne vibration levels. Small vibratory rollers produce groundborne vibration levels ranging up to 0.101 in/sec PPV at 25 feet from the operating equipment.

Existing off-site receptors could be located as close as 25 feet from the nearest construction footprint where heavy equipment would operate at the project site. At this distance, operation of a small vibratory roller could result in groundborne vibration levels up to 0.101 in/sec PPV. This is well below the FTA's damage threshold criteria of 0.12 in/sec PPV for even the most fragile structures. Therefore, the impact of short-term groundborne vibration associated with construction to off-site receptors would be less than significant.

Operational Vibration Impacts

Implementation of the proposed project would not include any permanent sources of vibration that would expose persons in the project vicinity to groundborne vibration levels that would exceed the City's operational groundborne vibration threshold of 0.05 in/sec PPV at any existing sensitive land use in the vicinity of the project site. In addition, there are no existing significant permanent sources of groundborne vibration in the vicinity of the site to which the proposed project would be exposed. Therefore, project operational groundborne vibration level impacts would be considered less than significant.

Level of Significance Before Mitigation Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

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3.14 - Paleontological Resources

3.14.1 - Introduction

This section describes existing conditions related to paleontological resources in the region and project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to paleontological resources that could result from implementation of the project. Information included in this section is based on the Phase I Cultural Resources Assessment (Phase I CRA) (Appendix D) and a paleontological records search at the Los Angeles County Museum of Natural History, which is included in Appendix I as well as Riverside County General Plan and the United States Geological Survey (USGS).

3.14.2 - Environmental Setting

Based on Figure OS-8 Paleontological Sensitivity identifies the project site as containing a high potential to contain paleontological resources. Based on the Paleontological Records Search the project site surface deposits are composed of younger Quaternary Alluvium, derived as alluvial fan deposits from the surrounding more elevated terrain. In the slightly more elevated terrain in the remainder of the proposed project area, particularly in the south and southwest, the surface deposits are composed of older Quaternary Alluvium, derived as alluvial fan deposits from the hills to the south. The closest vertebrate fossil locality from the project area is LACM 1207, east-northeast of the proposed project area north of the Riverside Freeway (State Route [SR] 91) on the west side of Cota Street in the Temescal Wash area that produced a fossil specimen of deer, Odocoileus, at unknown depth.

3.14.3 - Regulatory Framework

Federal

Society of Vertebrate Paleontology Guidelines

The Society of Vertebrate Paleontology, a national scientific organization of professional vertebrate paleontologists, has established standard guidelines that outline acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, specimen preparation, analysis, and curation. Most practicing professional paleontologists in the nation adhere to the Society of Vertebrate Paleontology's assessment, mitigation, and monitoring requirements, as specifically spelled out in its standard guidelines.

Local

Riverside County General Plan: Open Space Element

The following General Plan Policies relate to paleontological resources in Riverside County:

OS 19.6 Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a Paleontological Resource Impact Mitigation Program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.

OS 19.7 Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a Paleontologist shall be retained by the project proponent. The Paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

OS 19.8 Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on-site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

OS 19.9 Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

3.14.4 - Methodology

Phase I Cultural Resources Assessment (Appendix D) and a paleontological records search at the Los Angeles County Museum of Natural History, which is included in Appendix I as well as Riverside County General Plan and the USGS. Impacts to paleontological resources were determined by reviewing the Paleontological Records Search prepared for the project site.

3.14.5 - Thresholds of Significance

This section has been included to be consistent with Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, as well as Riverside County's environmental checklist. For purposes of this analysis, the following thresholds are used to evaluate the significance of geology and soils impacts resulting from implementation of the project.

Paleontological Resources

a) Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature.

3.14.6 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this

acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Paleontological Resources

Impact PALEO-1	**Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature?**

Source(s): Riverside County General Plan Figure OS-8 "Paleontological Sensitivity," Paleontological Resource Impact Mitigation Program (PRIMP) Report

Impact Analysis

The project-specific paleontological report (Appendix I) concluded that shallow excavations on the project site would expose Quaternary Alluvium soil formations, which are unlikely to uncover significant fossil vertebrae. Deeper excavations on the project site that extend down into older Quaternary deposits, and any excavations in the older Quaternary deposits exposed in slightly more elevated terrain of the proposed project area, however, may well encounter significant vertebrate fossils. This represents a potentially significant impact. The project would implement Mitigation Measure (MM) PALEO-1a through MM PALEO-1c which would ensure excavations are monitored by a qualified Paleontologist and if fossils or fossil-bearing deposits are discovered during construction all excavation activity would cease within a 100-foot radius until a qualified Paleontologist can determine the nature of the find and identify appropriate actions to be taken for excavation and/or documentation of the find. In addition, consistent with Riverside County General Plan Policy)S 19.6, the project would submit a PRIMP that would be filed to the County Geologist prior to site grading activity. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources. This mitigation measure would reduce potential impacts to paleontological resources that may be discovered during project construction. Therefore, impacts related to destruction of paleontological resources or unique geologic features would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM PAELO-1a Stop Construction Upon Encountering Paleontological Materials

A qualified Paleontological Monitor shall be present during all phases of ground disturbance in excess of 10 feet in order to check for the inadvertent exposure of fossils or other resources of paleontological value. This may be followed by regular periodic or "spot-check" paleontological monitoring during ground disturbance as needed. In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 100-foot radius of the find shall be temporarily halted or diverted. The applicant's construction contractor shall notify a qualified Paleontologist to examine the discovery. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The Paleontologist shall document the discovery as

needed in accordance with Society of Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The Paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the applicant determines that avoidance is not feasible, the Paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to Riverside County for review and approval prior to implementation, and the applicant shall adhere to the recommendations in the plan.

MM PALEO-1b Prepare a Paleontological Resource Impact Mitigation Program

The applicant shall provide the County Geologist a Paleontological Resource Impact Mitigation Program (PRIMP) prior to grading activity. The PRIMP shall include specific steps to be taken that would mitigate impacts to paleontological resources consistent with the Riverside County General Plan: Multipurpose Open Space Element.

MM PALEO-1c Monitoring

A qualified Paleontological Monitor shall be present during all phases of ground disturbance in excess of 10 feet in order to check for the inadvertent exposure of fossils or other resources of paleontological value. This may be followed by regular periodic or “spot-check” paleontological monitoring during ground disturbance as needed.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

3.15 - Population and Housing

This section addresses potential impacts to population and housing resulting from the proposed project. The purpose of this section is to evaluate current housing needs, growth projections, and project characteristics as a basis for evaluating potential impacts of the proposed project, and to identify any measures necessary to mitigate potential impacts. Descriptions and analysis in this section are based on information from the United States Census Bureau, the County of Riverside 2020 General Plan and 2020 General Plan Environmental Impact Report (EIR), the City of Corona 2020-2040 General Plan, the California Department of Finance, and the Southern California Association of Governments (SCAG) 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

3.15.1 - Existing Conditions

County of Riverside (Planning Area 1 Through Planning Area 5)

Current Population and Housing Characteristics

Unincorporated Riverside County's population was estimated to be 401,693 as of January 1, 2023 by the California Department of Finance. Table 3.15-1 summarizes the current population and housing characteristics for Unincorporated Riverside County.

Table 3.15-1: Unincorporated Riverside County Population and Housing Summary (2023)

Population	Housing Units	Persons Per Household
401,693	143,425	3.12

Notes:
Housing unit count includes vacant/unoccupied units.
Source: California Department of Finance 2023.

Historic Population Growth

Unincorporated Riverside County's population has increased by 16,309 persons between 1990 and 2023. Fluctuations in population at the unincorporated County level can include, but not be limited to annexations of unincorporated areas by cities, incorporation of unincorporated areas into new cities, economic fluctuations, etc.

Table 3.15-2 summarizes the population fluctuations that occurred between 1990 and 2023.

Table 3.15-2: Unincorporated Riverside County Population, 1990–2023

Year	Population	Change from Previous
1990	385,384	—
1995	385,452	+.002%
2000	420,721	+9.2%

Year	Population	Change from Previous
2005	523,318	+24.4%
2010	504,392	-3.6%
2015	364,423	-27.8%
2020	392,111	+7.6%
2021	394,680	+0.6%
2022	398,404	+0.09%
2023	401,693	+0.08%
Source: California Department of Finance 2023.		

City of Corona (Planning Area 6)

Current Population and Housing Characteristics

The City of Corona's population was estimated to be 157,005 as of January 1, 2023, by the California Department of Finance. Table 3.15-3 summarizes the current population and housing characteristics for the City of Corona.

Table 3.15-3: City of Corona Population and Housing Summary (2023)

Population	Housing Units	Persons Per Household
157,182	49,893	3.24
Notes: Housing unit count includes vacant/unoccupied units. Source: California Department of Finance 2023.		

Historic Population Growth

The City of Corona's population has increased by 93,511 persons between 1990 and 2023, although it has experienced declines since 2021. Fluctuations in population at the City level can include but not be limited to annexations of unincorporated areas, the construction of new housing, economic fluctuations, etc.

Table 3.15-4 summarizes the population fluctuations that occurred between 1990 and 2023.

Table 3.15-4: City of Corona Population, 1990–2023

Year	Population	Change from Previous
1990	75,943	—
1995	96,099	+26.5%
2000	123,757	+28.8%
2005	144,719	+16.9%

Year	Population	Change from Previous
2010	151,858	+4.9%
2015	154,533	+5.7%
2020	156,413	+4.9%
2021	157,182	-3.7%
2022	157,139	-0.32%
2023	157,005	-0.09%
Source: California Department of Finance 2023.		

3.15.2 - Regulations

County of Riverside Housing Element 2021-2029

The Housing Element is one of the seven General Plan elements mandated by the State of California, as articulated in Sections 65580 to 65589.8 of the Government Code. State law requires that the Housing Element consist of "an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement and development of housing." The residential character of the County is largely determined by the variety, location, and maintenance of its housing. The Housing Element is an official response to the need to provide housing for all economic segments of the population. It establishes policies that will guide County decision-making and sets forth an action program to implement housing goals through 2029.

An important component of the Housing Element is the County's description of what it hopes to achieve during the current planning period through implementation of goals, policies, actions, and quantified objectives relative to the maintenance, preservation, improvement, and development of housing to meet the present and future needs of all economic segments of the population, as well as ongoing coordination and program implementation. This analysis includes an 8-year schedule of actions that the County is undertaking or intends to undertake. The applicable policies are included below:

Eight-Year Action Plan Summary

Goals and Policies

Policy H 3.1 Encourage housing developers to produce affordable units by providing assistance and incentives for projects that include new affordable units available to lower/moderate income households or special needs housing.

Policy H 3.6 The County should evaluate the availability of publicly owned land for the development of affordable housing, in cooperation with the County's Housing Authority and coordination with affected communities and non-profit and for-profit developers.

Policy H 5.2 Provide housing information and counseling to low-income households and households with special housing needs.

The proposed project complies with the policies, as the proposed project includes 100 percent age-restricted (60+) dwelling units; therefore, providing housing for different income levels and populations.

City of Corona Housing Element 2021-2029

State law requires housing elements to be updated at least every 5 years to reflect a community's changing housing needs. The City of Corona Housing Element was last updated in 2021; however, special legislation extended the update cycle for jurisdictions within SCAG to coincide with the 2012 update of baseline population, employment, and other shared data for the RTP/SCS. Therefore, the Housing Element is updated for the years 2021–2029 for the updated cycle for jurisdictions in the SCAG region and is consistent with other regional and local plans. The City of Corona Final Housing Element 2021–2029 consists of the following major components:

- An analysis of Corona's population, household, and employment base, and the characteristics of the City's housing stock to define the nature and extent of unmet housing needs.
- A review of potential constraints to meeting the City's identified housing needs.
- An evaluation of resources and opportunities that will further the development of new housing and advance energy conservation in the community.
- A statement of the Housing Plan to address Corona's identified housing needs, including housing goals, policies, and programs.

The goals and policies that the City of Corona intends to implement within this housing element cycle address the following five major issue areas:

- Conserving and improving the existing stock of affordable housing
- Providing adequate sites to achieve a variety and diversity of housing
- Assisting in the development of affordable housing
- Removing governmental constraints as necessary
- Promoting equal housing opportunity

The following goals and policies are applicable to the proposed project:

Goals and Policies

Goal H-1 Promote and maintain a balance of housing types and corresponding affordability levels to provide for the community's needs for housing within all economic segments of the City.

Policy H-1.5 Create or expand zoning designations and commensurate development standards to encourage flexibility in permitted land use types that respond to changing market forces and provide opportunities for higher density residential development, mixed-

use residential/commercial development, and transit oriented residential development in appropriate areas of the City.

Goal H-2 Promote and preserve suitable and affordable housing for persons with special needs, including large families, single-parent households, the disabled and seniors, and shelter for the homeless.

Policy H-2.2 Work with nonprofit agencies and private sector developers to encourage development of senior housing.

Goal H-4 Ensure that housing opportunities are available to all persons without regard to race, color, ancestry or national origin, religion, marital status, familial status, age, gender, disability, source of income, sexual orientation, or any other arbitrary factors.

Planning Area 6 provides 100 percent age-restricted (60+) dwelling units; therefore, providing housing for different income levels and populations. Planning Areas 1- 5 fully comply with the policies. Planning Area 6, if developed, would require a zone change to residential uses, a permitted land use under the City of Corona 2020-2040 General Plan.

3.15.3 - Accordingly, the proposed project complies with the policies. Thresholds of Significance

According to Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, as well as Riverside County's environmental checklist, population and housing impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

b) Create a demand for additional housing, particularly housing affordable to households earning 80 percent or less of the County's median income?

c) 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)?

3.15.4 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this

acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Population Displacement/Replacement Housing

Impact POP-1:	**Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

Source(s): Project Application Materials, GIS database, Riverside County Housing Element 2017-2021, and City of Corona Housing Element 2013-2021.

Impact Analysis

The proposed project is located at the former Mountain View Golf Course, which has been vacant since its closure in 2009. No existing housing units or permanent residents occur on the proposed project site. As such, no impacts would result from the proposed project and would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Housing Demand

Impact POP-2:	**Create a demand for additional housing, particularly housing affordable to households earning 80 percent or less of the County's median income?**

Source(s): Project Application Materials, GIS database, Riverside County Housing Element 2017-2021, and City of Corona Housing Element 2013-2021.

Impact Analysis

The entirety of the project site, both the County of Riverside and City of Corona portions, is currently vacant and has been vacant since the closing of the Mountain View Golf Course in 2009. There is no existing housing on the proposed project site. Because there is no housing on-site that would be removed and the proposed project would develop new housing options, the proposed project would not create a demand for additional housing, particularly affordable housing to households earning 80 percent or less than the County's median income. Rather the proposed project would increase housing options in the area.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Population Growth

Impact POP-3:	**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)?**

Source(s): Project Application Materials, GIS database, Riverside County Housing Element 2017-2021, and City of Corona Housing Element 2013-2021.

Impact Analysis

Construction

The proposed project would develop up to 365 dwelling units, which would be 100 percent active adult and age-restricted to 60 years old and older. The proposed project is divided into six planning areas.

During the construction phase, the proposed project is estimated to create approximately 236 temporary on-site construction jobs in both unincorporated County of Riverside and the City of Corona. Per the State of California Employment Development Department, as of August 2021, Riverside County has 84,700 unemployed residents[1], and the City of Corona has 4,900 unemployed residents. As such, the 236 total temporary on-site jobs that construction of the proposed project would generate would be able to be filled from the existing regional workforce and would not induce substantial population growth, due to the current economic climate of the region.

As such, construction of the proposed project would have a less than significant impact to direct and indirect population growth to Riverside County and the City of Corona.

Operation

County of Riverside (Planning Area 1 Through 5)

In Planning Area 1 through 5, the proposed project would construct 309 new age-restricted (60+) single-family and paired-housing residential dwelling units. In addition, Planning Area 2 will include one retail/commercial space.

Residential (Planning Area 1, 3, 4, and 5)

The proposed project has the potential to directly increase population growth in the area; however, the population growth would not be a substantial increase to the current population. Table 3.15-5 summarizes the attributable growth to the proposed project.

[1] California Employment Development Department. 2021. County Profiles. Website: https://labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProQSSelection.asp?menuChoice=localAreaPro. Accessed October 13, 2021.

Table 3.15-5: Population Growth, Planning Area 1, 3, 4, and 5

Dwelling Units	Potential Persons Per Dwelling Unit	Project Population Growth	Unincorporated Riverside County's Population	Project Population Growth as a Percentage of Unincorporated Riverside County Population
309	2.11	652	401,693	.16%

Notes:
Planning Areas 3, 4, and 5 are to be designed to accommodate age-restricted (60+) homes; age-restricted homes typically have a lower Persons Per Dwelling Unit count than non-age-restricted dwelling units. Therefore, the Population Density Factor was obtained from the National Association of Home Builders (NAHB) Approving 55+ Housing: Facts That Matter (see Figure I-2, Age of Household Head 55 to 64, Page 8).
Source: California Department of Finance.

As shown in Table 3.15-6, the proposed project would have the potential to increase Unincorporated Riverside County's population by 652, which would represent a less than 1 percent increase relative to Unincorporated Riverside County's 2021 population estimate of 401,693. This would not be considered a significant population increase. As such, the proposed project's residential component would have a less than significant impact to direct and indirect population growth to Riverside County.

Retail/Commercial (Planning Area 2)

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2. However, the development of Planning Area 2 is no longer contemplated, and this acreage would remain undeveloped as open space. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.

The following uses were proposed in the NOP for Planning Area 2:

Planning Area 2 is a retail/commercial component of the proposed project. Table 3.15-6 provides the potential employment generation of the retail/commercial component.

Table 3.15-6: Employment Generation, Planning Area 2

Land Use Designation	Square Feet Per Employee	Proposed Project Commercial Retail Square Feet	Employment Generation
Commercial Retail (CR)	500	10,000	20
Source: County of Riverside 2015 General Plan, Appendix E-1.			

As shown in Table 3.15-7, Planning Area 2, the retail/commercial component of the proposed project, would have the potential to generate 20 total jobs. Per the State of California Employment

Development Department, as of August 2021, Riverside County has 84,700 unemployed residents; the City of Corona, immediately adjacent to the proposed project site, has 4,900 unemployed residents. As such, the 20 total permanent jobs that the proposed project would generate would be able to be filled from the existing regional workforce and would not induce substantial population growth, due to the current economic climate of the region. As such, the proposed project's retail/commercial component would have a less than significant impact to direct and indirect population growth to Riverside County.

Planned Infrastructure

All planned infrastructure, including roads, drainage, domestic and reclaimed water, sewer, and grading improvements, would be privately funded and would only serve the project site, therefore, the improvements would not indirectly induce population growth that is not already projected. As such, the proposed project's planned infrastructure would have a less than significant impact to direct and indirect population growth to Riverside County.

City of Corona (Planning Area 6)

At the time of this analysis, the project applicant proposed the development of 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 6.

Proposed Uses

The following uses were proposed in the NOP for Planning Area 6:

- **Planning Area 6 (City of Corona):** 56 single-family, detached residences and a new trail system

In Planning Area 6, the proposed project would construct 56 new single-family, detached residential dwellings that would be designated active adult and age-restricted to 60 years old or older.

Residential Area

The proposed project has the potential to directly increase population growth in the area; however, the population growth would not be a substantial increase to the current population. Table 3.15-7 summarizes the attributable growth to the proposed project.

Table 3.15-7: Population Growth, Planning Area 6

Dwelling Units	Potential Persons Per Dwelling Unit	Project Population Growth	City of Corona's Population	Project Population Growth as a Percentage of City of Corona's Population
56	2.11	119	157,182	.08%
Notes: Planning Area 6 is to be designed to accommodate age-restricted (60+) homes; age-restricted homes typically have a lower Persons Per Dwelling Unit count than non-age-restricted dwelling units. Therefore, the Population Density Factor				

Dwelling Units	Potential Persons Per Dwelling Unit	Project Population Growth	City of Corona's Population	Project Population Growth as a Percentage of City of Corona's Population
was obtained from the National Association of Home Builders (NAHB) Approving 55+ Housing: Facts That Matter (see Figure I-2, Age of Household Head 55 to 64, Page 8). Source: California Department of Finance.				

As shown in Table 3.15-7, the proposed project would have the potential to increase the City of Corona's population by 119, which would represent a less than 1 percent increase relative to the City of Corona's 2021 population estimate of 157,182. This would not be considered a significant population increase. As such, the proposed project's residential component would have a less than significant impact to direct and indirect population growth to the City of Corona.

Planned Infrastructure

All planned infrastructure, including roads, drainage, domestic and reclaimed water, sewer, and grading improvements, would be privately funded and would only serve the project site, therefore, the improvements would not indirectly induce population growth that is not already projected. As such, the proposed project's planned infrastructure would have a less than significant impact to direct and indirect population growth to the City of Corona.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.16 - Public Services

This section describes the existing public services and potential effects from project implementation. Information in this section is based in part on the County of Riverside 2020 General Plan, County of Riverside 2020 General Plan Environmental Impact Report (EIR), the Riverside County Fire Department 2009–2029 Strategic Plan, and City of Corona 2020-2040 General Plan.

3.16.1 - Existing Conditions

County of Riverside

Fire Protection and Emergency Medical Services

The County of Riverside contracts with the State (i.e., California Department of Forestry and Fire Protection [CAL FIRE]) for fire protection. Under CAL FIRE management, the Riverside County Fire Department (RCFD) operates 94 fire stations in 10 battalions.[1] Of these stations, 22 of them are located in the unincorporated portion of Riverside County.[2] During the peak staffing period, RCFD's 94 stations are staffed with 1,150 CAL FIRE career personnel, 240 Riverside County and Office of Emergency Services (OES) personnel, and 150 volunteer/reserve firefighters.[3] Fire prevention, fire protection, and emergency medical assistance are provided by the RCFD. In addition to providing fire protection services to unincorporated areas, the RCFD provides fire protection services to 24 cities on a contractual basis.[4] RCFD also responds into eight cities through mutual and automatic aid agreements.

According to the RCFD 2009-2029 Strategic Plan, the County is divided into four land use designation areas for fire protection purposes: (1) Urban, (2) Suburban, (3) Rural and (4) Outlying. Each land use designation is broken into individual categories relating to fire control goals: (1) Fire station location; (2) Suppression initiated; (3) Full assignment in operation; and (4) Initial attack fire control. There are minute values assigned to each land use designator. The values are currently in place through adoption; however, there have been internal adjustments based on new information, operational needs, and technologies. While the adopted Fire Protection Master Plan created standardized guidelines for response and station locations, the information was largely based on available documents and references from the 1980s and prior. Current technology, equipment, and dispatch policies have advanced and created the ability to extend spatial distance between facilities.[5] Based on the Addendum to the Strategic Plan and confirmation by the RCFD, the project area would be considered within the suburban category. Suburban is described as medium to medium-high density

[1] Riverside County Fire Department (RCFD). 2021. Riverside County Fire Department Service Area web page. Website: http://www.rvcfire.org/ourDepartment/ServiceArea/Pages/default.aspx. Accessed October 14, 2021.
[2] Riverside County Fire Department (RCFD). 2021. Fire Stations web page. Website: http://www.rvcfire.org/stationsAndFunctions/FireStations/Pages/default.aspx. Accessed October 14, 2021.
[3] Riverside County Fire Department (RCFD). 2021. Unit Strategic Fire Plan: CAL FIRE/Riverside County Fire. Website: https://osfm.fire.ca.gov/media/sw0kltgm/2021_rru_fireplan.pdf#:~:text=The%20purpose%20of%20the%20Riverside%20County%20Fire%20Plan,Pre%E2%80%90Fire%20management%20strategies%2C%20and%20articulate%20Pre%E2%80%90fire%20Management%20tactics. Accessed October 14, 2021.
[4] Riverside County Fire Department (RCFD). 2021. Fire Stations web page. Website: http://www.rvcfire.org/stationsAndFunctions/FireStations/Pages/default.aspx. Accessed October 14, 2021.
[5] Riverside County Fire Department (RCFD). 2009. Strategic Plan 2009-2029. Website: https://rvcfire.org/stationsAndFunctions/AdminSppt/StrategicPlanning/Documents/StrategicPlan2009.pdf. Accessed October 14, 2021.

residential, light industrial and/or light commercial. As a mixed-use community with open space and retail/commercial, the proposed project would align with the aforementioned characterization.

Fire response for the County is part of a mutual aid program with all of the cities in the County. Upon receipt of the call for services, the RCFD will dispatch the closest resources in the area to respond to the call. The Emergency Command Center (ECC) is a combined County, State, and local agency dispatch center, which is responsible for alerting and handling incidents over a 7,200-square-mile area.[6]

Fire stations can be staffed by a mixture of State (CAL FIRE), Riverside County (RCFD), contract city (if applicable), and volunteer firefighters. Each fire station engine unit is staffed with three personnel. Depending upon the service area (Riverside County is divided into six service areas), the staffing configurations are either: Fire Captain, Fire Apparatus Engineer, and Firefighter or Company Officer (Fire Captain or Fire Apparatus Engineer) and two Firefighters. The RCFD engine companies are also advanced life support paramedic assessment units.

There are three fire stations within a 5 mile radius of the project site. The fire stations are:

- Riverside County Fire Department Station No. 57, 3367 Corydon Avenue, Norco, CA 92860 (approximately 3.94 miles away).
- Riverside County Fire Department Station No. 13, 3777 South Neece Street, Corona, CA 92879 (approximately 4.61 miles away).
- Riverside County Fire Department Station No. 14, 1511 Hamner Avenue, Norco, CA 92860 (approximately 3.19 miles away).

Because of the proximity of Fire Station 14, Battalion 4 would serve the project site. According to the RCFD website, Battalion 4 is served by two Battalion Chiefs: Chief Jeff Burrow and Chief Will Bryant.[7]

Police Protection and Law Enforcement Services

Riverside County Sheriff's Department provides community policing and operates and maintains correctional facilities. The Riverside County Sheriff's Department has approximately 3,600 established positions to provide for community policing services.[8] The Sheriff's Department is a "demand response" agency that maintains limited patrol services. Ten Sheriff Department stations are located throughout Riverside County to provide area-level community service.[9] In addition, the Sheriff's Department operates the Moreno Valley Police Department station in the City of Moreno Valley, providing law enforcement services to that city under contract.[10]

[6] Riverside County Fire Department (RCFD). 2003. Riverside County Integrated Project 2003 General Plan Final Program Environmental Impact Report, Volume I.
[7] Riverside County Fire Department (RCFD). 2021. Riverside County Fire Department Battalion Chiefs web page. Website: http://www.rvcfire.org/ourDepartment/AdminOps/OrgCharts/Pages/BCs.aspx. Accessed October 14, 2021.
[8] Riverside County Sheriff's Department. 2021. About Us web page. Website: https://www.riversidesheriff.org/27/About-Us. Accessed October 14, 2021.
[9] Riverside County Sheriff's Department. 2021. Patrol Stations web page. Website: https://www.riversidesheriff.org/168/Patrol-Stations. Accessed October 14, 2021.
[10] County of Riverside. 2014. County of Riverside Environmental Impact Report No. 521. Accessed October 14, 2021.

According to the Riverside County 2015 General Plan EIR, for future planning purposes the Riverside County Sheriff's Department has established the following criteria for its staffing requirements in unincorporated areas of Riverside County:

- One sworn officer per 1,000 population
- One supervisor and one support staff employee per seven officers
- One patrol vehicle per three sworn officers
- One school resource officer per school

The County of Riverside has existing programs in place that ensure applicable policies are imposed once a development proposal triggers a specific policy or policies. The need for specific policies is determined through subsequent California Environmental Quality Act (CEQA) analysis performed for site-specific projects. These measures are implemented, enforced, and verified through their inclusion into project Conditions of Approval.

City of Corona

Fire and Emergency Medical Services

The Corona Fire Department provides fire protection and emergency medical services (fire prevention, fire operations, emergency medical services, and emergency management) in the City. The Corona Fire Department also serves the communities of El Cerrito, Coronita, and Home Gardens through a service agreement with the County of Riverside. It provides secondary backup for areas covered by Riverside County Fire. The Corona Fire Department has a daily total of 24 firefighters who provide a constant state of readiness from the seven fire stations, 24/7, and 107 sworn fire personnel. The Corona Fire Department has a total of 111 full-time staff members, which includes administrative and firefighting staff. The Corona Fire Department deploys seven fire stations, each of which is assigned a defined fire response zone.[11] The Department consists of two divisions; the Administration Division and the Operations Division.[12]

The Fire Department Administration Division consists of the Fire Chief, Deputy Fire Chief, Public Safety Administrative Supervisor, Executive Assistant, and clerical support staff. This division provides developmental oversight and planning, sets direction and policy, controls and evaluates the Department, and provides direction and oversight for all personnel matters. The Administration Division provides clerical support services and customer service for all divisions of the Department and coordinates the development and administration of the Department's annual operating and capital improvement budgets.[13]

The Fire Department Operations Division provides protection for citizens and visitors with a full-service response force. This includes protection of life and property from the destructive forces of fire and the protection of life, environment, and property from hazardous materials releases. It also provides advanced and basic life support at medical emergencies, participates in search and rescue

[11] City of Corona. 2019. Draft Environmental Impact Report State Clearinghouse No. 2018081039. Website: https://www.coronaca.gov/home/showpublisheddocument/17290/637122799157100000. Accessed October 14, 2021.
[12] City of Corona. 2021. About Our Fire Department web page. Website: https://www.coronaca.gov/government/departments-divisions/fire-department/about-our-fire-department. Accessed October 14, 2021.
[13] Ibid.

operations, responds to catastrophic events, and provides other life-saving measures as needed. This division also provides mutual aid throughout the State and automatic aid and contractual aid with surrounding communities.[14]

There are seven City of Corona fire stations within a 5-mile radius of the project site. These fire stations are:

- Corona Fire Station No. 1, 540 Magnolia Avenue, Corona, CA 92882 (approximately 2.73 miles away).
- Corona Fire Station No. 2, 225 East Harrison Street, Corona, CA 92879 (approximately 2.51 miles away).
- Corona Fire Station No. 3, 790 South Smith Avenue, Corona, CA 92882 (approximately 0.74 mile away).
- Corona Fire Station No. 4, 915 North McKinley Street, Corona, CA 92879 (approximately 4.69 miles away).
- Corona Fire Station No. 5, 1200 Canyon Crest Drive, Corona, CA 92882 (approximately 1.24 miles away).
- Corona Fire Station No. 6, 110 West Upper Drive, Corona, CA 92882 (approximately 2.72 miles away).
- Corona Fire Station No. 7, 3777 Beford Canyon, Corona CA 92882.

Police Protection and Law Enforcement Services

Police and law enforcement services for the City of Corona is provided by the Corona Police Department (CPD). The CPD provides 24-hour patrol services, an Investigations Division that investigates all types of crimes, a crime scene forensics unit, a highly trained Special Response Team (SWAT) for high risk incidents, mounted officers for crowd control, K-9 teams, School Resource Officers assigned to high schools, a Youth Diversion Team, a Traffic Bureau with motor officer enforcement, the Homeless Outreach Psychological and Evaluation Team (HOPE), an Air Unit, and other law enforcement functions. The Department is supported by civilian staff, such as a Records Unit that maintains all criminal and civil reports, a Communications Center that takes calls from the public and dispatches police and fire personnel, Animal Control Services and Enforcement, and non-sworn personnel that handle non in-progress calls and jail bookings. [15]

Community Services

The City of Corona Library and Recreation Service Department is charged with providing community services and recreational opportunities. The City maintains three community centers, multipurpose recreation centers, a senior center, tennis courts, two skate parks, a gymnasium, and an auditorium in the Civic Center (which provides space for active arts, music, and drama organizations). The City

[14] City of Corona. 2023. About Our Fire Department web page. Website: https://www.coronaca.gov/government/departments-divisions/fire-department/about-our-fire-department. Accessed April 26, 2023.

[15] Corona Police Department (CPD). 2020. Corona Police Department 2022-2025 Strategic Plan. Website: https://www.coronaca.gov/home/showpublisheddocument/22664/637950237273830000. Accessed April 26, 2023.

does not own or maintain any municipal golf courses. Additionally, Heritage Park is a 4.5 acre special use park that contains gardens, a museum, a visitor center, and an art center showcasing Corona's agricultural history. The City acquired the park and ownership was transferred to the Corona Heritage Foundation, a nonprofit foundation, which now operates and maintains the park.

3.16.2 - Regulatory Framework

State Regulations

California Building Standards Code

The current California Building Standards Code (CBC), contained in Part 2 of Title 24 of the California Code of Regulations, identifies building design standards, including those for fire safety. The CBC is based on the most recent International Building Code but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in multi-family buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code, contained in Part 9 of California Code of Regulations, Title 24, incorporates by adoption the International Fire Code of the International Code Council, with California amendments. The California Fire Code regulates building standards set forth in the CBC, fire department access, fire protection systems and devices, fire and explosion hazards safety, hazardous materials storage and use, and standards for building inspection. The California Fire Code is updated and published every 3 years by the California Building Standards Commission.

Senate Bill 50

Senate Bill (SB) 50 (funded by Proposition 1A and approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and the percentage of movable classrooms in use.

California Government Code, Section 65995(b) and Education Code, Section 17620

SB 50 amended Section 65995 of the California Government Code, which contains limitations on Section 17620 of the Education Code, the statute that authorizes school districts to assess development fees within school district boundaries. Section 65995(b)(3) of the Government Code requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. School districts may levy higher fees if they apply to the State Allocation Board and meet certain conditions.

Mitigation Fee Act

Enacted as Assembly Bill (AB) 1600 on January 1, 1989, the Mitigation Fee Act (California Government Code 66000-66008) requires a local agency that is establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose and proposed use of the fee. The agency also must demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied.

Local Regulations

County of Riverside Fire Services

The RCFD is the Operational Area Coordinator for the California Fire and Rescue Mutual Aid System for all fire service jurisdictions in Riverside County. The RCFD also has several automatic aid agreements with other city jurisdictions as well as the adjacent National Forests. The County of Riverside contracts with the State of California for fire protection. Public Resources Code 4142 affords legal authority for CAL FIRE to enter into agreements with local government entities to provide fire protection services with the approval of the Department of General Services. By virtue of this authority, CAL FIRE administers the RCFD.[16]

CAL FIRE's Fire Hazard Severity Zones in the State Responsibility Area (SRA) Map shows that the project site is not located in a high fire hazard severity zone. Additionally, the area is also not listed as a Very High Fire Hazard Severity Zone (VHFHSZ) for a Local Responsibility Area (LRA) by CAL FIRE. However, the project site is located approximately 0.5 mile east from an area designated as a VVHFHSZ for an LRA.[17]

Fire policies and regulations governing the unincorporated areas of Riverside County include Riverside County Ordinance No. 787, Riverside County Fire Protection Master Plan, California Public Resources Code No. 4290, the Uniform Fire Code, and the Uniform Building Code.

Riverside County Ordinance No. 787 (as amended through Ordinance No. 787.7)[18] is based on the CBC, and outlines fire protection standards for the safety, health, and welfare of the citizens of the County. Items regulated by Ordinance No. 787 include, but are not limited to storage of hazardous materials, water supply, and brush clearance.

Fire Mitigation Fee

The fire mitigation fee was authorized by the Riverside County Board of Supervisors to fund the acquisition of land, buildings, furnishings, and apparatus necessary to mitigate fire risks. The mitigation fee requirement is identified during the land development review process by the RCFD Emergency Services Engineering and Planning Staff located at Riverside County Transportation and Land Management Agency Permit Assistance Centers. Current fee amounts are $400 per single-family dwelling unit and $0.25 per square-foot for all other types of developments. The fee typically

[16] Riverside County Sheriff's Department. 2021. About Us web page. Website: https://www.riversidesheriff.org/27/About-Us. Accessed October 14, 2021.
[17] California Department of Forestry and Fire Protection (CAL FIRE). 2021. Fire Hazard Severity Zone Viewer. Website: https://egis.fire.ca.gov/FHSZ/. Accessed October 14, 2021.
[18] Riverside County. Riverside County Ordinance No. 787. Website: www.rivcocob.org/ords/700/787.pdf. Accessed October 2021.

is due prior to the recordation of land divisions; however, there are provisions for deferral of the fee to the building permit stage. Payment of the fee shall be made directly to the Fire Department. In addition to the application fees for planning approvals and building permits, a property owner or developer may be required to pay other types of development fees. These may include developer mitigation fees and/or fire mitigation fees as described above.[19]

County of Riverside Sheriff Services

Riverside County Sheriff's Department has established the following criteria for its staffing requirements in unincorporated areas of the County:

- One sworn officer per 1,000 population
- One supervisor and one support staff employee per seven officers
- One patrol vehicle per three sworn officers
- One school resource officer per school

County of Riverside 2020 General Plan

One of the challenges associated with the population increase is to ensure that new growth pays for its share of public services and infrastructure, and that existing residents are not burdened with the costs of that new growth. Constant diligence is necessary to monitor the level of existing services, such as police and fire, the operation and maintenance of various facilities, and staffing levels, so that the County can respond to potential changes. The County or Riverside 2020 General Plan establishes the following policies regarding public services:

Land Use Element

LU 5.1 Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers transportation systems, and fire/police/medical services.

LU 7.8 Require new developments in Fire Hazard Severity Zones to provide for a fuel clearance/modification zone, as required by the Fire Department.

LU 10.1 Require that new development contribute their fair share to fund infrastructure and public facilities such as police and fire facilities.

LU 10.2 Require a fiscal impact analysis for specific plans and major development proposals so as not to have a negative fiscal impact on the County.

LU 25.2 Provide for a balanced distribution of recreational amenities.

LU 28.9 Require residential projects to be designed to maximize integration with and connectivity to nearby community centers, rural villages, and neighborhood centers.

[19] County of Riverside Planning Department. 2023. FAQ web page. Website: https://planning.rctlma.org/General-Information/Frequently-Asked-Questions#no38. Accessed April 27, 2023.

LU 32.1 Accommodate the development of structures and sites that integrate a mix of housing, retail, commercial office, business park, public/quasi-public, and recreational open space uses in areas designated for Community Center on the area plan land use maps.

LU 32.2 Require that areas designated as community center be planned and designed with a specific plan of land use.

City of Corona 2020-2040 General Plan

The City of Corona 2020-2040 General Plan establishes the following policies regarding public services:

Environmental Resources

ER-12.11 Require that large-scale master-planned residential communities incorporate pedestrian and cycling paths/trails that link with adjacent neighborhoods, schools, areas of shopping and employment, community centers, other places of activity, and transit access points.

Healthy Communities

HC-5.1 Locate and distribute, where feasible, a generally equivalent type and amount of public facilities, services, and amenities (parks, schools, police and fire services, etc.) to all areas throughout Corona. Seek to improve facilities, services, and amenities in areas deemed deficient.

Parks, Recreation, Cultural Arts, and Education

PR-1.8 Enhance options to access parks, community centers, and other recreational facilities through transit, bikeways, and walking paths that are usable for people of all ages and abilities.

PR-2.1 Provide recreational and educational services, programs, and activities that are responsive to the interests of the community; adjust services to reflect trends and needs.

PR-2.4 Provide and support senior programs and seek opportunities to expand, where feasible, programs promoting health, lifelong learning, recreation, arts, and culture for Corona's older adults.

PR-2.7 Ensure recreational service fees, to the extent feasible and appropriate, and balance the need to recover costs while offering opportunities for residents to participate regardless of income.

Public Safety

PS-5.3 Assess the impacts of incremental increases in community development and resulting impacts on traffic congestion, municipal infrastructure capacity, and emergency response times. Ensure through the design review process that proposed projects provide mitigation to maintain law enforcement services at acceptable, safe levels.

PS-5.5 Require new and expanded development projects or those in which change operations to contribute an appropriate amount of impact fees based on their proportional impact and demand for police services.

PS-8.8 Ensure that revenues are collected from new development, existing developments, and other land uses in an amount that is commensurate with their respective impact on overall City fire operations.

PS-10.2 Require all improved and new homes, structures, and facilities in the Very High Fire Hazard Severity Zones [VHFHSZ] to adhere to additional fire safe design standards consistent with State law and local practice.

PS-10.3 Require all improved and new developments to be thoroughly reviewed for their impact on safety and the provision of fire protection services as part of the development review process.

PS-10.4 Require new and rehabilitated homes and structures to meet or exceed City fire prevention standards and State law, including building access, construction design, sprinklers, and others as required by Corona Fire.

PS-10.6 Require fuel modification plans and vegetation clearance standards for development in VHFHSZs to protect structures from wildfire, protect wildlands from structure fires, and provide safe access routes for the community and firefighters within the project boundary, which may be extended pursuant to required findings when in accordance with State law, local ordinance, rule or regulation and no feasible mitigation measures are possible.

PS-10.7 Condition approval of parcel maps and tentative maps in VHFHSZs based on meeting or exceeding the SRA Fire Safe Regulations and the fire hazard reduction around buildings and structures regulations within the project boundary, which may be extended pursuant to required findings when in accordance with State law, local ordinance, rule or regulation and no feasible mitigation measures are possible.

School Services

The Corona-Norco Unified School District (CNUSD) provides public school facilities for the project area. The School District serves more than 53,000 students in Corona, Norco, Eastvale, and Temescal Valley and provides traditional K-12 educational facilities and programs, alternative education, and adult education programs. CNUSD currently has 31elementary schools, eight e intermediate (K-8) /middle schools, five comprehensive high schools, a middle college high school, and three alternative schools.[20]

[20] Corona-Norco Unified School District. 2023. About Us. Website: https://www.cnusd.k12.ca.us/cms/one.aspx?pageId=921287. Accessed April 27, 2023.

The project site is within the attendance boundary of Cesar Chavez Academy (K–8), Coronita Elementary School, Raney Intermediate School, and Corona High School.[21] Table 3.16-1 identifies school location, grades served, and enrollment figures.

Table 3.16-1: 2018-2019 Corona-Norco Unified School District Local School Facilities

School	Grades	Enrollment (2018–2019 School Year)	Total Capacity	Address
Elementary Schools				
Ben Franklin Elementary	K–6	810	1,045	2650 Oak Avenue
Corona Ranch Elementary	K–5	993	1,129	785 Village Loop Drive
Coronita Elementary	K–5	547	985	1757 Via Del Rio
Dwight D. Eisenhower Elementary	K–5	887	1,126	3355 Mountain Gate Drive
Foothill Elementary	K–6	908	1,503	2601 South Buena Vista Avenue
Garretson Elementary	K–6	985	1,382	1650 Garretson Avenue
Jefferson Elementary	K–6	687	828	1040 South Vicentia Avenue
John Adams Elementary	K–6	673	810	2350 Border Avenue
John Stallings Elementary	K–6	568	868	1980 Fullerton Avenue
Lincoln Fundamental Elementary	K–6	826	1,100	1041 Fullerton Avenue
Orange Elementary	K-6	670	1,181	1350 Valencia Road
Parkridge Elementary	K–6	808	1,017	750 Corona Avenue
Prado View Elementary	K–6	721	1,016	2800 Ridgeline Drive
Promenade Elementary	K-5	698	698	550 Hamilton Street
Susan B. Anthony Elementary	K–6	842	1,109	2665 Gilbert Avenue
Temescal Valley Elementary	K–6	967	1,084	22950 Claystone Avenue
Vicentia Elementary	K–6	619	969	2005 South Vicentia Avenue
William McKinley Elementary	K–6	640	848	2050 Aztec Lane
Woodrow Wilson Elementary	K–6	830	1,136	1750 Spyglass Drive
Academies				
Cesar Chavez Academy	K–8	913	1,334	1150 Paseo Grande
Dr. Bernice Todd Academy	K–8	1,177	1,503	25105 Mayhew Canyon Road
Home Gardens Academy	K–8	1,001	891	13550 Tolton Avenue
Intermediate/Middle Schools				
Auburndale Intermediate	7–8	677	1,250	1255 River Road

[21] Vondriska, John. Administrative Director, Corona-Norco Unified School District. Personal Communication: email. October 18, 2018.

School	Grades	Enrollment (2018–2019 School Year)	Total Capacity	Address
Citrus Hills Intermediate	7–8	1,086	2,072	3211 South Main Street
Corona Fundamental Intermediate	7–8	838	920	1230 South Main Street
El Cerrito Middle	7–8	1,163	1,424	7610 El Cerrito Road
Letha Raney Intermediate	6–8	745	1,273	1010 West Citron Street
High Schools				
Centennial High School	9–12	3,055	3,750	1820 Rimpau Avenue
Corona High School	9–12	2,595	3,646	1150 West Tenth Street
Lee Pollard High School	9–12	595	1,040	185 Magnolia Avenue
Orange Grove High School	9–12	125	174	300 South Buena Vista Avenue
Santiago High School	9–12	3,751	4,204	1395 Foothill Parkway
Notes: Sources: Corona General Plan Technical Update Draft EIR 2019 FirstCarbon Solutions (FCS). 2021.				

As shown in Table 3.16-2, the proposed project is within the attendance boundaries of the following schools.

Table 3.16-2: Impacted School Sites

Name of School	Enrollment (2018–2019 School Year)	Total Capacity	Capacity Remaining (percentage)
Cesar Chavez Academy (K–6)	382	667	43%
Cesar Chavez Academy (7–8)	531	667	20%
Corona High School	2,595	3,646	29%
Sources: Corona General Plan Technical Update Draft EIR 2019. FirstCarbon Solutions (FCS). 2021.			

3.16.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, public services impacts resulting from the implementation of the proposed project would be considered significant if the project would result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 following public services:

a) Fire services
b) Sheriff services
c) Schools
d) Libraries
e) Health Services

3.16.4 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Fire Services

Impact PS-1a:	**Result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 fire protection?**

Source(s): Personal correspondence, Riverside County 2020 General Plan and City of Corona 2020-2040 General Plan.

Impact Analysis

Riverside County Fire Department, CAL FIRE-Riverside Unit

Because of the Automatic Aid Agreement with the RCFD, the CAL FIRE-Riverside Unit would provide County resources when needed. Therefore, RCFD would be the main provider for fire and emergency services to the project site.[22] In the event of an emergency where County resources are needed, the following fire stations would respond to the project site:

1. Station No. 14, 1511 Hamner Avenue, Norco, California will respond with one State Type 3 Fire Engine. The distance from Station No. 14 to the proposed project location is approximately 4.5 miles with an average drive time of 7.5 minutes (not including turn out time). This station responded to 1,073 calls in 2017.
2. Station No. 13, 3777 Neece Street, Corona, California will respond with one Type 1 Fire Engine providing paramedic service. The distance from Station No. 13 to the proposed project location is approximately 5.6 miles with an average drive time of 9 minutes (not including turn out time). This station responded to 1,137 calls in 2017.

[22] Dexter Galang. 2018. Personal Correspondence with CAL FIRE Facilities Planner.

3. Station No. 57, 3367 Corydon Avenue, Norco, California will respond with one Type 1 Fire Engine providing paramedic service. The distance from Station No. 57 to the proposed project location is approximately 5.4 miles and an average drive time of 9.5 minutes (not including turn out time). This station responded to 575 calls in 2017.

Staffing Levels and Response Times

The fire stations are each staffed 24 hours a day, 7 days a week, with a 3-person crew. Additionally, Fire Station No. 13 and No. 57 provide paramedic services. Because of the travel distance of the fire stations in relation to the proposed project site, the response times from all County Fire Stations are longer than the Riverside County standard of 4 minutes.

Proposed Project Impacts on CAL FIRE-Riverside Unit

The proposed project would contribute to a cumulative adverse impact on the Fire Department's ability to provide an acceptable level of service. These impacts include an increased number of emergency and public service calls due to the increased presence of structures, traffic, and population. Property owners, project proponents or developers would be subject to fees to mitigate impacts via capital improvements and/or impact fees.

According to County of Riverside Ordinance No. 659 Fee Schedule for the Temescal Canyon Area Plan (Area Plan 6), where the proposed project site is located, the impact fees associated with fire protection services is $694 per single-family residential dwelling unit, $481 per multi-family dwelling unit, and $8,191 per acre of commercial uses.[23]

The proposed development is not located in a High Fire Hazard Severity Zone of the SRA. Buildings constructed in these areas are required to comply with the special construction provisions contained in current local, State, and federal applicable codes. Plans must be submitted to the Riverside County Office of the Fire Marshal for review and approval prior to building permit issuance in accordance with applicable standards.

City of Corona Fire Department

The City of Corona requires new development within the City to follow specific policies to reduce impacts to fire services. The proposed project would introduce new development and additional people within the City of Corona and the City's Sphere of Influence (SOI). The proposed project would result in additional fire and emergency response from existing facilities.[24] Currently, the Corona Fire Department has in place a contract with the RCFD to handle fire and medical calls within the unincorporated area of Coronita. This agreement does not cover wildland fires, hazardous material responses, fire investigations or fire prevention services, which are still handled by the RCFD. Therefore, this contract allows for Corona Fire Department resources to respond to both the City of Corona and County of Riverside portions (Planning Areas 1 through 6) of the proposed project. The Corona Fire Department would provide fire protection and emergency services for the project site.

[23] County of Riverside. 2010. Ordinance No. 659 Establishing a Development Impact Fee Program.
[24] Dexter Galang. 2018. Personal Correspondence with Deputy Fire Chief Cox.

There are five Corona Fire Department stations that would provide services to the project site.

1. Fire Station No. 3, 790 South Smith Street (approximately 0.96 mile east)
2. Fire Station No. 5, 1200 Canyon Crest Drive (approximately 1.5 miles west)
3. Fire Station No. 2, 225 East Harrison Street (approximately 2.68 miles east)
4. Fire Station No. 1, 540 Magnolia Avenue (approximately 3.20 miles southeast)
5. Fire Station No. 6, 110 West Upper Drive (approximately 3.56 miles south)

Staffing Levels and Response Times

The current levels of staffing for all Corona Fire Department stations are four personnel staffing a paramedic engine company; however, Fire Station No. 1 has four personnel staffing a paramedic ladder truck. All other Corona Fire Department stations are located at greater distances from the site and would have longer response times. The Corona Fire Department engines/truck(s) maintain a goal of 5 minutes and 50 seconds for Emergency Medical Services (EMS) response times, and a goal of 6 minutes and 25 seconds for Fire and Special Operation response times 90 percent of the time. Average fire response times for the project area are currently 6 minutes and 21 seconds, and the goal response time is met 93.75 percent of the time.

Proposed Project Impacts

The proposed project would increase the call volume by approximately 50 calls per year based on Corona Fire Department's per capita response projections. Additionally, due to projected increases for multiple calls for services at a time, the Corona Fire Department response times would also increase at a rate that is difficult to project but would be tracked over time.[25]

No new fire protection facilities would be necessary as a result of project implementation. The Corona Fire Department anticipates the ability to respond to the increase of calls for services due to the proposed project. However, with the increase in calls for service, Corona Fire Department projects that operating costs would also increase at the same time, which could cause potential delays in response times overall. If response times overall increase due to simultaneous calls for service in the City, existing resources would need to travel further to reach potential fire emergencies.[26]

To ensure that fire and emergency services would not diminish to unacceptable response times by the proposed project, prior to the issuance of a building permit for construction, the project applicant shall pay the required service and development fees pursuant to the "Fire Facilities Fund" as amended in the Chapter 3.36 of the Municipal Code. This fee is paid to the City for public improvements and facilities associated with the Corona Fire Department. The fees would be utilized to fund capital costs associated with acquiring land for new fire stations, constructing new fires stations, purchasing fire equipment for new fires stations, and providing for additional staff as needed and as identified by the City and the Corona Fire Department. As such, the Corona Fire

[25] Dexter Galang. 2018. Personal Correspondence with Deputy Fire Chief Cox.
[26] Ibid.

Department's ability to maintain acceptable service ratios, response times and other performance objectives to fire service would be less than significant.

In summary, CAL FIRE and the Corona Fire Department's ability to maintain acceptable service ratios, response times and other performance objectives to fire service are potentially significant impacts. However, with the Automatic Aid Agreement in place with the Corona Fire Department, building compliance provisions are required by the County of Riverside and City of Corona prior to the issuance of building permits. Capital improvements/impact fees would be required to be paid by the applicant prior to operation, as is standard with all new development projects. Impacts to CAL FIRE and the Corona Fire Department would be less than significant upon the required standard payments of capital improvement/impact fees by the applicant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Sheriff Services

Impact PS-1b:	**Result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 Sheriff services?**

Source(s): Personal correspondence, Riverside County 2015 General Plan Draft EIR, County of Riverside 2020 General Plan, and City of Corona 2020-2040 General Plan.

Impact Analysis

County of Riverside (Planning Areas 1 Through 5)

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas. However, the development of Planning Area 2 is no longer contemplated and this acreage would remain undeveloped as open space. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.

The project proposes to develop 365 single-family and paired-housing residential dwelling units along with open space, parks, and trail amenities within the County of Riverside on a former golf course. Of the 365 new residential units, 309 residential units would be located in Planning Areas 1 through 5. This would increase the population of the County of Riverside by approximately 652 new residents for these planning areas.

Riverside County Sheriff's Department

The Riverside County Sheriff's Department consists of 11 Sheriff Department stations. The Riverside County Sheriff's Department station that would provide law enforcement services to the proposed project is the Jurupa Valley Station (JVS) located at 7477 Mission Boulevard in Riverside, California, which is approximately 13 miles from the project site. The JVS serves the unincorporated communities of Coronita, El Cerrito, Highgrove, Home Gardens, and Lake Hills in addition to providing contract law enforcement services to the cities of Eastvale, Jurupa Valley, and Norco; three school districts, and one community services district. The JVS is commanded by a Captain and is divided into two divisions: a Patrol Division and an Investigative Division.[27]

Staffing Levels

There are currently 129 sworn Deputies of all ranks within the JVS. For all unincorporated areas, six Patrol Deputies are staffed per day, with two Deputies per shift. The current emergency response times in the unincorporated areas served by the JVS are 12 minutes 28 seconds from calls to service, and 11 minutes 43 seconds for calls from dispatch. For contract cities, the JVS emergency response times are 5 to 7 minutes from calls to service and from dispatch.[28]

The target staffing ratio at the Riverside Sheriff's Department is one sworn officer per 1,000 people. Based on the current population of 28,500 people served by JVS, the current staff ratio is 4.5 Deputies per 1,000 people.[29] The Riverside County Sheriff's Department does not have any specific mutual aid agreements. Additionally, the County of Riverside Sherriff's Department has a target response time of less than 5 minutes for Priority 1 calls, which are calls that involve circumstances that pose, or did pose in the immediate past, a clearly defined threat to human life or property and which involve a high level of violence, or which have the potential for serious injury. However, between October 2020 through December 2020, the average response time for Priority 1 calls was 7.96 minutes. Priority 4 calls represent the majority of calls received by the Sherriff's Department, which on average, were responded to in 34.21 minutes during the same time period. [30]

Proposed Project Impacts on Riverside County Sheriff's Department

The proposed project would generate approximately 4 to 5 calls for service per day, resulting in approximately 1,460 to 1,825 calls for service annually. Given that the proposed project would increase the population in the JVS service area by 652 new residents, the sworn officers to resident ratio would be 4.4 officers per 1,000 residents after the proposed project is completed. Therefore, the 2.3 percent increase in the JVS service area population would not be considered significant because the sworn officer to resident ratio still exceeds the one officer per 1,000 residents standard. The proposed project would have impacts to the overall response times in their JVS service area. The projected drive times for calls for service is approximately 15 to 45 minutes, one way, while the time

[27] Riverside County Sheriff Department. 2021. Jurupa Valley Station web page. Website: https://www.riversidesheriff.org/610/Jurupa-Valley-Station. Accessed October 18, 2021.

[28] Personal Correspondence. 2018. Person Correspondence with Lieutenant Robert Rose. Riverside County Sheriff's Department.

[29] County of Riverside, 2015. Draft Environmental Impact Report. Public Facilities.

[30] County of Riverside. 2020. Sheriff's Department Quarterly Report October 1, 2020 – December 31, 2020. Website: https://mccmeetingspublic.blob.core.usgovcloudapi.net/coachelaca-meet-658b771e1f364b1d887ad8ba11a13677/ITEM-Attachment-001-41145caa782f454991562de041eec7cb.pdf#:~:text=%EF%82%B7%20The%20Riverside%20County%20Sheriff%E2%80%99s%20Department%20strives%20to,five%20minutes%20for%20Priority%201%20calls%20for%20service. Accessed October 25, 2021.

taken by Deputies to address each call could vary from a few minutes to several hours. As such, due to the distance from other unincorporated areas served by the JVS, in addition to high volume traffic considerations on Interstate 15 and State Route 91, average response times could increase during peak commute times. Therefore, impacts to the JVS service response times is potentially significant.[31] However, the County has implemented the Development Impact Fee (DIF) Program, which would require the project applicant to pay the established development mitigation fee prior to issuance of a certificate of occupancy for the proposed project buildings in order to maintain adequate funding for law enforcement facilities. This fee can be used to pay for one-time capital improvements, such as the purchase of land and equipment or the construction of new facilities and can be used to obtain additional staffing and/or equipment in order to offset any of the potential increases in enforcement service calls. The project applicant would be required to pay the current County DIF rate for Criminal Justice to offset incremental impacts to police protection services.[32] Payment of these fees is mandatory and is therefore not included as mitigation. The portions of the proposed project that would be served by the County of Riverside Sherriff's Department will not require new construction or physical alteration of existing law enforcement facilities and impacts to Sheriff services are anticipated to be less than significant.

City of Corona (Planning Area 6)

As originally discussed in the NOP, the project proposes to develop 56 single-family residential dwelling units along with open space, parks, and trail amenities within the City of Corona on a former golf course. Planning Area 6 would increase the population of the City of Corona by approximately 118 residents. However, the development of Planning Area 6 is no longer contemplated and would remain undeveloped. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Area 6.

Corona Police Department

The CPD is divided into three divisions: Field Services, Investigation Services, and Support Services. The CPD provides emergency police response, non-emergency police response, routine police patrol, crime investigation, offender apprehension, special response teams (i.e., SWAT), hostage negotiators, crime suppression teams, K9 teams trained in explosives/narcotics/missing persons, a traffic enforcement bureau, school resource officers, mounted patrol for special events, community awareness programs, and animal control.

The proposed project would have minimal impact on the response times for the CPD. Most of the impact would come in the morning and late afternoon hours during commuter traffic, which could delay non-emergency response times. Currently, the station for the CPD is located at 730 Public Safety Way in Corona, which is approximately 2 miles from the project site. The CPD operates using policing zones. Zones are created to provide service coverage based on categories such as population, geographic area, calls of service volume, etc. Calls are dispatched out of the main facility to the officers in the zones. The proposed project would be located under Zone 4.[33]

[31] Personal Correspondence. 2018. Lieutenant Robert Rose. Riverside County Sheriff's Department.
[32] County of Riverside. 2013. San Gorgonio Crossing Recirculated Draft EIR no. 534. Accessed October 25, 2021.
[33] Personal Correspondence, 2018. Sargent Chad Fountain. CPD, Public Information Officer.

Staffing Levels

Staffing levels vary depending on the day and hours of service; however, the CPD has more than 250 sworn officers. The minimum staffing of sworn patrol officers is two officers per zone; however, at times this may go down to one during early morning hours in certain situations. Civilian employees working patrol in the area include one Community Service Officer for the entire City. The CPD also has a traffic enforcement unit consisting of six motor officers, two collision investigators, one commercial enforcement officer, and one parking enforcement civilian employee. Traffic officers are not designated to one location, and their activity is directed based on the need of the Department. According to the Corona Police 2020 Annual Report, service calls made to the CPD were responded to in 4 minutes and 51 seconds approximately 90 percent of the time. The CPD target is 5 minutes.[34]

The target staffing ratio for the CPD is one officer per 1,000 residents. Given the City's estimated current population of 168,382 residents, based on the California Department of Finance estimates and the current staffing of 250 sworn officers, the current ratio is approximately 1.49 officers per 1,000 residents, which exceeds the one officer per 1,000 residents ratio.

Existing Mutual Aid Agreements

The CPD has a contract for helicopter services with the City of Riverside for air support. Additionally, the City has many other agreements with other governmental or law enforcement agencies. The ones that could be specifically, although minimally, impacted based on the proposed project, would be the Memorandum of Understanding (MOU) fees associated with the regional hospitals for sexual assault testing and chain of evidence processing for the District Attorney's office as well as polygraph services with the Riverside Sherriff's Office. The CPD may have cost impacts to any traffic-related crossing guard needs within the city limits of this development, as these costs are shared with the CNUSD.

Proposed Project Impacts on the Corona Police Department

Based on analysis of the areas around the proposed development (RD 5B), there were a total of 23 emergency calls for service and 565 total calls for services. In RD 5B there are 964 parcels, making the total calls for service per parcel at about 0.59. Adding 56 parcels would potentially add approximately 33 total calls for service as a result of the proposed project. Given that the proposed project would increase the population in the Corona Police service area by 118 new residents, the sworn officers to resident ratio would be 1.4 officers per 1,000 residents after the proposed project is completed. Therefore, the 0.07 percent increase in the Corona Police service area population would not be considered significant because the sworn officer to resident ratio still exceeds the one officer per 1,000 residents standard.

Additionally, the CPD may be required to assist the Riverside County Sheriff's Department due to the sometimes extended response times and/or lack of personnel of the Riverside County Sheriff's Department from Jurupa or Norco. However, the CPD anticipates the use of existing facilities to serve the proposed project, and no new facilities would be needed. As such, the proposed project would

[34] Corona Police Department (CPD). 2020. Corona Police 2020 Annual Report. Website: https://www.coronaca.gov/home/showpublisheddocument/19898/637510489106870000. Accessed October 19, 2021.

not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Schools

Impact PS-1c:	**Result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 schools?**

Source(s): School District correspondence, GIS database, County of Riverside 2020 General Plan, and City of Corona 2020-2040 General Plan.

Impact Analysis

Planning Areas 1 Through 6

The entire proposed project, Planning Areas 1 through 6, is located within the jurisdiction of the CNUSD; however, the proposed project would not directly generate new student enrollment at existing schools because all proposed new residential dwelling units proposed would be 100 percent age restricted to 60 years old and older. Because of the age restriction, no new residents would be school age children, and therefore, would not create an impact on CNUSD.

As such, the applicant would not be required to pay developer fees to the CNUSD pursuant to the Leroy F. Green School Facilities Act (AB 2926), as a condition of approval for the proposed project. There would be no impact to school facilities as a result of the proposed project.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Libraries

Impact PS-1d:	**Result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 libraries?**

Source(s): Riverside County 2015 General Plan Draft Environmental Impact Report, County of Riverside 2020 General Plan, City of Corona 2019 Corona General Plan Technical Update Draft EIR, and City of Corona 2020-2040 General Plan.

Impact Analysis

County of Riverside (Planning Areas 1 Through 5)

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas. However, the development of Planning Area 2 is no longer contemplated and this acreage would remain undeveloped as open space. Consistent with the NOP and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.

The County of Riverside operates a system of 38 library branches and two book mobiles (one serving Coachella Valley and one serving western Riverside County) to serve unincorporated populations.[35] The nearest County of Riverside library to the project site is the Home Gardens Library located approximately 4.7 miles east of the project site. The second nearest library is the El Cerrito Library located approximately 5.18 miles southeast of the project site.

The Riverside County Library System operates an automated network that deploys over 350 computer/terminal workstations in the library branches of the Riverside County Library System: Riverside Public Library, Moreno Valley Library, Murrieta Public Library, Murrieta Valley High School and College of the Desert. The network can also be accessed by Riverside County residents via the internet. The library system manages the library catalog of the 1.3 million items in the library system and the annual checkout of over 3.5 million books, audios, and videos.[36]

Additionally, the American Library Association suggests that an appropriate service criterion would be the availability of convenient library facilities and book reserves at a rate of 0.5 square-foot of library space and 2.5 volumes per capita. The County's ability to support the needs of future growth is dependent upon its ability to secure sites for, construct and stock new libraries on a timely basis. At present, there is no specific funding mechanism for expansion of library facilities. Based on 2010 reported registered borrowers (681,117) and current square footage of library facilities available (333,884), at present, facilities provide approximately 0.49 square feet of space per registered borrower (not the Riverside County population as a whole).[37]

[35] County of Riverside. 2015. General Plan Draft Environmental Impact Report.
[36] Ibid.
[37] County of Riverside. 2020. General Plan.

However, the County of Riverside policies and regulations in regard to development impacts to library services include the Ordinance 659 DIF Program. This Ordinance establishes the need for addressing impacts caused by new development of residential, commercial, and industrial uses. Thus, the Ordinance establishes a DIF Program by which new development is charged fees to address the increased need for additional facilities, services, and also open space. For each category of land use (single-family residential, multiple-family residential, commercial, and industrial), DIF charges are determined based on the location of the property to be developed (fees vary by Area Plan), as well as the density/intensity of the proposed use. Therefore, the project applicant would be required to pay the current DIF for library services to offset any impact on the current County library branches before receiving the building permit. Payment of these fees is mandatory and is therefore not included as mitigation.

As such, due to the relatively close proximity of the two County libraries in addition to the implementation of Ordinance 659, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities or result in the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios or other performance objectives for libraries.

City of Corona (Planning Area 6)

The City of Corona operates one public library for the existing approximately 168,382 residents. The Corona Public Library is located at 605 South Main Street and is a 62,000-square-foot facility. The library has a total of 122,500 registered members, 38,500 of which are children. The library's collections consist of 152,500 items, including books, videos, CDs, CD-ROM software, audio cassettes, books on tape, and pamphlets. The Corona Public Library also contains 50 internet terminals.[38] The proposed project would increase Corona's current population by 118 new residents, which represents an approximately 0.07 percent increase in population, resulting in a minimal increase in demand to existing resources and programming. The City of Corona uses development impact fees from residential uses to fund library facilities within the City. Payment of these fees is mandatory and is therefore not included as mitigation. Therefore, impacts to library services in the City of Corona are less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

[38] City of Corona. 2019. Corona General Plan Technical Update Draft EIR. Accessed October 25, 2021.

Health Services

Impact PS-1e:	**Result in substantial adverse physical impacts associated with the provision of new or physically altered government 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 health services?**

Source(s): Riverside County 2020 General Plan and City of Corona 2020-2040 General Plan.

Impact Analysis

There are approximately 18 hospitals in the overall County area and two hospitals are in the City of Corona—Corona Regional Medical Center-Main at 800 South Main Street, and Corona Regional Medical Center-Magnolia at 730 Magnolia Avenue.[39,40] The nearest hospital to the project site is Corona Regional Medical Center, which is approximately 2.18 miles east of the site. In addition, Kaiser Permanente Corona Medical Offices are located approximately 3.31 miles east of the site. It is anticipated that the existing hospitals have capacity for the additional population expected from the proposed project, approximately 770 total residents. According to the County of Riverside General Plan EIR, Riverside County has 2,880 licensed beds, a rate of 1.47 beds per 1,000 residents. No specific adopted criteria are maintained for determining future needs for public hospital or medical clinics. Based on the current ratio of residents to hospitals, the proposed project's increase in new residential population will represent only a nominal shift in hospital facilities per capita in the County. In addition, due to the proximity of existing medical centers to the project site, existing facilities have the capacity to serve the proposed project. Therefore, the proposed project is anticipated to have a less than significant impact with regard to health services.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

[39] City of Corona. 2019. Corona General Plan Technical Update Draft EIR. Accessed October 25, 2021.
[40] County of Riverside. 2015. Riverside County 2015 General Plan Draft Environmental Impact Report. Accessed October 25, 2021.

3.17 - Recreation

This section of the Draft Environmental Impact Report (Draft EIR) describes recreation resources in relation to the project site and discusses the potential impacts to these resources that would occur with implementation of the proposed project. Descriptions and analysis in this section are based, in part, upon existing site conditions, project site plans/exhibits, the County of Riverside 2020 General Plan, and the City of Corona 2020-2040 General Plan.

3.17.1 - Existing Conditions

Regional

Riverside County Regional Parks

According to the County of Riverside 2020 General Plan, Multipurpose Open Space Element, Riverside County (County) includes a wide range of open space, parks, and recreational areas. This includes Joshua Tree National Park and major State parks, such as Anza-Borrego, the Salton Sea State Recreation Area, and Chino Hills State Park. County parks also serve residents and visitors in the western portion of the County, as well as in the desert, mountain, and Colorado River regions. Riverside County maintains 35 regional parks, encompassing roughly 23,317 acres. Local parks are under the jurisdiction of County Recreation and Park Districts and serve the following areas: the Beaumont-Cherry Valley area; the Coachella Valley area; the Jurupa area; and the Valley-wide area including the San Jacinto Valley, the Winchester area, the Menifee Valley, and the Anza Valley.

Federal Recreational Resources in Riverside County

There are four National Park and Recreation areas that fall within Riverside County, including the Santa Rosa/San Jacinto Mountains National Monument; the San Bernardino National Forest; the Cleveland National Forest; and Joshua Tree National Park. Together, these landmarks provide extensive recreational opportunities for the residents of Riverside County. These resources are as follows:

- **Santa Rosa/San Jacinto Mountains National Monument:** Established by the United States Congress in 2000 and encompassing two federal Wilderness Areas, the National Monument covers approximately 150,800 acres of federal lands, 86,400 acres belonging to/managed by the Bureau of Land Management (BLM), and 64,400 acres belonging to/managed by the United States Forest Service (Forest Service). The total area also includes approximately 23,000 acres controlled by the Agua Caliente Band of Cahuilla Indians; 8,500 acres controlled by California Department of Parks and Recreation; 34,500 acres controlled by other State of California agencies; and approximately 55,200 acres of private land.
- **San Bernardino National Forest:** This large National Forest spans both Riverside and San Bernardino counties. Of the National Forest's 823,816 total acres, approximately 241,600 acres occur within Riverside County, in three discontinuous locations (223,980 acres, 17,453 acres, and 167 acres, respectively). The Forest Service manages this resource.
- **Cleveland National Forest:** The Cleveland National Forest covers a total of 566,866 acres and is the southernmost National Forest in California. It spans across three counties, including San

Diego, Orange, and Riverside. The portion within Riverside County totals approximately 90,750 acres and is under Forest Service management.

- **Joshua Tree National Park:** This BLM-managed National Park encompasses a total of approximately 1,017,750 acres, spanning Riverside and San Bernardino counties. Approximately 794,000 acres are within Riverside County.

Local

City of Corona General Plan

According to the City of Corona 2020-2040 General Plan, the City of Corona (City) currently maintains 35 public parks consisting of approximately 352 acres. Recreational facilities include the 27-acre El Cerrito Sports Park, which serves City residents under a joint use agreement with the County. Additional park facilities serve the unincorporated sphere of influence. In addition to developed parkland, the Sage Open Space area and Fresno Canyon offer 67 acres of open space for walking, hiking, and bicycling, for a total of 446 acres. Corona's parklands include a variety of park types and uses. Parks are classified within four categories that range in size:

- Miniparks, special park facilities of fewer than 2 acres, often consist of vista points, greenbelts, rest areas, or picnic areas.
- Neighborhood parks typically include passive or active recreational activity areas with fields, courts, and/or picnic areas. These parks vary in size from about 5 to 20 acres and can serve a population of up to 5,000. The majority of Corona's parklands are neighborhood parks.
- Community parks are at least 20 to 50 acres, serve several neighborhoods, and can include both passive and active recreation facilities. Community parks in Corona include Santana Regional Park, Promenade Community Park, and Citrus Community Park.
- Major/Regional parks, which are from 50 to 100 acres, are also included in the City's classification of parklands. Major parks often include active recreation facilities and serve a greater proportion of the population than do community parks. Butterfield Park is the City's only major park.

Recreational Facilities in the Project Vicinity

Planning Areas 1 through 5 of the Trails of Corona Specific Plan are located within unincorporated Riverside County, and Planning Area 6 is within the City of Corona. There are no existing parks within the proposed project site. Although the project site was formerly the Mountain View Golf Course, it was not counted as part of the City or County's park or recreation land uses. The entire project is surrounded by the City of Corona, and it is located near the boundaries of the County of Riverside and County of San Bernardino. North of the project site are the Cities of Norco and Eastvale and unincorporated Riverside County. According to the City of Corona 2020-2040 General Plan, Corona's location near the convergence of Los Angeles, Riverside, and San Bernardino counties allows residents access to regional facilities in all three counties. Corona residents have access to the adjacent Cleveland National Forest, which forms the southern boundary of the City, and the Prado Basin to the northeast of the City. Both the Prado Basin and the Cleveland National Forest provide regional recreation opportunities for Corona residents.

Federal, State, and County agencies also provide regional park and recreation facilities. The Chino Hills State Park (a federal facility) and Featherly Park (a private facility) in Orange County and Prado Regional Park in Riverside County provide nearby regional facilities for Corona residents. The Santa Ana River Wildlife Area, located in Riverside County, also presents recreational opportunities, such as hiking and equestrian trails. The Santa Ana River Trail connects Corona to Yorba Linda by bicycle trail.

The parks located within a 1-mile radius of the project site are Serfas Club Park (approximately 0.69 mile); Ridgeline Park (approximately 0.78 mile); and Brentwood Park (approximately 0.81 mile). The parks located within a 5-mile radius of the project site are shown in Table 3.17-1.

Table 3.17-1: Nearby Park/Recreational Facilities

Park Name	Address/Cross Streets	Amenities	Approximate Distance from the Project Site
Public Parks/Recreational Facilities—City of Corona, 1-mile radius			
Serfas Club Park	2575 Green River Road, Corona, CA 92882	• Lighting • Sport Fields/Courts • BBQ • Play Equipment • Picnic Facilities • Restrooms	0.69 mile west
Ridgeline Park	2850 Ridgeline Drive, Corona, CA 92882	• Lighting • Sport Fields/Courts • BBQ • Restrooms • Picnic Facilities	0.78 mile west
Brentwood Park	1646 Dawn Ridge Drive, Corona, CA 92882	• Lighting • Sport Fields/Courts • BBQ • Restrooms • Picnic Facilities	0.81 mile east
Public Parks/Recreational Facilities—Regional Parks			
Prado Regional Park/Basin	16700 Euclid Avenue, Chino, CA 91708	• 75 campgrounds • 110 miles of recreational trails • Backpacking areas • Mountain biking areas • Off-road vehicles areas • Fishing/boating areas (60-acre lake) • Multipurpose room • Over 400 picnicking areas (sheltered and open) • Horseshoe pits • 18-hole Disc Golf course • BBQ pits • Camping amenities.	4.92 miles northwest

Park Name	Address/Cross Streets	Amenities	Approximate Distance from the Project Site
Cleveland National Forest	Various access points, nearest access point is near the intersection of Green River Road and Tanglewood Drive to the west.	• Bicycling • Camping and Cabins • Fishing areas • Hiking trails • Horse riding and camping • Hunting areas • Nature Viewing • Off highway vehicle riding areas and camping • Picnic areas	2,950 feet west
Source: San Bernardino County. 2018. Website: http://cms.sbcounty.gov/parks/parks/pradoregionalpark.aspx; United States Department of Agriculture (USDA). 2018. Website: https://www.fs.usda.gov/recmain/cleveland/recreation; Corona Technical Background Report 2004.			

3.17.2 - Regulatory Framework

State Regulations

Quimby Act

Section 66477 of the California Government Code, also known as the Quimby Act, was enacted in an effort to promote the availability of park and open space areas in California. The Quimby Act authorizes cities and counties to enact ordinances requiring the dedication of land or the payment of fees for park and/or recreational facilities in lieu thereof, or both, by developers of residential subdivisions as a condition to the approval of a tentative map or parcel map. The Quimby Act permits the County to require parkland dedications not to exceed 3 acres of parkland per 1,000 persons residing within a subdivision and/or in lieu fee payments for residential development projects. However, if the amount of existing neighborhood and community park space within the local jurisdiction exceeds that limit, the required dedication ratio cannot exceed 5 acres of parkland per 1,000 persons.

Local Regulations

Riverside County 2020 General Plan

According to the County of Riverside 2020 General Plan, Riverside County maintains 35 regional parks, encompassing roughly 23,317 acres. According to the California Department of Finance, the County of Riverside 2021 total population was estimated to be 2,454,453. Given that population estimate, the City's current park ratio is 9.5 acres per 1,000 residents. The County of Riverside 2020 General Plan sets forth the following applicable policies that are relevant to recreational resources:

Multipurpose Open Space Element

OS 20.3 Discourage the absorption of dedicated parklands by non-recreational uses, public or private. Where absorption is unavoidable, replace parklands that are absorbed by other uses with similar or improved facilities and programs.

OS 20.5 Require that development of recreation facilities occur concurrent with other development in an area.

OS 20.6 Require new development to provide implementation strategies for the funding of both active and passive parks and recreational sites.

Circulation Element

C 16.1 Implement the Riverside County trail system as depicted in the Bikeways and Trails Plan of the General Plan.

C 17.2 Require bicycle access between proposed developments and other parts of the county trail system through dedication of easements and construction of bicycle access ways.

Land Use Element

LU 9.2 Require that development protect environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and federal and state regulations, such as CEQA, NEPA, the Clean Air Act, and the Clean Water Act.

LU 25.2 Provide for a balanced distribution of recreational amenities.

LU 25.4 Require that new development meet or exceed the parkland requirements as established in the Quimby Act and County enabling ordinances.

Riverside County Zoning Ordinance

- **Ordinance Number 460, Section 10.35:** Regulating the Division of Land: Riverside County has adopted provisions implementing the Quimby Act by establishing a requirement for dedication of 3 acres of parkland per 1,000 population or payment of a fee in lieu of such dedication. The fee or land dedications may only be used to provide neighborhood and community parks that serve the proposed development.
- **Ordinance Number 328:** Rules and Regulations for the Government of County or District Owned or Operated Parks and Open Space Areas: This ordinance prescribes rules and regulations for parks and open space areas within Riverside County for the purpose of maintaining the integrity and effective use of such areas for recreational purposes. The ordinance also regulates the following: those uses allowed in parks/open space areas, the circulation of vehicles throughout the recreational areas, and the maintenance and protection of landscaped areas.
- **Ordinance Number 348:** Providing for Land Use Planning and Zoning Regulations and Related Functions for the County of Riverside: This ordinance protects the people and property of Riverside County from development of unsuitable land uses and aims to ensure that built areas are developed safely and with minimal conflict with surrounding lands. Regarding the existing visual character and aesthetic quality of a site and its surroundings, Ordinance Number 348 identifies requirements for landscaping associated with development proposals. The landscaping of development projects enhances the visual character and aesthetic quality of a site and its surroundings by maintaining and improving the existing visual character and aesthetic quality of a site.

City of Corona 2020-2040 General Plan

The City of Corona 2020-2040 General Plan establishes a goal of at least three acres of usable, attractive, well-maintained, and amenity-appropriate parkland per 1,000 residents; the General Plan also maintains this ratio as the parkland standard for the City. According to the California Department of Finance, the 2023 population estimate for the City of Corona is 157,182. According to the City's website, the City has more than 394 acres of parks.[1] Given that population estimate, the City's current park ratio is 2.51 acres per 1,000 residents. The City would need to add an additional 78 acres in order to fulfill its goal based on the population in 2023. The City of Corona 2020-2040 General Plan sets forth the following applicable policies that are relevant to recreational resources:

PR-1.1 Seek all creative means to facilitate the provision of at least three acres for every 1,000 residents of usable, attractive, well-maintained, and amenity-appropriate parkland.

PR-1.2 Provide a variety of park types (e.g., neighborhood, community, major, and special user) with an appropriate mix of amenities that are designed for accessibility and use to meet the diverse needs of residents.

PR-1.3 Encourage distribution of parks, open space, and recreational amenities throughout the City, to the extent feasible, to maximize convenient access for residents, primarily, and secondarily to the business community.

PR-1.5 Operate and maintain park and recreational facilities to facilitate a high-quality experience; regularly modernize parks and associated facilities where needed, incorporating best practices in sustainable designs.

PR-1.8 Enhance options to access parks, community centers, and other recreational facilities through transit, bikeways, and walking paths that are usable for people of all ages and abilities.

PR-2.1 Provide recreational and educational services, programs, and activities that are responsive to the interests of the community; adjust services to reflect trends and needs.

PR-2.2 Provide state-of-the-art community recreational and other facilities that support existing programs, accommodate emerging needs, and are accessible to all members of the community.

PR-2.4 Provide and support senior programs and seek opportunities to expand, where feasible, programs promoting health, lifelong learning, recreation, arts, and culture for Corona's older adults.

[1] City of Corona. Website: https://www.coronaca.gov/about-us. Accessed March 28, 2024.

PR-2.7 Ensure recreational service fees, to the extent feasible and appropriate, and balance the need to recover costs while offering opportunities for residents to participate regardless of income.

3.17.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, recreation impacts resulting from the implementation of a proposed project would be considered significant if the project would:

1. Parks and Recreation

a) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

b) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

c) Be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?

2. Recreational Trails

a) Include the construction or expansion of a trail system?

3.17.4 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Recreational Facilities Physical Effect on Environment

Impact REC-1a:	**Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

Source(s): GIS database, Ord. No. 460, Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications), Ord. No. 659 (Establishing Development Impact Fees), California Department of Finance population estimates, project site plans and exhibits, County of Riverside 2020 General Plan, and the City of Corona 2020-2040 General Plan.

Impact Analysis

The proposed project includes the development of several open space parks, trails, and recreation areas integrated throughout Planning Areas 1 through 6. As described previously, both the County of Riverside Ordinance Number 460 (Quimby Act) and the City of Corona General Plan have established a park ratio of at least 3.0-acre of parkland per 1,000 residents.[2] The County of Riverside currently maintains approximately 23,317 acres of parklands with a ratio of 58.1 acres per 1,000 residents, based on the 2023 population for Riverside County.[3] The City of Corona provides 394 acres of parkland with a ratio of 2.51 acres per 1,000 residents, based on the 2023 City of Corona population.[4] As a result, the City needs to add an additional 78 acres to fulfill its goal based on the population in 2023.

If the project does not provide the required amount of park space, the project applicant would be required to pay in lieu park fees consistent with the most recent fee schedule. Impact fees would be used by the County to develop and maintain recreational facilities.

County of Riverside (Planning Areas 1 Through 5)

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas. However, the development of Planning Area 2 is no longer contemplated, and this acreage would remain undeveloped as open space. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.

Each Project Planning Area contains open space in the form of parks and trails open to the public. As described in the Project Description, parks would include a combination of some of the following: walking, running, and biking trails, tot lots, active sport courts, or dog parks. Park benches and large greenspaces would also be provided for passive recreation.

The proposed neighborhood parks would meet the requirements of the Quimby Act in accordance with County Ordinance Number 460, requiring 3 acres of parkland per 1,000 residents. The proposed project would result in approximately 652 residents,[5] which would require 1.96 acres of parkland to meet County standards. As mentioned previously, the development proposes to include 36.73 acres of open space, parks, and trails, which exceeds the County's service goal of 3 acres per 1,000 residents. As a result, the proposed project would include more park space than is required for the project to meet the requirements of County Ordinance 460 As such, development of the proposed project would not require the expansion of existing or construction of new parkland resulting in environmental impacts off-site. Therefore, impacts would be less than significant.

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[2] County of Riverside. 2015. Multipurpose Open Space Element. December 8. Website: https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-Plan-2017-elements-OCT17-Ch05-MOSE-120815.pdf. Accessed March 28, 2024.

[3] California Department of Finance. 2021. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark. Website: https://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/. Accessed October 13, 2021.

[4] Ibid.

[5] The proposed project's total residents were calculated using a Population Density Factor obtained from the National Association of Home Builders (NAHB) Approving 55+ Housing: Facts That Matter (see Figure I-2, Age of Household Head 55 to 64, Page 8).

City of Corona (Planning Area 6)

The City of Corona established a parkland standard of 3.0 acres of parkland per 1,000 residents, as stated in City of Corona 2020-2040 General Plan policy PR-1.1. The proposed project would create 36.73 acres of open space and parks throughout Planning Areas 1-5. Planning Area 6 would remain undeveloped. If developed consistent with the NOP, Planning Area 6 would add approximately 10.43 acres of recreational acreage, including 4,262 linear feet of trails. If Planning Area 6 were developed consistent with the NOP, the City would require 0.36 acres of open space within the proposed project to meet the City's standards. Therefore, the proposed project would be consistent with the City of Corona 2020-2040 General Plan Recreation standards and impacts would be less than significant.[6]

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Increase Use of Parks

Impact REC-1b:	**Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Source(s): GIS database, Ord. No. 460, Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications), Ord. No. 659 (Establishing Development Impact Fees), project site plans and exhibits, County of Riverside 2020 General Plan, and the City of Corona 2020-2040 General Plan.

Impact Analysis

County of Riverside (Planning Areas 1 Through 5)

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas. However, the development of Planning Area 2 is no longer contemplated and this acreage would remain undeveloped as open space. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2.

Planning Area 1 of the proposed project would consist of 66 two-family residences with associated open space, parks, and trails. Planning Area 3 would develop 115 single-family detached residences, 50 two-family residences, and a community center. Planning Areas 4 and 5 would develop 78 single-

[6] City of Corona. 2004. City of Corona General Plan – Parks, Schools, and Libraries. March 17. Website: https://www.coronaca.gov/home/showdocument?id=4637. Accessed October 27, 2021.

family detached residences with planned areas for passive recreation. All of the residential dwelling units would be age restricted to 60 years old and older. The project would intersperse recreational areas, parks, and trails throughout the project site that would be mostly accessible to the public, with a mix of private and public park/open space areas. Recreational areas, parks, and trails throughout the project site would be maintained by the HOA. The 36.73 acres of new park space in Planning Areas 1–5 would provide new residents and existing residents in the surrounding areas an interconnected series of parks and recreational areas. As described in Impact REC-1a, the project's 36.73 acres of park space would exceed the County's park per 1,000-person standard for the estimated 652residents.

As such, the open space amenities provided in the proposed project would be more than sufficient for future residential recreational use and, therefore, an increase of recreational use to the existing regional park amenities and recreational facilities within the vicinity of the project site would be less than significant.

City of Corona (Planning Area 6)

Planning Area 6 is located in the City of Corona. The project as proposed in the NOP would develop 56 single-family detached residences and a new recreational trail system in Planning Area 6. The parkland standard in the City of Corona is 3.0 acres of parkland per 1,000 residents in the City. The proposed project would develop 36.73 acres of recreational, park, and open space in Planning Areas 1–5. Under the project as proposed in the NOP, approximately 10.43 of additional recreational, park, and open space would be located in Planning Area 6 within the City of Corona. Alternatively, as currently envisioned, the proposed project would not develop Planning Area 6 and the site would remain undeveloped. Therefore, the proposed project meets the parkland standards in the City of Corona. Impacts due to the proposed project on existing neighborhood or regional parks are less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Location Within Community Service Area

Impact REC-1c:	**Be located within a Community Service Area or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?**

Source(s): GIS database, Ord. No. 460, Section 10.35 (Regulating the Division of Land – Park and Recreation Fees and Dedications), Ord. No. 659 (Establishing Development Impact Fees), Riverside County: County Service Areas, project site plans and exhibits, County of Riverside 2020 General Plan, and the City of Corona 2020-2040 General Plan.

Impact Analysis

County of Riverside (Planning Areas 1 Through 5)

According to the Community Service Area (CSA) map (*CSA 1 Coronita)*, the project site is located immediately adjacent to, but not within, the Coronita Community Service Area. As described previously, the project would intersperse recreational areas, parks, and trails throughout the project site that would be mostly accessible to the public, with a mix of private and public park/open space areas. The 36.73 acres of new park space in Planning Areas 1-5 would provide new residents and existing residents in the surrounding areas an interconnected series of parks and recreational areas. As described in Impact REC-1a, the project's park space would exceed the County's park per 1,000-person standard and, therefore, it is not required to pay associated development impact fees that are otherwise used by the County to develop and maintain recreational facilities as directed by County Ordinance Number 659. As such, the open space amenities provided by the proposed project would be more than sufficient and, therefore, an increase of recreational use to the existing regional park amenities and recreational facilities within the vicinity of the project site would be less than significant.

City of Corona (Planning Area 6)

The City of Corona does not designate CSAs and the project site is not included as part of a recreation and park district with a Community Parks and Recreation Plan. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Recreational Trails

Impact REC-2a: Include the construction or expansion of a trail system?

Source(s): Riverside County 2020 General Plan, including Figure C-6 Trails and Bikeway System, project site plans and exhibits, and the City of Corona 2020-2040 General Plan.

Impact Analysis

The project would include the construction of public and private trails throughout the project site. These trails would be maintained by the HOA and would connect to existing roadways adjacent to the project site and would provide connections between the new residential units. If Planning Area 6 were developed consistent with the NOP, it would include an extensive new trail system along the east side of the Planning Area 6 site. If approved as revised, Planning Area 6 would remain undeveloped and would not include any changes related to trail systems. The project would not expand any existing trail systems. Furthermore, as described previously, the project would not

significantly increase the use of existing recreational areas or trails in the surrounding area such that the need for new or expanded trails would be necessary. Impacts related to the construction or expansion of new trails would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

3.18 - Transportation

3.18.1 - Introduction

This section describes the existing transportation and traffic conditions and potential effects from project implementation on surrounding roads and intersections. Descriptions and analysis in this section are based, in part, on information contained in the Traffic Impact Analysis dated February 16, 2024, and the Vehicle Miles Traveled (VMT) Analysis dated December 9, 2021 (collectively, "Traffic Study"), both prepared by Urban Crossroads, included in this Draft EIR as Appendix J.

Changes to the State California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, requiring all lead agencies to adopt VMT as a replacement for automobile delay-based Level of Service (LOS) as the new measure for identifying transportation impacts for land use projects. This Statewide mandate went into effect on July 1, 2020. The City of Corona and County of Riverside recognize that vehicle delay as represented by LOS deficiencies are not analyzed as potential environmental impacts under CEQA. However, while not specifically relevant to an analysis of environmental transportation impacts under CEQA, the County's General Plan addresses LOS for new development projects. Therefore, the analysis of transportation impacts within this Draft EIR includes a VMT analysis based on applicable County and City screening thresholds to determine whether the proposed project would have an impact related to VMT and, if so, whether that impact would be significant. The findings from the Traffic Study that pertain to LOS are provided in this analysis for informational purposes only in order to allow decision-makers to evaluate traffic impacts as they pertain to General Plan consistency and recommends improvements to address any identified deficient conditions.

3.18.2 - Existing Conditions

Project Study Area

The proposed Trails of Corona Specific Plan (proposed project) is located on the former Mountain View Golf Course, south of State Route (SR) 91 and generally west of Avenida Del Vista and east of Serfas Club Drive, in both unincorporated Riverside County and the City of Corona.

3.18.3 - Methodology

VMT Screening

County Guidelines identify screening criteria that can be used to determine when a development project can be presumed to result in a less than significant impact without the need for a detailed VMT analysis. Screening criteria established by the County of Riverside include small project, transit priority area, local serving retail, affordable housing, local essential service, and map-based screening. The project's retail component was found to qualify for local serving retail screening as described below.

Local Serving Retail Screening

The County Guidelines identify that local serving retail projects that do not exceed 50,000 square feet in a single building would tend to serve the local community, thereby reducing the need for longer trips to obtain basic goods and services, which in turn reduces VMT.

VMT Thresholds

The County Guidelines identify that residential development should be evaluated based on an efficiency metric of VMT per capita. Thresholds of significance based on the adopted County Guidelines are as follows:

Table 3.18-1: VMT Thresholds of Significance

Land Use	VMT Threshold	Basis
Residential	15.2 VMT/capita	Existing Countywide average VMT per capita
Notes: VMT = Vehicle Miles Traveled Source: Riverside County Transportation Analysis Guidelines 2020.		

Level of Service (non-CEQA analysis)

Traffic operations of roadway facilities are described using the term LOS. LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

Level of Service Criteria

County of Riverside

Per the County of Riverside Traffic Study Guidelines, for intersections currently operating at unacceptable LOS (LOS E or F), a deficiency will occur if the project contributes peak-hour trips to pre-project traffic conditions.

City of Corona

The City of Corona 2020-2040 General Plan Policy CE-1.5 states that the City will maintain LOS D or better on arterial streets in the City. Develop and maintain a list of locations where LOS E or LOS F are considered acceptable and would be exempt from this LOS policy. Considerations for LOS exemption include lack of available right-of-way, environmental constraints, or other modes of travel (such as bicycle or pedestrians).

Caltrans Facilities

Senate Bill (SB) 743, approved in 2013, endeavors to change the way transportation impacts will be determined according to CEQA. The Governor's Office of Planning and Research (OPR) has recommended the use of VMT as the replacement for automobile delay-based LOS. Caltrans

acknowledges automobile delay will no longer be considered a CEQA impact for development projects and will use VMT as the metric for determining impacts on the State Highway System. However, LOS D has been utilized as the target LOS for Caltrans facilities, consistent with the County of Riverside and City of Corona.

Project Trip Generation

Trip generation represents the amount of traffic that is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

It should be noted that since the time this Traffic Study has been prepared, the site plan has been updated to remove the commercial use within Planning Area 2. In an effort to provide flexibility for minor changes to the site plan during final preparation, this Traffic Study evaluates the more conservative use, which includes the commercial retail square footage, in an effort to provide a conservative analysis. Trips generated by the proposed project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, 2021. The proposed project is anticipated to generate a net total of 1,536 trips-ends per day with 93 AM peak-hour trips and 130 PM peak-hour trips.

The trip generation rates used to estimate project traffic is shown in Table 3.18-2. A summary of the proposed project's trip generation is also shown in Table 3.18-9. The trip generation rates are based upon data collected by the ITE for Senior Adult Housing–Detached (ITE Land Use Code 251), Senior Adult Housing–Attached (ITE Land Use Code 252), and Strip Retail Plaza (ITE Land Use Code 822) in the published ITE Trip Generation Manual, 11th Edition, 2021.

Table 3.18-2: Project Trip Generation Summary

Project Trip Generation Rates									
Land Use[1]	ITE LU Code	Units[2]	AM Peak-hour			PM Peak-hour			Daily
			In	Out	Total	In	Out	Total	
Senior Adult Housing—Detached	251	DU	0.08	0.16	0.24	0.18	0.12	0.30	4.31
Senior Adult Housing—Attached	252	DU	0.07	0.13	0.20	0.14	0.11	0.25	3.24
Strip Retail Plaza	822	TSF	1.42	0.94	2.36	3.30	3.29	6.59	54.45
Project Trip Generation									
Project	Quantity	Units[2]	AM Peak-hour			PM Peak-hour			Daily
			In	Out	Total	In	Out	Total	
Planning Area 1									
Senior Adult Housing–Attached	66	DU	4	9	13	9	7	17	214

Project Trip Generation									
Project	Quantity	Units[2]	AM Peak-hour			PM Peak-hour			Daily
			In	Out	Total	In	Out	Total	
Planning Area 2									
Neighborhood Shopping Center	10	TSF	14	9	23	33	33	66	546
Pass-by Reduction:[4]			0	0	0	-13	-13	-26	-220
Planning Area 2 Total:			14	9	23	20	20	40	326
Planning Area 3									
Senior Adult Housing—Detached	115	DU	10	19	29	22	14	36	496
Senior Adult Housing—Attached	50	DU	3	7	10	7	6	13	162
Planning Area 3 Total:			13	26	39	29	20	49	658
Planning Area 4									
Senior Adult Housing—Detached	47	DU	4	7	11	9	5	14	204
Planning Area 5									
Senior Adult Housing—Detached	31	DU	2	5	7	6	4	10	134
Total:	**309**	**DU**	**37**	**56**	**93**	**73**	**56**	**130**	**1,536**

Notes:
[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).
[2] DU = dwelling unit; TSF = thousand square feet
[3] Internal Capture based on the NCHRP 684 Internal Capture Estimation Tool (ITE recommended methodology).
[4] Pass-by trip reduction source: ITE Trip Generation Handbook, 2021.
Source: Urban Crossroads. 2024.

Project Trip Distribution

The project trip distribution and assignment process represent the directional orientation of traffic to and from the project site. The trip distribution pattern of vehicles is heavily influenced by the geographical location of the project site, the location of surrounding uses, and the proximity to the regional freeway system.

Project Fair Share Calculation Methodology

In cases where the Traffic Study identifies that the project would contribute additional traffic volumes to cumulative traffic deficiencies, the project's fair share costs of improvements necessary to address deficiencies have been identified. The project's fair share cost of improvements is determined based on the following equation, which is the ratio of project traffic to new traffic, and new traffic is total future traffic less existing baseline traffic:

- Project Fair Share Percent = Project Traffic/[GPBO With Project Total Traffic–Existing Traffic]

Although the City has adopted VMT thresholds pursuant to SB 743, it does not prevent local agencies from using LOS to determine a project's fair share participation the construction of transportation

improvements outside of CEQA. Additionally, the City still utilizes LOS in its General Plan. Although no longer a requirement for CEQA in determining environmental impacts associated with LOS, the City can impose conditions of approval to require construction of certain transportation infrastructure improvements or payment of a fair share toward the cost of such improvements warranted by the project.

The proposed project fair share contribution calculations are presented in Section 9.4, Fair Share Contribution, of the Traffic Study.

3.18.4 - Regulatory Framework

State Regulations

Caltrans

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway System facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. Consistent with the County of Riverside minimum LOS of LOS D, LOS D will be used as the target LOS for both arterial-to-freeway ramps and freeway mainline segments and ramp junctions.

Senate Bill 743: Vehicle Miles Traveled Analysis

SB 743 requires the OPR to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code [PRC] § 21099(b)(1)). Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

In December 2018, after over 5 years of stakeholder-driven development through over 200 stakeholder meetings, public convening, and other outreach events, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the CEQA Guidelines section implementing SB 743 (CEQA Guidelines § 15064.3).

Changes to CEQA Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based LOS as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the OPR released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (Technical Advisory). The County of Riverside adopted Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled (County Guidelines) in December of 2020.

Regional Regulations

Transportation Uniform Mitigation Fee Program

Transportation improvements within the County of Riverside are funded through a combination of direct project mitigation and fee programs, such as the Transportation Uniform Mitigation Fee

(TUMF) Program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

The TUMF Program is administered by the Western Riverside Council of Governments (WRCOG) based upon a regional nexus study, most recently updated in 2016, to address major changes in right-of-way acquisition and improvement cost factors. This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite LOS and critical to mobility in the region. The TUMF Program is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

The TUMF Program fees are imposed on new residential, industrial, and commercial development through application of the TUMF Program fee ordinance and fees are collected at the building or occupancy permit stage. In addition, an annual inflation adjustment is considered each year in February. In this way, TUMF Program fees are adjusted upward on a regular basis to ensure that the development impact fees collected keep pace with construction and labor costs, etc.

County of Riverside Development Impact Fee Program

The proposed project is located within the County's Southwest Area Plan and therefore will be subject to County of Riverside Development Impact Fee (DIF) in an effort by the County to address development throughout its unincorporated area. The DIF program consists of two separate transportation components: the Roads, Bridges and Major Improvements component and the Traffic Signals component. Eligible facilities for funding by the County DIF program are identified on the County's Public Needs List. A comprehensive review of the DIF program is now planned in order to update the nexus study. This will result in development of a revised "needs list" extending the program time horizon from 2010 to 2030.

Riverside County Congestion Management Program

The Congestion Management Program (CMP) was adopted December 14, 2011, and is currently undergoing updates. The purpose of the CMP is to link land use, transportation, and air quality in order to establish reasonable growth management programs that will effectively use transportation funds, alleviate traffic conditions and other impacts, and/or improve air quality. The Riverside County Transportation Commission (RCTC) is the designated Congestion Management Agency (CMA) that is responsible for implementing the Riverside County CMP. The CMP identifies key roadways and intersections that are monitored as part of the program. There are no intersections within the study area that are identified as a CMP intersection per the Riverside CMP.

Riverside County—Circulation

According to the County of Riverside 2020 General Plan Circulation Element, the County of Riverside contains various transportation options, including automobile, rail and air transportation, a transit oasis system, bicycling, hiking, and walking, which serve as vital inter- and intra-regional linkages for the movement of people and goods. Rapid economic and residential growth both within and outside of the County of Riverside has far outpaced the ability to provide adequate transportation facilities, resulting in increased roadway congestion and decreased air quality. Future land use arrangements

and supporting multimodal transportation systems will allow employment, service, and housing opportunities in close proximity to each other, decrease the need to use the automobile for every trip, reduce roadway congestion, and improve the opportunity to use transportation alternatives safely and effectively. The following policies address land use issues related to circulation. A more detailed discussion and policy direction related to circulation can be found in the County of Riverside 2020 General Plan, Circulation Element and the 2021 General Plan, Land Use Element.

C 1.4 Utilize existing infrastructure and utilities to the maximum extent practicable and provide for the logical, timely, and economically efficient extension of infrastructure and services.

C 2.2 Require that new development prepare a traffic impact analysis as warranted by the Riverside County Traffic Impact Analysis Preparation Guidelines or as approved by the Director of Transportation. Apply Level of Service targets to new development per the Riverside County Traffic Impact Analysis Preparation Guidelines to evaluate traffic impacts and identify appropriate mitigation measures for new development.

C 2.3 Traffic studies prepared for development entitlements (tracts, public use permits, conditional use permits, etc.) shall identify project-related traffic impacts and determine the significance of such impacts in compliance with CEQA and the Riverside County Congestion Management Program Requirements.

C 2.4 The direct project-related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet Level of Service targets.

C 2.5 The cumulative and indirect traffic impacts of development may be mitigated through the payment of various impact mitigation fees such as County of Riverside Development Impact Fees, Road and Bridge Benefit District Fees, and Transportation Uniform Mitigation Fees to the extent that these programs provide funding for the improvement of facilities impacted by development.

C 3.8 Restrict heavy-duty truck through-traffic in residential and community center areas and plan land uses so that trucks do not need to traverse these areas.

C 3.9 Design off-street loading facilities for all new commercial and industrial developments so that they do not face surrounding roadways or residential neighborhoods. Truck backing and maneuvering to access loading areas shall not be permitted on the public road system, except when specifically permitted by the Transportation Department.

C 21.4 Construct and improve traffic signals at appropriate intersections. Whenever possible, traffic signals should be spaced and operated as part of coordinated systems to optimize traffic operation and reduce congestion.

C 21.6 Install special turning lanes whenever necessary to relieve congestion and improve safety.

LU 13.1 Provide land use arrangements that reduce reliance on the automobile and improve opportunities for pedestrian, bicycle, and transit use in order to minimize congestion and air pollution.

LU 13.2 Locate employment and service uses in areas that are easily accessible to existing or planned transportation facilities.

LU 13.3 Locate transit stations in community centers and at places of public, employment, entertainment, recreation, and residential concentrations.

LU 13.4 Incorporate safe and direct multimodal linkages in the design and development of projects, as appropriate.

LU 13.5 Allow traffic-calming elements, such as narrow streets, curb bulbs, textured paving, and landscaping, where appropriate.

LU 13.6 Require that adequate and accessible circulation facilities exist to meet the demands of a proposed land use.

LU 13.7 Review projects for consistency with the County's Transportation Demand Ordinance.

Riverside County 2021 General Plan Policy C 2.1 states that the County will maintain the following Countywide target LOS:

> The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently County maintained or are intended to be accepted into the County maintained roadway system:
>
> - LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well as those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley, and Temescal Canyon Area Plans.
> - LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley, and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley, and Temescal Canyon Area Plans.

LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.

County of Riverside Ordinances

The proposed project would be required to comply with the following County Ordinances related to transportation:

Ordinance No. 413–Vehicle Parking: Prohibits parking on any County highway for more than 72 hours.

Ordinance No. 452–Speed Limits: Determines that the prima facie limits1 are most appropriate to facilitate the orderly movement of traffic and are reasonable and safe, as to the respective portions of County highways.

Ordinance No. 460–Regulating the Division of Land: Includes standards related to general street design, private streets, street alignment, intersections, and alleys.

Ordinance No. 461–Road Improvement Standards and Specifications: Contains cross-sections, standards, and specifications for County roads.

Ordinance No. 499–Encroachments into County Highways: Monitors and regulate any structure or object of any kind, which is placed in, under or over any portion of a County Highway for the care and protection of County Highways and the traveling public.

Ordinance No. 500–Reducing Permissible Weight of Certain Vehicles: Prohibits any commercial vehicle exceeding a certain manufacturer's gross vehicle weight rating, subject to certain exemptions from using certain highways within residential areas.

Ordinance No. 559–Regulating Removal of Trees: No person shall remove any living native tree on any parcel or property greater than one-half acre in size, located in an area above 5,000 feet in elevation and within the unincorporated area of the County of Riverside, without first obtaining a permit to do so, unless exempt.

Ordinance No. 659–Establishing Development Impact Fees (DIF): Establishes and sets forth policies, regulations, and Fees relating to the funding and installation of the Facilities necessary to address the direct and cumulative environmental effects generated by new development projects.

Ordinance No. 671–Establishing Consolidated Fees for Land Use and Related Functions (DBF): Provides consolidation of certain schedules of fees related to the land use matters.

Ordinance No. 725–Penalties for Violations of Riverside County Ordinances: Any condition on public or private property that is declared unlawful, and a public nuisance may be abated.

[1] According to the United States Department of Transportation (USDOT) Federal Highway Administration (FHWA), a prima facie speed limit is one above which drivers are presumed to be driving unlawfully but, if charged with a violation, they may contend that their speed was safe for conditions existing on the roadway at that time. And, therefore, that they are not guilty of a speed limit violation.

Ordinance No. 748–Traffic Signal Mitigation Program: Allows traffic signalization to mitigate cumulative environmental impacts.

Ordinance No. 824–Western Riverside County Transportation Uniform Mitigation Fee Program Ordinance of 2017: Authorizes participation in the Western Riverside County TUMF.

Ordinance No. 859–Water Efficient Landscape Requirements: Establish provisions for water management practices and water waste prevention and to reduce water demands from landscapes.

Local Regulations

City of Corona DIF Program

The proposed project (for the portions that lie within the City of Corona) will also be subject to City of Corona's DIF Program, which includes a component for streets, bridges, and signals. A citywide impact fee will be necessary to finance the projects necessary to support local new development and not supported by the TUMF Program schedule. The latest City of Corona DIF fee schedule is effective July 1, 2020.

Measure "A" Funds

Measure A, Riverside County's 0.5-cent sales tax for transportation, was adopted by voters in 1988 and extended in 2002. It will continue to fund transportation improvements through 2039. Measure A funds a wide variety of transportation projects and services throughout the County of Riverside. The RCTC is responsible for administering the program. Measure A funds are spent in accordance with a voter-approved expenditure plan that was adopted as part of the 1988 election.

Fair Share Contribution

Project mitigation may include a combination of fee payments to established programs (e.g., the TUMF Program and/or DIF), construction of specific improvements, payment of a fair share contribution toward future improvements, or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the County of Riverside's discretion).

When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations for each peak-hour are provided in Table 1-6, Project Fair Share Calculations, in the Traffic Study. Improvements included in a defined program and constructed by development may be eligible for a fee credit or reimbursement through the TUMF Program where appropriate.

City of Corona

The City of Corona 2020-2040 General Plan Circulation Element is the City's blueprint for moving people, goods, and resources throughout Corona in a manner that is supportive of the land use element. Yet it is important to note that the goal of circulation element involves more than just moving vehicles. This element embraces opportunities to create a multimodal, safe, and efficient

circulation system that will address local traffic congestion, encourage increased transit use, respond to local business needs, and encourage pedestrians and bicyclists to use the network of streets for travel and recreational purposes.

The circulation element outlines the long-term plan for roadways, including numbers of lanes, right-of-way, and general operating conditions. It also provides guidance relating to the transit system, goods movement system, and nonmotorized travel, including bicycle and pedestrian travel. Regional circulation is also of critical interest in Corona because of the City's access from SR-91 and I-15 and regional trips that cut through Corona and use local roads to bypass the congestion on the freeway. California law mandates preparation of a circulation element to provide a framework for physical improvements that enhance mobility. The following policies address land use issues related to circulation. A more detailed discussion and policy direction related to circulation can be found in the City of Corona 2020-2040 General Plan, Circulation Element.

CE-1.1 Implement complete streets by limiting capacity to only serve expected demand on City streets (e.g., do not overbuild roadways) while discouraging regional cut-through and maximizing accessibility for users to adjacent land uses in a safe and efficient way.

CE-1.2 Support roadway maintenance programs that inspect, repair, and rehabilitate pavement surfaces in order to preserve the high quality of City streets and thoroughfares.

CE-1.3 Provide for safe roadway conditions by adhering to nationally recognized improvement standards and uniform construction and maintenance practices.

CE-1.4 Design and employ traffic control measures to ensure City streets and roads function with safety and efficiency.

CE-1.5 Maintain LOS D or better on arterial streets in the City. Develop and maintain a list of locations where LOS E or LOS F are considered acceptable and would be exempt from this Level of Service policy. Considerations for LOS exemption include lack of available right-of-way, environmental constraints, or other modes of travel (such as bicycle or pedestrians). Key locations identified for LOS exemption are:

- Green River Road at SR-91
- Lincoln Avenue at SR-91
- Main Street at SR-91
- Sixth Street, between East Grand Boulevard and West Grand Boulevard
- McKinley Avenue at SR-91
- Hidden Valley Parkway at I-15
- Magnolia Avenue at I-15
- Ontario Avenue at I-15
- El Cerrito Road at I-15
- Cajalco Road at I-15
- Weirick Road at I-15
- Other locations as approved by the City

Coordinate street system improvements and signalization with regional transportation efforts, including the Regional Transportation Plan, the State Transportation Improvement Program, the Riverside County General Plan, the Community and Environmental Transportation Acceptability Process, the CMP, and other relevant regional and subregional efforts and programs.

CE-1.7 Limit driveway and local street access on arterial streets to maintain a desired quality of traffic flow. Wherever possible, consolidate driveways and implement access controls during redevelopment of adjacent parcels.

CE-1.8 Restrict on-street parking on arterial streets, and in cases where on-street parking may be necessary, implement design features that separate parking spaces from street lanes.

CE-1.9 Design and operate secondary, local, and collector streets to discourage their use as through-traffic routes. Utilize residential neighborhood traffic control techniques to reduce cut-through traffic impacts.

CE-1.10 Require a traffic analysis to be prepared in accordance with the City's adopted Traffic Impact Study Guidelines and require projects to mitigate impacts on the City's circulation system that exceed the City's adopted service thresholds for near-term and future conditions.

CE-1.11 Provide all residential, commercial, and industrial areas with efficient and safe access for emergency vehicles, including undeveloped areas or those on the hillsides in high or very high fire hazard severity zones.

CE-1.12 Consider the effects on transportation systems of public utility improvements, including extensions of underground pipelines and overhead transmission lines and associated utility rights-of-way.

CE-2.1 Support RCTC and Caltrans efforts to improve management of the SR-91, I-15, and SR-71. Promote improvements that reduce regional cut-through traffic on City streets and work with RCTC and Caltrans to ensure that accessibility to these facilities is provided to Corona residents.

CE-2.3 Coordinate impacts of new roadway connections with adjacent cities and Riverside County to ensure consistency in design and operations of the new facilities and connections.

CE-2.4 Implement the Circulation Element map concurrent with new development and through redevelopment.

CE-3.1 Implement and maintain traffic signal coordination and advanced traffic management strategies throughout the City to the maximum extent practicable and integrate signal systems with adjacent jurisdictions and Caltrans.

CE-4.6 Require new development to provide transit facilities, such as bus shelters and turnouts, where deemed necessary, to encourage the use of transit and other alternative forms of transportation.

CE-5.1 Provide for safety of bicyclists, equestrians, and pedestrians by adhering to national standards and uniform practices; adhere to accessibility requirements for people with disabilities.

CE-5.2 Maintain existing pedestrian facilities and encourage new development to provide walkways between and through developments.

CE-5.3 Provide for safe accessibility to and use of pedestrian facilities by people with disabilities to implement accessibility requirements under the American with Disabilities Act.

CE-5.6 Encourage new and existing development to provide accessible and secure areas for bicycle storage. Provide bicycle racks or storage facilities at public facilities and require bicycle parking, storage, and other support facilities as part of new office and retail developments.

CE-5.7 Use easements and/or rights-or-way along flood control channels, public utilities, railroads, and streets wherever possible for bikeways and equestrian and hiking trails.

CE-7.1 Require new developments to provide adequate off-street parking in compliance with Corona Municipal Code Chapter 17-76.

CE-7.2 Allow for the provision of adequate parking that is required to meet the needs of residential uses, commerce, and other land uses and is sensitive to the context and broader transportation goals of the City.

3.18.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, land use impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

d) Cause an effect upon, or a need for new or altered maintenance of roads.

e) Cause an effect upon circulation during the project's construction.

f) Result in inadequate emergency access or access to nearby uses.

3.18.6 - Project Impacts and Mitigation Measures

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

Traffic Increase

Impact TRANS-1:	**Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?**

Source(s): Riverside County General Plan, Project Application Materials, Traffic Study, VMT Analysis

Impact Analysis

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated, and this acreage would remain undeveloped. The following analysis evaluates the full development of Planning Area 2 consistent with the Notice of Preparation (NOP) and the original project proposal; however, the lead agency has determined that it is reasonably foreseeable that Planning Area 6, while included in the original proposal, will remain undeveloped. Therefore, for an accurate assessment of the reasonably foreseeable project-specific impacts and mitigation, the development of Planning Area 6 has been removed from the following analysis.

Traffic analysis was performed for the following scenarios:

- Existing (2023) Conditions, as described in Section 3.18.2, Existing Conditions
- Existing Plus Ambient Growth Plus Project (EAP) (2027) Conditions
- Existing Plus Ambient Growth Plus Project Plus Cumulative (EAPC) (2027) Conditions
- Horizon Year (2040) Without Project Conditions
- Horizon Year (2040) With Project Conditions
- City of Corona General Plan Buildout (GPBO) Without Project Conditions
- City of Corona General Plan Buildout (GPBO) With Project Conditions

Based on the analysis provided in the Traffic Study, deficiencies were identified under the following scenarios: EAP (2027), EAPC (2027), Horizon Year (2040), and City of Corona General Plan Buildout (GPBO) traffic conditions. To address these deficiencies, the improvements identified in Conditions of Approval (COA) TRANS-1 would include additional traffic signals, crosswalks, turning lanes, and restriping at the specified locations.

CEQA Guidelines require that other reasonably foreseeable development projects that are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was obtained from City of Corona staff (Appendix J). During the scoping process, the County of Riverside indicated there were no cumulative projects for the study area.

Local and Regional Funding Mechanisms

Transportation Uniform Mitigation Fee Program

The TUMF Program is administered by the WRCOG based upon a regional nexus study most recently updated in 2016 to address major changes in right-of-way acquisition and improvement cost factors. This regional program was put into place to ensure that development pays its fair share, and that funding is in place for construction of facilities needed to maintain the requisite LOS and critical to mobility in the region. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County. The project site is located within the Northwest Zone.

County of Riverside Development Impact Fee Program

The project is located within the County's Temescal Canyon Area Plan and therefore will be subject to County of Riverside DIF in an effort by the County to address development throughout its unincorporated area. The DIF program consists of two separate transportation components: the Roads, Bridges and Major Improvements component and the Traffic Signals component. Eligible facilities for funding by the County DIF program are identified on the County's Public Needs List, which currently extends through the year 2020. A comprehensive review of the DIF program is now planned in order to update the nexus study. This will result in development of a revised "needs list" extending the program time horizon from 2010 to 2030.

The County's DIF program includes a traffic signal list and associated costs. Only traffic signals included in the DIF program are eligible for DIF credit. Credit is only available up to the amount identified in the DIF program which is subject to discussions with County staff.

Measure A

Measure A, Riverside County's half-cent sales tax for transportation, was adopted by voters in 1988 and extended in 2002. It will continue to fund transportation improvements through 2039. Measure A funds a wide variety of transportation projects and services throughout the County. RCTC is responsible for administering the program. Measure A dollars are spent in accordance with a voter-approved expenditure plan that was adopted as part of the 1988 election.

Fair Share Contribution

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate. When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak-hour, have been provided in Table 9-1 of the Traffic Study for the applicable deficient study area intersections. These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

Transit Service

The surrounding area is currently served by the Riverside Transit Agency (RTA) with bus services along SR-91 Freeway, however, there does not appear to be an existing transit route that could potentially serve the proposed project. Transit service is reviewed and updated by the RTA periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. The project does not propose to alter any transit routes or services. Impacts would be less than significant.

Pedestrian and Bicycle Facilities

Field observations conducted in 2023 indicate nominal pedestrian and bicycle activity within the study area. Existing pedestrian facilities currently exist along portions Serfas Club Drive, Paseo Grande, Via Del Rio, Kirkwood Drive, Frontage Road, and 6th Street. There is an existing historic trail that runs along the 6th Street alignment within the study area. There are existing Class II bike lanes along Serfas Club Drive south of the SR-91 Freeway and also along Palisades Drive.

Level of Significance

Less than significant impact.

Conditions of Approval

COA TRANS-1 The project applicant's responsibility for the project's contributions toward deficient intersections is fulfilled through payment of fair share or payment of fees (if applicable) that would be assigned to construction of the identified recommended improvements. The project applicant shall be required to pay fair share fees and participate in pre-existing fee programs consistent with the County's requirements.

The recommended improvements needed to address the deficiencies identified under EAP (2027), EAPC (2027), Horizon Year (2040), and City of Corona General Plan Buildout (GPBO) traffic conditions are as follows:

Existing

- Improvement–Paseo Grande and Via Del Rio (No. 21)
  - Traffic signal.
- Improvement–Paseo Grande and Pine Crest Drive (No. 24)
  - Traffic signal.
- Improvement–Paseo Grande and Ontario Avenue (No. 25)
  - Traffic signal.

EAP (2027)

Same as Existing.

EAPC (2027)

- Improvement–Paseo Grande and Via Santiago (No. 20)
  - Traffic signal.

Horizon Year (2040)

- Improvement–Serfas Club Drive and Green River Road (No. 13)
  - Westbound right turn lane.
  - Strip a crosswalk on the west leg and remove the crosswalk on the east leg, in order to provide additional green time to the other approaches.
- Improvement–Serfas Club Drive and Green River Road (No. 18)
  - Eastbound right turn lane
- Improvement–Paseo Grande and Frontage Road (No. 19)
  - Traffic signal.
  - Restripe the northbound approach to provide a northbound left turn lane and a through lane.
- Improvement–Avenida Del Vista and Via Santiago (No. 33)
  - Traffic signal.

Impact TRANS-2: The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Source(s): Riverside County General Plan, Project Application Materials, Traffic Study, VMT Analysis

Impact Analysis

Project-Generated Vehicle Miles Traveled

RivTAM is a useful tool to estimate VMT as it considers interaction between different land uses based on socioeconomic data such as population, households, and employment. RivTAM is a travel forecasting model that represents a sub-area (Riverside County) of the Southern California Association of Governments (SCAG) regional traffic model. RivTAM was designed to provide a greater level of detail and sensitivity in the Riverside County area as compared to the regional SCAG model. County Guidelines identifies RivTAM as the appropriate tool for conducting VMT modeling for land use projects within the County of Riverside.

Project VMT has been calculated using the most current version of RivTAM. Adjustments in socioeconomic data (SED) (i.e., population, households, and employment) have been made to separate Traffic Analysis Zones (TAZs) within the RivTAM model to reflect the project's proposed land uses (i.e., age restricted (60+) housing and retail). Consistent with County Guidelines the VMT analysis was conducted for existing and cumulative scenarios that include the following:

- **Existing Conditions**–RivTAM base year (2012) traffic model conditions.
- **Existing Plus Project Conditions**–RivTAM base year (2012) traffic model plus the proposed project land uses.

- **Cumulative No Project Conditions**–RivTAM cumulative model (2040) without the proposed project land use changes (i.e., adopted land use assumptions).
- **Cumulative Plus Project Conditions**–RivTAM cumulative model (2040) plus the proposed project land use changes.

Project Land Use Conversion

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the NOP and the original project proposal, this following VMT analysis evaluates the full development of Planning Area 2 and 6. Although the retail component of the proposed project meets screening criteria, the inclusion of the retail is still important when considering the potential VMT generated for the age restricted (60+) housing component. As such, the retail component is modeled in RivTAM based on conversion factors used for the County of Riverside's General Plan Update, which are contained in Appendix E-2: Socioeconomic Buildout Assumptions and Methodology of the County's General Plan. The age restricted (60+) housing component was modeled based on the average persons per household, which was obtained from the National Association of Home Builders (NAHB) Approving 55+ Housing: Facts That Matter. Table 3.18-3 summarizes the resulting conversion of land use information to SED needed to adjust RivTAM to reflect the proposed project. As shown, the proposed project is estimated to generate a population of 770 and an employment of 20.

Table 3.18-3: Socioeconomic Data Summary

	Residential	Retail
Units	365 dwelling units	10,000 square feet
Density Factor	2.11 persons per household[1]	1 employee/500 square feet[2]
SED	770 population	20 employees

Notes:
SED = socioeconomic data
[1] Population Density Factor was obtained from the National Association of Home Builders (NAHB) Approving 55+ Housing: Facts That Matter (see Figure I-2, Age of Household Head 55 to 64, Page 8).
[2] Employee Density Factor was obtained from the County of Riverside General Plan Appendix E-2: Socioeconomic Buildout Assumptions and Methodology (see Table E-5, Commercial Employment Factors, Page 3).

VMT Assessment

Adjustments to employment for the proposed project's TAZ were made to the RivTAM base year model and cumulative year model. Project-generated home-based VMT was then calculated for the base year model following the VMT calculation procedures identified in Appendix E of the County Guidelines and includes home-based trips that are both internal and external to the RivTAM model boundaries. The home-based VMT value is then normalized by dividing by the proposed project's

population (also referred to as capita). As noted in the County Guidelines, the project may result in a significant VMT impact if the base model year project-generated VMT per capita exceeds the existing Countywide average VMT per capita (i.e., County threshold). As noted previously, the existing Countywide average VMT per capita is 15.2 for residential uses.[2] Table 3 provides a comparison of the VMT analysis conducted for existing and cumulative scenarios. As shown in Table 3.18-4, for Baseline Plus Project conditions, the project-generated VMT per capita is 9.69, which falls below the County's adopted threshold of 15.2. The transportation impact based on the assessment of project-generated VMT as compared to the County's adopted threshold is less than significant.

Table 3.18-4: Project VMT per Employee

	VMT per Employee	Percent Change
Baseline (2012)		
County Threshold	15.2	–
Baseline + Project		
Trails at Corona Specific Plan	9.69	-36.21%
Cumulative No Project		
Trails at Corona Specific Plan	Not Applicable	
Riverside County	18.74	+23.37%
Cumulative + Project		
Trails at Corona Specific Plan	11.57	-23.83%
Riverside County	18.73	+23.30%

Notes:
VMT = Vehicle Miles Traveled
[1] The adopted Specific Plan consists entirely of Open Space–Recreation land uses. The efficiency metric of VMT per population is not applicable for the No Project condition.

Appendix E of the County Guidelines states the following: "For Specific Plans and Community Plans, Riverside County requires that Cumulative analysis be completed irrespective of the findings of Baseline Plus Project conditions. Additionally, No Project and Plus Project conditions under both the Baseline and Cumulative must provide total Regional VMT values. Note that the Regional VMT values are for informational purposes and are note used as the basis for the determination of a significant impact." Table 3.18-4 provides a comparison of VMT per capita for cumulative No Project and With Project scenarios. The adopted land use assumptions for the cumulative No Project conditions consist primarily of open space uses. In addition, consistent with County Guidelines the total link-level VMT was also extracted from RivTAM for the "No Project" and "Plus Project" base year (2012) and cumulative year (2040) models (see Table 3.18-5). This is provided for informational purposes only.

[2] County Guidelines: Figure 6–VMT Threshold of Significance

Table 3.18-5: Riverside County Total VMT

	Riverside County
Base Year (2012) No Project	53,667,883
Base Year (2012) With Project	53,667,369
Cumulative Year (2040) No Project	92,508,071
Cumulative Year (2040) With Project	92,511,525

In summary, the proposed project's retail component of approximately 10,000 square feet is considered local serving and is presumed to have a less than significant VMT impact. In addition, the proposed project's age restricted (60+) housing component was evaluated using RivTAM to estimate project-generated VMT per capita as compared to the County adopted threshold of existing Countywide average VMT per capita. The proposed project-generated VMT per capita of 9.69 was found to be below the County's impact threshold of 15.2; therefore, the proposed project's VMT impact is less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Impact TRANS-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Source(s): Riverside County General Plan, Project Application Materials, Traffic Study, Trails at Corona Specific Plan

Impact Analysis

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. The following analysis evaluates the full development of Planning Area 2 consistent with the NOP and the original project proposal. The lead agency has determined that it is reasonably foreseeable that Planning Area 6, while included in the original proposal, will remain undeveloped. Therefore, for assessment of project-specific impacts and mitigation, the development of Planning Area 6 has been removed from the following analysis.

The proposed project involves the conversion of undeveloped land to senior adult housing and shopping center. The proposed project would provide street improvements in accordance with Ordinance 460 and 461.

The proposed project is proposed to have access onto, Frontage Road, Pine Crest Drive, and Paseo Grande. All proposed project driveways are proposed to be stop-controlled on the minor street with free-flow along the major streets and are proposed to allow for full access, with the exception of Driveway 3 and Frontage Road being a right-in right-out only driveway. Regional access to the proposed project site will be provided by the SR-91 (via Serfas Club Drive and Maple Street). All of the project site adjacent roadways appear to currently be built to their ultimate General Plan roadway cross section.

The roads in the proposed project vicinity are generally straight or include gentle vertical and horizontal curves and do not have design feature hazards, such as sharp curves, such that the proposed project would substantially increase these hazards.

Furthermore, Section II.B (Page II-16) of the Trails at Corona Specific Plan lists Circulation Master Plan Development Standards. These development standards are related to landscaping of roadways, street lighting, construction phasing of off-site traffic signals, on-site traffic signage, sight distances, Emergency Vehicle Access (EVA), bikeways, and on-site auxiliary road facility improvements. The project applicant would be required to implement these development standards. Therefore, impacts would be less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Impact TRANS-4: Cause an effect upon, or a need for new or altered maintenance of roads?

Source(s): Riverside County General Plan, Project Application Materials, Traffic Study, Trails at Corona Specific Plan

Impact Analysis

The proposed project includes the construction of approximately 20 acres of roadways. The Trails at Corona Specific Plan provides for development of the site as a private, gated community with restricted public access and private roads. Private roads shall be built to the standards shown in Exhibit II-4–Roadway Cross Sections A and Exhibit II-5–Roadway Cross Sections B of the Trails at Corona Specific Plan. The Circulation Master Plan includes major and minor roadways with sizes and classifications described below and shown on Exhibit II-3–Circulation Master Plan of the Trails at

Corona Specific Plan. The classifications are based on the County standards of roadways unless shown as modified and shown herein for reference.

- **Tract 37504 (PA 1):**
  - Street "C" (modified 55-foot right-of-way) with center median (privately maintained):

    Provides the only ingress/egress into the gated access community via Frontage Road. The modified 55-foot roadway consists of a raised centered 12-foot median with landscaping between the concrete curbing on both sides. The traveled way is 21.5 feet in both directions on both sides of the median slopes to the adjacent concrete curb and gutter located at the outer edges of the right-of-way.

  - Street "A" and "B" (26-foot right-of-way) (privately maintained):

    Typical local streets per the County of Riverside Standards inclusive of a 13-foot traveled lane on both sides of the centerline abutting to the concrete curb and gutter on both sides of the right-of-way. Adjacent to and located outside of the 26-foot right-of-way, both sides, shall be a 3-foot Public Utilities Easement for use by the public utility agencies with approval from the County of Riverside.

- **Tract 37501 (PA 3):**
  - Street "A" and "D" (Modified 37-foot right-of-way) (privately maintained):

    Local modified street inclusive of an offset centerline with a 13-foot traveled lane on one side (abutting a 3-foot Public Utilities Easement outside of the right-of-way, for use by the public utility agencies with approval from the County of Riverside) and an 11-foot traveled lane on the opposite side with 8-foot street parking abutting a concrete curb and gutter with a 5-foot concrete sidewalk.

  - Street "B" (Modified 37-foot right-of-way) (privately maintained):

    Local modified street inclusive of an offset centerline with a 13-foot traveled lane on one side adjacent to a 5-foot concrete sidewalk and an 11-foot traveled lane on the opposite side with 8-foot street parking abutting a concrete curb and gutter (abutting a 3-foot Public Utilities Easement outside of the right-of-way, for use by the public utility agencies with approval from the County of Riverside).

  - Street "C" (26-foot right-of-way) (privately maintained):

    Typical local streets per the County of Riverside Standards inclusive of a 13-foot traveled lane on both sides of the centerline abutting to the curb and gutter on both sides of the right-of-way. Adjacent to and located outside of the 26-foot right-of-way, both sides, shall be a 3-foot Public Utilities Easement for use by the public utility agencies with approval from the County of Riverside.

- **Tract 37502 (PA 4):**
  - Street "A" and "B" (Modified 37-foot right-of-way) (privately maintained):

Local modified street inclusive of an offset centerline with a 13-foot traveled lane on one side (abutting a 3-foot Public Utilities Easement outside of the right-of-way, for use by the public utility agencies with approval from the County of Riverside) and an 11-foot traveled lane on the opposite side with 8-foot street parking abutting a concrete curb and gutter with a 5-foot concrete sidewalk.

- Street "B" right-of-way changes to the standard 26-foot right-of-way after the intersection with Street "A."
- Street "B" (26-foot right-of-way) (privately maintained):

  Typical local streets per the County of Riverside Standards inclusive of a 13-foot traveled lane on both sides of the centerline abutting to the curb and gutter on both sides of the right-of-way. Adjacent to and located outside of the 26-foot right-of-way, one side only, shall be a 3-foot Public Utilities Easement for use by the public utility agencies with approval from the County of Riverside.

- **Tract 37502 (PA 5):**
  - Street "A" and "B" (Modified 37-foot right-of-way) (privately maintained):

    Local modified street inclusive of an offset centerline with a 13-foot traveled lane on one side (abutting a 3-foot Public Utilities Easement outside of the right-of-way, for use by the public utility agencies with approval from the County of Riverside) and an 11-foot traveled lane on the opposite side with 8-foot street parking abutting a concrete curb and gutter with a 5-foot concrete sidewalk.

No additional new or altered maintenance of roads would be required. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Impact TRANS-5: Cause an effect upon circulation during the project's construction?

Source(s): Riverside County General Plan, Project Application Materials, Traffic Study, Trails at Corona Specific Plan

Impact Analysis

Construction of the proposed project may cause temporary delays along Frontage Road, Pine Crest Drive and Paseo Grande; however, the County requires temporary road construction and traffic control plans during construction to minimize delay. The proposed project on-site traffic signing and

striping to be implemented in conjunction with detailed construction plans for the project site. With the proposed project's required preparation of a traffic congestion management plan, the proposed project is anticipated to have a less than significant impact regarding circulation during construction.

Level of Significance

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Emergency Access

Impact TRANS-6: Result in inadequate emergency access or access to nearby uses?

Source(s): Riverside County General Plan, Project Application Materials, Traffic Study

Impact Analysis

The proposed project would include four access points for the project site. In order to ensure that such plan properly addresses potential environmental impacts, the County requires the preparation of a traffic control plan, which would reduce impacts to less than significant. A construction traffic control plan would be required to be prepared for all aspects of project construction, including physical improvements on the site itself as well as any off-site traffic improvements required to be completed directly by the project applicant. The construction traffic control plan would describe in detail the location of equipment staging areas, stockpiling/storage areas, construction worker and equipment parking areas, roadways that would be potentially affected, and safe detours around the proposed project and/or roadway construction site, as well as provide temporary traffic control (e.g., flag person) and appropriate signage during construction-related truck hauling activities. The traffic control plan would ensure adequate and uninterrupted access to all nearby residences throughout the construction period. The purpose of the traffic control plan is to safely guide motorists, cyclists, and pedestrians, minimize traffic impacts, and ensure the safe and even flow of traffic during construction, consistent with County standards and requirements.

Considering the temporary nature of project construction, and established County and City requirements for traffic control on public roadways during construction, the proposed project is expected to have a less than significant impact on emergency access during construction. Emergency access to serve the operational project site will be developed in accordance with applicable ordinances, standard conditions of approval, and permits related to emergency access.

Emergency vehicular access is provided to each Planning Area maintaining manageable distances to public right-of-way connections. Planning Area 1 includes a main entry way off the Frontage Road connection to the existing commercial properties along the 91 Freeway with an EVA to Serfas Club. PA 3 includes a main access off Frontage Road looping directly to Paseo Grande via a full access point and an EVA. Planning Area 4 is directly accessed from Serfas Club within EVA along Pine Crest. Planning Area 5 is accessed adjacent to the Planning Area 3 connection point on Paseo Grande with

an accompanying EVA also along Paseo Grande. Emergency access points shall include a Knox box for use by authorized emergency vehicles and are not directly open to the public. The proposed project would also provide access, as appropriate, for homes off-site to the east, as indicated in Exhibit II-3–Circulation Master Plan of the Trails at Corona Specific Plan, for private access. The access would be constructed on-site pursuant to the applicable standards of County Ordinance 461 or as approved by the Transportation Department. Cross-sections for proposed project roadways. Transportation infrastructure funding may be provided through a combination of developer financing, Community Facilities District funding, assessment district funding, Road and Bridge Benefit District (RBBD) fees, TUMF, Ordinance 659 (DIF Program) fees, or other similar mechanisms. The type of funding for specific facilities will be determined in conjunction with the participating agencies, including Riverside County.

A Focused Traffic Assessment (Appendix J) was prepared to evaluate queueing along Frontage Road and select locations along Serfas Club Drive based on the updated site plan (removal of Planning Areas 2 and 6). Based on the intersection operations and queueing analyses performed for the Focused Traffic Assessment, there are no anticipated traffic deficiencies along Frontage Road under any future analysis scenario. There are no queueing issues anticipated with the back-to-back left turn lanes into Driveway 1 with the left at Serfas Club Drive along Frontage Road. Although a residential portion of the proposed project would take access off the existing Frontage Road, the effects along with the existing commercial traffic on Frontage Road are nominal and would not result in any queueing issues along Frontage Road. The intersection operations and queueing analyses results improve compared to the 2024 Traffic Study, which is likely due to the reduction in trips compared to the 2024 Traffic Study.

There are deficiencies anticipated along Serfas Club Drive, however, these deficiencies are attributable to the background growth in the area, as the deficiencies occur under both No Project and With Project traffic conditions. Additionally, the deficiencies are identified along through movements on Serfas Club Drive, which is associated with vehicles using Serfas Club Drive as an alternate route to bypass the peak-hour congestion along the SR-91 Freeway.

Since the queueing issues on the arterial streets are due to freeway congestion, no roadway widening has been identified along Serfas Club Drive. Additionally, due to the existing residential uses along Serfas Club Drive, there is not sufficient right-of-way to widen the existing roadways to accommodate additional capacity. Such roadway widening would likely not alleviate the queueing issues along Serfas Club Drive caused by the SR-91 Freeway itself. Therefore, no improvements have been identified for the queueing deficiencies identified under the analysis scenarios.

Level of Significance

Less than significant impact.

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3.19 - Tribal Cultural Resources

3.19.1 - Introduction

Tribal Cultural Resources (TCRs) are either: sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are either: included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR) included in a local register of historical resources; OR: A resource determined by the lead agency, at its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of the California Environmental Quality Act (CEQA) Guidelines Section 5024.1—taking into account the significance of the resource to a California Native American tribe.

Descriptions and analysis in this section are based upon existing site conditions, project site plans/exhibits, the County of Riverside 2015 General Plan, the City of Corona 2004 General Plan, the Phase I Cultural Resources Assessment for the proposed project prepared May 2018 by FirstCarbon Solutions (FCS), included in this Draft EIR (DEIR) as Appendix D (also analyzed in Section 3.5, Cultural Resources, of this Draft EIR), and outreach to Native American Tribes pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 (noticing to Native American Tribes can be found in Appendix D).

3.19.2 - Environmental Setting

Overview

The term "cultural resources" encompasses historic, archaeological and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- **Paleontological Resources:** Paleontology is the study of plant and animal fossils.
- **Burial Sites:** Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

Cultural Setting

The Cultural Setting below is provided from the Phase I Cultural Resources Assessment (Phase I CRA).

Prehistory

Recent overviews of the inland Southern California coast archaeology and historical reviews, among other locales are provided.[1, 2, 3] The most accepted regional chronology for coastal Southern

[1] Fagan, B.M. 2003. Before California: An Archaeologist Looks at Our Earliest Inhabitants. New York: Alta Mira Press.
[2] Moratto, M.J. 1984. California Archaeology. San Diego. Academic Press.
[3] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.

California is from Wallace's four-part Horizon format,[4] which was later updated and revised by Warren,[5] and most recently by Chartkoff and Chartkoff.[6] The latter modified the term "Period" to "Horizon," a term more common among researchers today. Created to place temporal structure upon materialistic phases observed during archaeological syntheses, the advantages and weaknesses of Southern California chronological sequences are reviewed by Warren,[7] Chartkoff and Chartkoff,[8] and Heizer.[9]

Early Man

Spanning the period from approximately 17,000 to 9,500 before present (BP), archaeological assemblages attributed to the Early Man Period are characterized by large projectile points and scrapers. The limited data available suggests that prehistoric populations focused on hunting and gathering, moving about the region in small nomadic groups. Technologies associated with ocean resource gathering would have likely been utilized, but the sea level during this period was lower than today, meaning that sites on the coast are inundated and unavailable for study. Californians of this period are viewed as populations of big game hunters that were mobile enough to pursue herds. The entirety of California may have been occupied near the beginning of the Holocene epoch, about 11,750 years ago. During the Holocene, sea levels rose about 60 meters between 11,750 and 7,000 BP, due to melting of the Pleistocene ice sheet in the higher latitudes. Although the sea level was about 120 meters lower off the coast of California roughly 22,000 years ago (Milne et al. 2005), sea level stabilization began about 7,000 years ago and only a slight rise has occurred since then.

Pleistocene flora and fauna are regularly uncovered from sediments at the La Brea tar pits, deep construction-related excavations in coastal Orange County and in the Santa Ana watershed. Such studies reinforce the idea that much of Southern California exhibited a climate similar to that of Monterey or the San Francisco Bay Area during this period, with slightly drier conditions away from the coast.[10]

Millingstone

As part of the slow restabilization effect of the melting continental ice sheet, rising sea levels and other environmental changes up to the end of the Early Man Period, the Southern California climate became warmer and drier. Known as the Altithermal, Fagan notes that after 8,500 BP, the climate of most of California became warmer and much drier, and remained so for 4,000 years.[11]

Native groups altered their subsistence characteristics to compensate. Characterized by the appearance of handstones and millingstones that would have been used to grind seeds, the Millingstone Period tentatively dates to between 9,500 and 3,000 BP. Artifact assemblages in early Millingstone sites reflect an emphasis on foraging subsistence systems. Because shrubby vegetative

[4] Wallace, W.J. 1955. A Suggested Chronology for Southern California Coastal Archaeology. Southwestern Journal of Anthropology 11(3):214–30.
[5] Warren, C.N. 1968. Cultural Tradition and Ecological Adaptation on the Southern California Coast. Archaic Prehistory in the Western United States, C. Irwin-Will.
[6] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.
[7] Moratto, M.J. 1984. California Archaeology. San Diego. Academic Press.
[8] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.
[9] Heizer, R. F., ed. 1978. Handbook of North American Indians, Vol. 8: California. Washington, D.C. Smithsonian Institution.
[10] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.
[11] Fagan, B.M. 2003. Before California: An Archaeologist Looks at Our Earliest Inhabitants. New York: Alta Mira Press.

communities replaced the temperate forest, native populations would likely have shifted to seasonal rounds to take advantage of new patterns of seed ripening. Little is known about the types of cultural changes that would be needed, but the types of artifacts seen during this Period can infer the subsistence systems.

Artifact assemblages typically included choppers and scraper planes, with a general lack of projectile points. Large projectile points began to appear in the late portion of the Millingstone Period, which suggests the development of a more diverse economy. The distribution of Millingstone sites reflects the theory that aboriginal groups may have followed a modified central-based wandering settlement pattern. In this semisedentary pattern, a base camp would have been occupied for a portion of the year, but small population groups seasonally occupied subsidiary camps in order to exploit resources not generally available near the base camp. Sedentism apparently increased in areas possessing an abundance of resources that were available for longer periods. Arid inland regions would have provided a more dispersed and sporadic resource base, further restricting sedentary occupations to locations near permanent water. The duration and intensity of encampment occupations increased, especially in the latter half of the period in the coastal areas. Huge shellmounds near coastal habitats indicated more intensive sedentism after 5,000 BP, and suggests an increase in population.[12]

Intermediate

Dating between 3,000 and 1,250 BP, the Intermediate Period represents a transitional era. Excavated assemblages retain many attributes of the Millingstone Period but with more elaborate and diverse artifact types in these deposits. Additionally, Intermediate Period sites can contain large-stemmed or notched small projectile points suggestive of bow and arrow use, especially near the end of the Period, and the use of portable grinding tools continues. Intensive use of mortar and pestles signaled processing of acorns as the primary vegetative staple as opposed to a mixed diet of seeds and acorns. Because of a general lack of data, neither the settlement and subsistence systems nor the cultural evolution of this Period are well understood, but it is very likely that the nomadic ways continued. It has been proposed that sedentism increased with the exploitation of storable food resources, such as acorns, but coastal sites from the period exhibit higher fishing activity than in previous periods. The first permanently occupied villages make their appearance in this Period/Horizon.[13]

Late Prehistoric

Extending from 1,250 BP to Spanish Contact in 1769, the Late Prehistoric Period reflects a slight increase in technological sophistication and diversity. Exploitation of marine resources continued to intensify. Assemblages characteristically contain projectile points, and toward the end of the Period the size of the points decreased and notched and stemmed bases appear, which implies the use of the bow and arrow. Use of personal ornaments such as shell beads are widely distributed east of the coast, suggesting well-organized and codified trade networks. Additional assemblages in this Period/Horizon included steatite bowls, asphaltum, grave goods, and elaborate shell ornaments. The use of bedrock milling stations was widespread during this Period/Horizon. Increased hunting efficiency and widespread exploitation of acorns provided reliable and storable food resources.

[12] Fagan, B.M. 2003. Before California: An Archaeologist Looks at Our Earliest Inhabitants. New York: Alta Mira Press.
[13] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.

Village size increased during this time, with some of these villages potentially having held 1,500 or more residents.[14] Analyses of skeletons show that the first signs of malnutrition appear in this Period, signaling greater competition for food resources.[15]

The earliest part of this Period may have seen an incursion of Cupan-Takic speakers from the Great Basin country (the so-called Shoshonean wedge) who may have replaced the Hokan speakers in the area.[16] At the time of the Spanish conquest, Cupan-Takic speakers were located in Orange County, western Riverside County, and the Los Angeles Basin (Gabrieleño, Juaneño and Cahuilla peoples). Serran-Takic speakers are now represented by the Serranos in the San Bernardino Mountains. Recent work has concluded that the "Shoshonean wedge" is misnamed—the original Los Angeles inhabitants replaced by the incoming Takic speakers may have actually been Yuman speakers (similar to those in the California Delta region of the Colorado River) and not Hokan Salinan-Seri (Chumash) speakers as was suggested by Kroeber.[17]

At the time of the Spanish conquest, local Indian groups were composed of constantly moving and shifting clans and cultures. Early ethnographers applied the concept of territorial boundaries to local indigenous groups purely as a conceptualization device, and the data was based on fragmented information provided to them from second-hand sources.

Native American Background

According to Heizer, the project area lies in the extreme northeastern portion of an area associated with the Luiseño, as well as the extreme northwestern portion of an area associated with the Cahuilla.[18] However, this area borders traditional use areas identified with various other tribal groups as well, including the Gabrieleño and the Serrano. Documented Gabrieleño territory is located to the northwest, while the Serrano are found to the north and northeast of the project area.[19]

The Cahuilla

The Cahuilla belong to the Shoshonean linguistic family and have had definitive historical relationships with the Hopi of Arizona, the Gabrieleño, and Digueno of the southern Californian coast and the Luiseño of Riverside County as well as other desert tribes such as the Kamia, Chemehuevi, Paiute and Serrano. The Cahuilla population prior to Spanish contact could have been as numerous as 6,000 persons, in an area over 2,400 square miles.[20, 21, 22]

[14] Chartkoff J.L. and K.K. Chartkoff. 1984. The Archaeology of California. Menlo Park. Stanford University Press.
[15] Fagan, B.M. 2003. Before California: An Archaeologist Looks at Our Earliest Inhabitants. New York: Alta Mira Press.
[16] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[17] O'Neil, S. 2002. The Acjachemen in the Franciscan Mission System: Demographic Collapse and Social Change. Master Thesis, Department of Anthropology, CSU-Fullerton.
[18] Heizer, R. F., ed. 1978. Handbook of North American Indians, Vol. 8: California. Washington, D.C. Smithsonian Institution.
[19] Ibid.
[20] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[21] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.
[22] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.

The Cahuilla villages were determined according to their proximity to a defined water source and access to a food-gathering locale. Village sites were usually located near alluvial fans, streams or at the base of the San Jacinto Mountains for protection against the winds. The Cahuilla can be discussed according to their primary village locality: Desert Cahuilla, Mountain Cahuilla, and Valley Cahuilla, while other Desert Cahuilla settlements were located around hand dug wells and watering holes. Typically, one clan or family occupied several food-gathering locations and guarded these areas against other Cahuilla clans.[23, 24, 25]

The pottery associated with the Cahuilla has been stylistically and ornamentally compared to that of an ancient Pueblo style, as well as to the Colorado River Indians, the Digueno, Luiseño, and Mohave.[26, 27, 28] It is constructed in coil form, and then shaped with a polishing stone and wooden paddle to be baked or fired in the sun. In many cases, their pottery was incised for decoration.[29, 30] Kroeber and Hooper suggest that the Cahuilla had four definitive pottery forms: an open bowl or dish, a cooking pot, a small-rimmed vessel, and a wider opening rimmed vessel; while Bean and Lawton suggest that ladles, trays, and pipes were also manufactured.[31, 32] Baskets were also an important item to a Cahuilla clan and typically made in a variety of shapes and sizes, but always produced from a coil of mesquite branches, willow, or palm leaves. Grasses were used in the foundation and the only tool used to manufacture these baskets was a needle. These needles were either fashioned from the leg bone a deer or made from a heavy cactus needle set into a wooden handle.[33]

Cahuilla homes were generally constructed with forked posts supporting wood ceiling beams and were completely covered in thatch, which was slightly mixed with sand or soil. In some cases, the floor was slightly subterranean and each house was positioned so that a level of privacy was

[23] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.
[24] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[25] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.
[26] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[27] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[28] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[29] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[30] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[31] Ibid.
[32] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[33] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.

attained.[34, 35] Wilke notes that the Cahuilla homes were generally hidden in mesquite groves, which effectively obscured them from plain view.[36]

Ceremony and ritual was of great importance to the Cahuilla.[37] Deep ceremonial ties existed between the Serrano and the Cahuilla, and in many cases, the Desert Cahuilla are thought to have adopted certain ceremonial practices from the Serrano.[38] Frequently practiced ceremonies include multiple rituals for mourning the dead, the eagle dance, summer and winter solstice celebrations, and separate ceremonies for the initiation of boys and girls.[39]

The first recorded contact between the native Cahuilla and European culture was in 1776. At this time, the Anza expedition was traveling through Los Coyotes Canyon. The next recorded contact does not occur until 1809 through the San Gabriel Mission, when the missionaries were baptizing the Cahuilla.[40] Based on information from the 1823 and 1826 expeditions of Jose Romero, the Cahuilla could speak Spanish and were running cattle from Palm Springs through the San Gorgonio Pass.[41]

Mission Indians throughout most of Southern California and Northern Baja California began demanding that the missions be turned over to them permanently during 1834 to 1835. When this did not occur, local Indian groups began abandoning and attacking the missions. In 1851, the Cahuilla were extremely hostile toward the Europeans and planned an uprising in Hemet with plans to attack and destroy Los Angeles; however, with the help of Cahuilla Chief Juan Antonio, the uprising was thwarted.[42]

Eventually a state of equilibrium developed in the region and Mexican officials and rancho owners began utilizing local Indians as allies, soldiers, and guardians.[43] According to Forbes, in 1842, a band of Mountain Cahuilla served as an auxiliary force for the Lugo family in the Colton-San Bernardino area. A Desert Cahuilla leader named Cabezon also became a Mexican ally. These Indian forces helped in capturing and killing hostages as well as defending livestock. Cahuilla leaders such as

[34] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.

[35] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.

[36] Wike, P., 1975. The Cahuilla Indians of the Colorado Desert: Ethnohistory and Prehistory. Website: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiTj8Wmodf-AhVMmWoFHW2gBVkQFnoECA4QAQ&url=https%3A%2F%2Fnrm.dfg.ca.gov%2FFileHandler.ashx%3FDocumentID%3D9510&usg=AOvVaw0MNK2jAwD_cxSGLSVMWFZ6. Accessed May 2, 2023.

[37] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.

[38] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.

[39] Ibid.

[40] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.

[41] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.

[42] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.

[43] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.

Cabezon functioned as intermediaries between other Cahuilla bands, Europeans, and the Spanish-Mexican people.[44, 45]

The Serrano

Kroeber and Bean and Smith form the primary historical references for this group.[46, 47] According to Bean and Smith, the project area lies near the southern portion of an area utilized by the Serrano.[48] Spanish diseases decimated all indigenous groups adjacent to the eastern San Bernardino Mountains, especially after an outpost was built in Redlands in 1819, but some Serrano survived intact for many years in the far eastern San Bernardino Mountains, due to the ruggedness of the terrain and the dispersed population.

The Serrano spoke a language that belongs to the Cupan group of the Takic subfamily. As part of part of the larger Uto-Aztecan language family, the Takic subfamily includes the Shoshonean groups of the Great Basin. The total Serrano population at initial European contact was roughly 2,000 people. Their range is generally thought to have been located in and east of the Cajon Pass area of the San Bernardino Mountains, north of Yucaipa, west of Twentynine Palms, and south of Victorville. The range of this group was limited and restricted by reliable water. Twentynine Palms was the origin location of the Maringa Serrano clan, and after 1811, many Serrano were forcibly taken to the Mission San Gabriel.[49] Located in Joshua Tree National Park, the Mara Oasis was the central location for the Maringa Serrano clan.

Serrano populations studied in the early part of the last century were a remnant of their cultural form prior to contact with the Spanish missionaries. Nonetheless, the Serrano are viewed as clan- and moiety-oriented, or a local lineage-oriented group tied to traditional territories or use areas. The Serrano clans are considered a "non-political ethnic nationality," divided among themselves into patrilineal clans with two moieties: Coyote and Wildcat. Typically, a "village" consisted of a collection of families centered about a ceremonial house, with individual families inhabiting willow-framed huts with tule thatching and a central fire pit. Considered hunter-gatherers, Serrano exhibited a sophisticated technology devoted to hunting small animals and gathering roots, tubers, and seeds of various kinds. Today, Serrano descendants are found mostly on the Morongo reservation.

Luiseño

Of all the Southern California native groups, the Luiseño have been the most ethnographically studied and the literature is rich in detail. The Luiseño occupational areas encompass over 1,500

[44] Bean, L.J. 1972. Mukat's People: The Cahuilla Indians of Southern California. Los Angeles: University of California Press.
[45] Bean, L.J. 1978. Cahuilla. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 575–587. Washington, DC: Smithsonian Institution.
[46] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[47] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[48] Ibid.
[49] Bean, Lowell J., and Sylvia B. Vane. 2002. The Native American Ethnography and Ethnohistory of Joshua Tree National Park: An Overview and Assessment Study: Section IV. The Serrano. Website: htttp://www.nps.gov/history/history/online_books/jotr/history4.html. Accessed May 2, 2023.

square miles of Southern California as well as the Channel Islands.[50, 51, 52] Luiseño villages were found along the Pacific Ocean from just north of Agua Hedionda to south of Aliso Creek in present-day San Diego County. They then moved inland from these points to the western base of the San Jacinto River, and then south to the valley of San José, near Fallbrook.[53] The villages were determined according to their proximity to a defined water source, access to a food-gathering locale, and whether they were in good defensive location.[54] Spatially, these villages were commonly located along valley bottoms, streams, or coastal strands. The Luiseño characteristically lived in sedentary villages, therefore one clan or family occupied several food-gathering locations and aggressively guarded these areas against other clans.[55, 56]

Luiseño homes were constructed in two forms; one for the large construction and one for a smaller home style. The larger variations were typically constructed with forked posts supporting wood ceiling beams and were completely covered in thatch, which was lightly mixed with sand or soil.[57, 58] The smaller home style had a slightly conical roof made of some locally available brush, with a floor that was usually excavated 2 feet below ground surface. All homes were built with a small fire pit in the center and a slight smoke hole in the roof just above the fire.[59, 60, 61] Sweat houses were of similar thatch design to that of the smaller home pattern, but varied in its construction in that it stood on two forked posts connected by log and was shaped like an ellipse, with an entrance on one of the longer sides of the structure.

The pottery associated with the Luiseño is made for functionality; it was simply constructed and lacked ornamental design, although Bean and Shipek note that if designs were included, "a simple line decoration was either painted or incised with a fingernail or stick."[62] The Luiseño made pots from the basis of a coil form, in which pieces of coiled clay are gradually added to the edge of the pot, while it is being shaped with a wooden paddle and finished with a polishing stone. After completion, the pot was sunbaked and fired.[63] Typical uses of pottery included cooking, water jugs,

[50] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[51] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[52] Phillip Sparkman. 1908. American Archaeology and Ethnology - The Culture of the Luiseño Indians. Website: https://www.sacred-texts.com/nam/ca/coli/coli00.htm. Accessed May 2, 2023.
[53] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[54] Ibid.
[55] Ibid.
[56] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.
[57] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[58] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[59] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.
[60] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[61] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[62] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[63] Phillip Sparkman. 1908. American Archaeology and Ethnology - The Culture of the Luiseño Indians. Website: https://www.sacred-texts.com/nam/ca/coli/coli00.htm. Accessed May 2, 2023.

containers, and a water vessel with two spouts used while gathering food.[64] Plant fibers were also commonly used for purposeful household implements, such as brooms, brushes, nets, pouches, twine, and cedar bark skirts for women. The process of creating such items from plant fiber tends to rely on soaking, stretching, and then rolling the fiber).[65, 66]

Ceremony and ritual was of great importance to all native peoples, and the Luiseño had their own variety of traditional practices. Frequently practiced ceremonies include multiple rituals for the mourning of the dead, the eagle dance, separate ceremonies for the initiation of boys and girls, and a summer and winter solstice celebration.[67, 68, 69] These ceremonies offered gatherers an opportunity to witness reenactments, songs, and the oral recitation of their history.[70] Important equipment during rituals included blades made of obsidian, stone bowls, clay figurines, and headdresses constructed of eagle feathers.[71] Ritual dances were limited to three standard dances, such as the fire dance, which was used during the Toloache Cult initiation for boys at puberty. Also of great significance during the boys' initiation were masterfully designed sand paintings, once thought to have originated in the Southwest, though presently culturally identified with the Luiseño.[72, 73, 74] Although not necessarily limited to ritual, Heizer and Whipple comment that the Luiseño of Riverside County decorated their rock designs in the same form as that of the native peoples of the Great Basin, which appeared as pecked abstracts displayed on boulders.[75]

Personal adornment was a common practice among the Luiseño. Ornamental items such as beads and pendants were made of clay, shell, stone, deer hooves, bear claws, and mica sheets. Men would wear ear and nose ornaments, sometimes made of bone or cane with beads attached. Body painting and tattooing was used purely for rituals.[76]

The Gabrieleño

Kroeber and Bean and Smith form the primary historical references for this group.[77, 78] The arrival of Spanish explorers and the establishment of missions and outposts during the eighteenth century

[64] Phillip Sparkman. 1908. American Archaeology and Ethnology - The Culture of the Luiseño Indians. Website: https://www.sacred-texts.com/nam/ca/coli/coli00.htm. Accessed May 2, 2023.
[65] Ibid.
[66] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[67] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[68] Phillip Sparkman. 1908. American Archaeology and Ethnology - The Culture of the Luiseño Indians. Website: https://www.sacred-texts.com/nam/ca/coli/coli00.htm. Accessed May 2, 2023.
[69] Strong, W.D. 1929. Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1):1–358.
[70] Garbarino, Merwyn S.; Sasso, Robert F. 1994. Native American Heritage, Third Edition.
[71] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[72] Ibid.
[73] Garbarino, Merwyn S.; Sasso, Robert F. 1994. Native American Heritage, Third Edition.
[74] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[75] Heizer, R. F., ed. 1978. Handbook of North American Indians, Vol. 8: California. Washington, D.C. Smithsonian Institution.
[76] Bean, L.J. and F.C. Shipek. 1978. Luiseño. In Handbook of North American Indians, Vol. 8: California, edited by R.F. Heizer, pp. 550–563. Washington, DC: Smithsonian Institution.
[77] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.
[78] Bean, L.J. and C.R. Smith. 1978. Serrano. In R.F. Heizer, (ed.), Handbook of North American Indians, Vol. 8: California. Washington, D.C.: Smithsonian Institution.

ended the prehistoric period in California, and due to the introduction of diseases such as smallpox and the mass removal of local Indian groups to the Mission San Gabriel and Mission San Juan Capistrano, Gabrieleño society began to fragment.

The Gabrieleño spoke a language that belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family (a language family that includes the Shoshoean groups of the Great Basin). The total Gabrieleño population at about 1770 *anno domini* (AD) was roughly 5,000 people, based on an estimate of 100 small villages of 50 to 200 people per village. Their range was generally thought to have been along the Pacific coast from Malibu to San Pedro Bay, south to Aliso Creek, east to Temescal Canyon, and then north to the headwaters of the San Gabriel River. Also included were several islands, including Catalina. This large area encompassed the City of Los Angeles, much of Rancho Cucamonga, Corona, Glendale, and Long Beach. By 1800, most Gabrieleños had been assimilated into the Mission system.

The first modern social analyses of Gabrieleño culture took place in the early part of the twentieth century, but by that time acculturation and disease had considerably reduced the population and much of the cultural background had been lost.[79] Nonetheless, the early ethnographers viewed the Gabrieleño as a chief-oriented society of semisedentary hunter-gatherers. Influenced by coastal and interior environmental settings, their material culture was quite elaborate and consisted of well-made wood, bone, stone, and shell items. Included among these was a hunting stick made to bring down numerous types of game. Located in an area of extreme environmental diversity, large villages may have been permanent, such as that found on or near Red Hill, with seasonally utilized satellite villages. Their living structures were large, domed, and circular thatched rooms that may have housed multiple families. The society exhibited a hierarchy, possibly including chiefs, who possessed a much higher level of economic power than unranked tribal members did.

Historic Background

The Temescal Rancho

The first Europeans to traverse the territory that constitutes modern Riverside County were Spanish soldier, Pedro Fages, and Father Francisco Garcés. This expedition to locate deserting soldiers eventually brought the group through the foothills of the San Jacinto Mountains, along Coyote Canyon, on the southern edge of Riverside County. They then continued into the Anza Valley, the San Jacinto Valley, Riverside, and eventually into San Bernardino and the Cajon Pass. Later, in 1774, Captain Juan Bautista de Anza would also utilize Coyote Canyon and enter the confines of modern Riverside County as his expedition searched for an overland route from Sonora to coastal Southern California. These expeditions sparked an influx of non-natives to Southern California, the Spanish being the first of these groups. Associated with the Spanish migration is the establishment of missions and military presidios along the coast of California. Although neither the missions nor presidios were ever located within the confines of modern Riverside County, their influence was far reaching. Lands adjacent to the modern borders of Riverside County were utilized for agriculture and pasturage under the supervision of the Mission San Gabriel and the Mission San Luis Rey.

[79] Kroeber, A.L. 1925. Handbook of the Indians of California. Bulletin 78. Bureau of American Ethnology. Washington, DC. Smithsonian Institution.

In the early decades of the nineteenth century, the missions began establishing ranchos for the purpose of expanding their agricultural holdings. While these Mission Rancho lands were never a part of modern Riverside County, their establishment is important to the development of the area as a center of mission activity for inland Southern California, and it encouraged population expansion into modern Riverside County lands. One such rancho was established to the west of the project area and was named the Santiago de Santa Ana. This 75,000-acre grant was awarded by Governor Arrellaga to José Antonio Yorba on July 1, 1810. This grant encompassed the majority of the Santa Ana Canyon of eastern Orange County, as well as much of northern Orange County and Newport Bay, and it is probable that livestock from this rancho grazed at the far western edge of modern Riverside County. By 1818, Don Leandro Serrano had been asked to establish a presence and quell attacks by the indigenous population to the east of the Santiago de Santa Ana, by the Mission San Luis Rey padres. Serrano was given a permit to graze livestock in the Temescal Valley, and he eventually settled on lands located approximately 1 mile north of Glen Ivy Hot Springs.[80] This first documented residence in modern Riverside County is located approximately 2 miles south of the project area. After Mexico achieved its independence from Spain in 1821, and Alta California became the northern frontier of Mexico, the Mission padres were forced to swear allegiance to Mexico. Secularization of the missions took place over the next decade, and the former mission lands were transferred to Mexican families that had settled in the area.[81] During this period, Don Leandro Serrano petitioned Governor Echeandia for an official title to the Temescal Rancho lands; however, the governor never responded to his request. Thereafter, Serrano abandoned his attempt to file for the unofficial rancho holdings, as an undisputed claim to the land for 30 years would result in the transfer of title under Spanish law. Serrano and his family continued to live on the rancho lands, though he never received an official grant. This situation eventually created problems for the Serrano family when, in the 1850s and 1860s, the Temescal Tin Mining district was established on disputed lands from either the Temescal Rancho or the El Sobrante de San Jacinto Rancho. This led to an 1867 United States Supreme Court decision that found the Temescal Rancho holdings to be non-existent, based upon an inability to prove that Dan Leandro Serrano had ever acquired the property.[82]

South Riverside

Originally named South Riverside, the history of the modern City of Corona can be traced to lands once part of a series of ranchos belonging to prominent Spanish-Mexican families. Prior to development of South Riverside, the entire Corona Plain belonged to a variety of families, including the Serrano's, the Yorba's, the Sepulveda's, the Cota's, the Bandini's, and the Botiller's. In April 1876, the lands of the original Rancho La Sierra, located between Temescal Wash and the east side of the Santa Ana Mountains, were divided among the many heirs of Don Bernardo Yorba. After this division, the central portion of modern Corona was located in the Rancho La Sierra (Yorba).

In 1886, R.B. Taylor bought a large quantity of land once located within the Yorba rancho and beyond, consisting of acreage from Vincente Yorba, Pulaski & Goodwin, the Cota family, the Pat

[80] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.
[81] Gunther, J.D. 1984. Riverside County, California Place Names. Riverside: Rubidoux Printing Company.
[82] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.

Harrington Ranch, the Barney Lee Ranch, as well as acreage in Temescal Canyon. Taylor believed that the acquisition of the Temescal Canyon lands would provide enough water resources to sustain a townsite, and, thereafter, he began to look for investors in his native State of Iowa. Upon his return to Sioux City, Taylor was able to generate $200,000 from business associates, and he returned to California to initiate his business enterprise.[83]

R.B Taylor formed the South Riverside Land and Water Company, and appointed himself as a Director, as well as his business partners from Iowa. The consortium decided to name the proposed townsite South Riverside, in an effort to capitalize on the already established Riverside colony, and they purchased 12,000 acres of quality agricultural land.[84] Thereafter, Taylor and his investors focused on the development of agricultural enterprises, the establishment of water rights, and the sale of smaller parcels to prospective homesteaders.

H.C. Kellogg began surveying the townsite in July of 1886, with the known version of the completed survey map available in 1891.[85] The most notable feature of the Kellogg survey map was a circular drive approximately 3 miles in length. Known as Grand Boulevard, this circular road encompassed 407 acres, divided into 193 town-blocks. This area would eventually serve as a buggy route for the earliest inhabitants of South Riverside, where they could find all the amenities a community had to offer, including stores, residences, churches, and schools.[86] However, prior to the establishment of this envisioned downtown sphere, water would need to be made directly available to the area. To accomplish this, some of the early townspeople formed the Temescal Water Company in 1887. The company built a water pipeline that sent water from the wetlands of Temescal Canyon onto the proposed townsite.

Throughout 1886 and 1887, approximately $275,725 worth of lots had been sold to prospective homesteaders and entrepreneurs, water had been supplied, and the first hotel had been erected.[87] While the early inhabitants began to plant orange and lemon trees upon arriving, it would be several years before any of the groves would yield enough fruit to be profitable. In the meantime, South Riverside began to entice additional residents with its mineral wealth. The Pacific Clay Company was established to produce pottery, tableware, and sewer pipe from the clay available on nearby lands, and the construction of a factory was announced in 1888. About this same time, the Porphyry Paving Company began to bring in equipment and laborers to make use of the porphyry deposits known to the east of the town. These endeavors stimulated an increase in the population of the town; however, it was the arrival of the Santa Ana and Los Angeles Railroad that greatly influenced the population explosion in the area. By June of 1887, the first train arrived at the townsite, and South Riverside became an official stop on the rail line.[88]

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[83] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.

[84] Freel, G.S. 2007 "The History of Corona." Online article from the City of Corona Public Library: http://www.coronapubliclibrary.org/index.cfm?go=HistoryOfCorona. Downloaded September 2007.

[85] Kellogg, H.C. 1891. Map of South Riverside and Orange Heights. Map version #2 (mid-1890s) is undated. Map on file, Chino Public Library Heritage Room, Chino.

[86] Freel, G.S. 2007 "The History of Corona." Online article from the City of Corona Public Library: http://www.coronapubliclibrary.org/index.cfm?go=HistoryOfCorona. Downloaded September 2007.

[87] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.

[88] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.

In 1896, the name of South Riverside was officially changed to Corona. This followed an election to determine whether the town should incorporate and whether the townspeople wanted to change the name of the townsite. The results of the election revealed that the name Corona was found to be popular. Meaning "crown" in Spanish, the townspeople thought it aptly described and honored circular Grand Boulevard, now located at the center of town.[89] This election also determined that the City of Corona would incorporate as the first city in the newly formed County of Riverside.[90]

Since Corona's incorporation, the population has steadily grown, and the agricultural and mineral resources of the area have been profitable. By 1912, there were 5,000 acres of established lemon and orange groves in the City, and by 1913, Corona shipped more citrus than any other town in Southern California. In addition, the lands to the northwest of downtown were planted in alfalfa, sugar beets, tomatoes, beans, and walnuts. This area also served as pasturage for dairy farms, beginning in about 1914.[91]

By the 1960s, citrus continued to gross the most revenue, and, in 1962, the State Route (SR) 91 was constructed through Corona. Thereafter, downtown Corona went through urban renewal and made great efforts to update the area with new buildings. In the 1980s, citrus and dairy farming began to be phased out, due to their decreasing profitability and the increasing value of agricultural lands for residential development. Then, with the construction of Interstate 15 (I-15) on the east side of Corona in the late 1980s, new commercial and residential developments began, heralding a Citywide revitalization. By 1996 (100 years after incorporation), Corona's population had grown to more than 100,000 people, and the City contained 32 parks and 30 schools in the Corona Norco Unified School District.[92]

3.19.3 - Regulatory Framework

State

California Assembly Bill 52

AB 52 was signed into law on September 25, 2014, and provides that any public or private "project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." TCRs include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." Under prior law, TCRs were typically addressed under the umbrella of "cultural resources," as discussed above. AB 52 formally added the category of "tribal cultural resources" to CEQA Guidelines, and extends the consultation and confidentiality requirements to all projects, rather than just projects subject to SB 18 as discussed above.

[89] Freel, G.S. 2007 "The History of Corona." Online article from the City of Corona Public Library: http://www.coronapubliclibrary.org/index.cfm?go=HistoryOfCorona. Downloaded September 2007.
[90] Lech, S. 2004. Along the Old Roads: a History of the Portion of Southern California that became Riverside County, 1772–1893. Riverside: Self-published.
[91] Freel, G.S. 2007 "The History of Corona." Online article from the City of Corona Public Library: http://www.coronapubliclibrary.org/index.cfm?go=HistoryOfCorona. Downloaded September 2007.
[92] Ibid.

The parties must consult in good faith, and consultation is deemed concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource (if such a significant effect exists); or (2) when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed upon during consultation must be recommended for inclusion in the environmental document. AB 52 also identifies mitigation measures that may be considered to avoid significant impacts if there is no agreement on appropriate mitigation. Recommended measures include:

- Preservation in place
- Protecting the cultural character and integrity of the resource
- Protecting the traditional use of the resource
- Protecting the confidentiality of the resource
- Permanent conservation easements with culturally appropriate management criteria

3.19.4 - Methodology

Native American Heritage Commission Sacred Lands File Record Search and Tribal Consultation

On March 27, 2018, FCS sent a letter to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed in its Sacred Lands File for this portion of Riverside County and the City of Corona. The response from the NAHC was received on April 27, 2018. To ensure that all potential Native American resources are adequately addressed, letters to each of the 44 listed tribal contacts were sent on April 30, 2018. As of the date of this DEIR, six responses have been received.

Pedestrian Survey

Two FCS archaeologists conducted a pedestrian survey for the property on April 23 and 24, 2018. Grass, weeds, and imported sand and topsoils covered most of the property, limiting the observable surface soils to less than 20 percent. Those areas were inspected closely for any evidence of archaeological remains, either historic or prehistoric. None were observed.

3.19.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, as well as Riverside County's environmental checklist, tribal cultural impacts resulting from the implementation of the proposed project would be considered significant if the project would cause a substantial adverse change in the significance of a TCR, defined in Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Tribal Cultural Resources

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1 (k).

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)

3.19.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the construction and operation and provides feasible mitigation measures where appropriate.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Eligibility for California Register Listing

Impact TCR-1:	**Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1 (k)?**

Source(s): Descriptions and analysis in this section are based upon existing site conditions, project site plans/exhibits, the County of Riverside 2015 General Plan, the City of Corona 2004 General Plan, the Phase I Cultural Resources Assessment for the proposed project prepared May 2018 by FCS, included in this Draft EIR as Appendix D (also analyzed in Section 3.5, Cultural Resources, of this Draft EIR), and outreach to Native American Tribes pursuant to AB 52 and SB 18 (noticing to Native American Tribes can be found in Appendix D).

Impact Analysis

On July 1, 2015, an amendment to Public Resources Code 21074 took effect, which created a new category of cultural resources, "Tribal Cultural Resources." These resources are defined as:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - Included or determined to be eligible for inclusion in the California Register of Historical Resources (Analyzed in Impact TCR-1).
  - Included in a local register of historical resources.
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant (Analyzed in Impact TCR-2).

The project site is not listed on any national, State, or local registers of historic places (including those for TCRs). Additionally, no TCRs were observed during the field survey. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Eligibility as Determined by Lead Agency

Impact TCR-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 Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)**

Source(s): Descriptions and analysis in this section are based upon existing site conditions, project site plans/exhibits, the County of Riverside 2015 General Plan, the City of Corona 2004 General Plan, the Phase I Cultural Resources Assessment for the proposed project prepared May 2018 by FCS, included in this Draft EIR as Appendix D (also analyzed in Section 3.5, Cultural Resources, of this Draft EIR), and outreach to Native American Tribes pursuant to AB 52 and SB 18 (noticing to Native American Tribes can be found in Appendix D).

Impact Analysis

Pursuant to AB 52, the County of Riverside sent letters to the following tribes on August 2018, notifying them of the proposed project and advising that any tribal consultation request should be made within 30 days:

- Cahuilla Band of Indians
- Colorado River Indian Tribes
- Gabrieleño Band of Mission Indians—Kizh Nation
- Gabrieleño-Tongva
- Morongo Band of Mission Indians
- Pala Band of Mission Indians
- Pechanga Band of Luiseño Indians
- Quechan Indian Tribe
- Ramona Band of Cahuilla
- Rincon Band of Luiseño Indians
- Soboba Band of Luiseño Indians

As of the date of this DEIR, the County of Riverside has received one tribal consultation request from the tribes, the requests of the proposed project were conditions in the case of inadvertent finds, which have been incorporated as part of Mitigation Measure (MM) CUL-1 and MM CUL-2. Impacts would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implementation of MM CUL-1 and MM CUL-2.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

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3.20 - Utilities and Service Systems

This section describes the existing and proposed utility systems setting and potential effects from implementation of the proposed project. Descriptions and analysis in this section are based, in part, on information from the County of Riverside 2020 General Plan, City of Corona 2020-2040 General Plan, the Western Municipal Water District 2020 Urban Water Management Plan (UWMP), the City of Corona 2020 UWMP, as well as the project-specific Preliminary Water Quality Management Plan (PWQMP), Preliminary Hydrology Analysis, the Preliminary Wastewater Report, Preliminary Reclaimed Water Report, Preliminary Water Report, and Will Serve Letters from the applicable utility service providers (Appendix K).

3.20.1 - Existing Conditions

County of Riverside Existing Conditions

Western Municipal Water District

Potable Water

The Western Municipal Water District (WMWD) current service area encompasses approximately 527 square miles, with a retail service area that includes unincorporated areas around Lake Mathews, the City of Murrieta, and unincorporated Riverside County, south of the City of Temecula.[1]

The WMWD retail service areas have a combined 2020 population of 979,634. The WMWD has prepared an estimate of future population for 2020 to 2045, based on growth rates developed by the Southern California Association of Governments (SCAG) for 2020 through 2045. The proposed project is located within the service area of the WMWD, which owns, operates, and maintains the water system within the limits of the County of Riverside and would be the purveyor of water to the proposed project site. According to the WMWD 2020 UWMP, the County of Riverside obtains its water from two sources. The local source is groundwater from the Temescal, Bedford, and Coldwater Sub-basins and within the vicinity of the project area[2]. WMWD purchases imported water from the Metropolitan Water District of Southern California (Metropolitan) from the Colorado River and the California State Water Project (SWP).

Water Supply

The WMWD has a diverse supply portfolio used to meet wholesale and retail demands, including imported water, local groundwater, and recycled water. The majority of this water is purchased from Metropolitan. Metropolitan is a regional water wholesaler that has 26 public member agencies, including the WMWD, from two sources: the Colorado River Aqueduct, which it owns and operates, and the SWP, owned and operated by the California Department of Water Resources (DWR). Approximately 75 percent of the wholesale supply was obtained from Metropolitan in 2020.[3]

[1] Western Municipal Water District (WMWD). 2020. Urban Water Management Plan. Website: https://www.wmwd.com/DocumentCenter/View/5339/Western-2020-UWMP_Public-Draft_20210518?bidId=. Accessed November 12, 2021.
[2] Ibid.
[3] Ibid.

Groundwater Resources

Groundwater is a major source of water supply for WMWD and its retail agencies. WMWD extracts groundwater from the Riverside-Arlington basin and operates the Arlington Desalter, a reverse-osmosis groundwater treatment facility. The estimated supply available from the Arlington Desalter is approximately 5,000 AFY. In 2019, WMWD completed construction of the Victoria Recharge Basin near the intersection of Victoria Avenue and Jackson Street in Riverside (Victoria site). This site would be used to replenish the Riverside-Arlington groundwater basin with up to 1,800 acre-feet of water per year. The region also uses local groundwater from seven different groundwater basins, San Bernardino Basin Area (SBBA), Chino Basin, Riverside-Arlington Basin, Temescal Basin, Bedford-Coldwater Basin, Elsinore Valley Basin, and Temecula Valley Basin.[4]

Imported Water Resources

In 2020, the WMWD purchased or imported approximately 75 percent of its total water supply from Metropolitan and from local groundwater sources from the City of Riverside, Riverside Highland Water Company, and the Meeks and Daley Water Company. The largest source for the WMWD is Metropolitan's supply.

Metropolitan imports water from the SWP, which conveys water from the Bay-Delta to Southern California via the California Aqueduct, and from the Colorado River through the Colorado River Aqueduct. Western Wholesale receives treated imported water from Metropolitan's Mills Water Treatment Plant (WTP) and Skinner WTP, in addition to raw water which is delivered directly to wholesale customers from various connections to Metropolitan's system. Western Wholesale also owns and operates the Mills Gravity Line, which distributes treated water from the Mills WTP to the Western Retail Riverside system and several other wholesale customers. WMWD has a 10-year purchase agreement with Metropolitan for a Tier 1 annual maximum of 105,783 AFY with a minimum Purchase Order Commitment for 70,522 AFY, effective January 1, 2015, to December 31, 2024. Western can purchase additional water beyond the purchase agreement maximum at Metropolitan's higher Tier 2 rate.[5]

Stormwater

Capturing stormwater for supplemental groundwater recharge is a key strategy in the region to increase local supplies, enhance long-term sustainability of local groundwater basins and help mitigate the effects of climate change on local supplies. There are various stormwater capture facilities throughout the region and additional projects are currently under development, including the Riverside North Aquifer Storage and Recovery (ASR) Project. The Riverside North ASR project is a partnership between WMWD, San Bernardino Valley Municipal Water District and Riverside Public Utilities. The project consists of proposed in-channel and off-channel recharge along the Santa Ana River. The proposed off-channel recharge facility location is along the west side of the Santa Ana River and proposes the construction of up to eight individual recharge basins encompassing approximately 25 acres. The in-channel recharge basin proposes construction of an inflatable dam

[4] Western Municipal Water District (WMWD). 2020. Urban Water Management Plan. Website: https://www.wmwd.com/DocumentCenter/View/5339/Western-2020-UWMP_Public-Draft_20210518?bidId=. Accessed November 12, 2021.

[5] Ibid.

across the Santa Ana River channel, which can be raised and lowered depending on the amount of water flowing in the river. The proposed project is estimated to recharge an average of approximately 6,000 AFY of water. The in-channel and off-channel water captured would be recharged into the Riverside North subbasin of the Riverside-Arlington Basin and a portion of the retained water would be diverted to the Riverside Canal pipeline for direct use. The proposed project is currently in the environmental and permitting phase and is anticipated to be constructed by 2025.[6]

Surface Water

WMWD does not utilize any local surface water sources for their wholesale system. However, WMWD is a partner in developing stormwater recharge projects to supplement local supplies.

Recycled Water

WMWD does not currently use recycled water to meet wholesale customer demands but is coordinating with other regional agencies to evaluate opportunities for future use of recycled water from Western Riverside County Regional Wastewater Authority (WRCRWA).

The WMWD Project Multiple Dry Year Supplies and Demand is illustrated below in Table 3.20-1.

Table 3.20-1: Western Municipal Water District Projected Multiple Dry Year Supplies and Demands

Totals	2025	2030	2035	2040	2045
Supply Totals (AFY)	96,816	100,908	106,261	112,664	121,443
Demand Totals	96,816	100,908	106,261	112,664	121,443
Net Supply	0	0	0	0	0

Notes:
AFY = acre-feet per year
Source: Western Municipal Water District (WMWD). 2020 Urban Water Management Plan.

WMWD obtains imported water from Metropolitan. For the numbers estimated above, it was assumed potable and nonpotable supplies were equal to potable and nonpotable demands. However, it is important to note that WMWD is not limited to a particular volume of imported water and that Metropolitan's 2020 UWMP shows a substantial surplus of supplies under all conditions. Metropolitan has made substantial investments in storage projects to ensure reliability in dry years. Therefore, WMWD expects to have access to additional imported water supplies, if needed.

Wastewater Systems

The WMWD provides wastewater treatment services for the western portion of the County. There are two wastewater treatment plants that provide recycled water to the WMWD: the Western Water

[6] Western Municipal Water District (WMWD). 2020. Urban Water Management Plan. Website: https://www.wmwd.com/DocumentCenter/View/5339/Western-2020-UWMP_Public-Draft_20210518?bidId=. Accessed November 12, 2021.

Recycling Facility (WWRF), which was formerly the March Wastewater Treatment Plant, and the WRCRWA Treatment Plant, which is a regional wastewater treatment facility owned by the WRCRWA. The WRCRWA is a joint powers authority comprised of the cities of Norco and Corona, Jurupa Community Services District, Home Gardens Sanitary District, and WMWD.

Western Water Recycling Facility

WMWD operates the WWRF, which treats domestic wastewater from March Air Reserve Base and the north central portion of the Riverside Service Area. The WWRF was expanded in 2011 to a capacity of 3 million gallons per day (mgd) tertiary treatment.[7] The plant was then upgraded in 2014 to produce 2,200 AFY of tertiary treated wastewater, which is discharged to an impoundment and then pumped to supply the recycled water system. The recycled water is provided to the Riverside National Cemetery, General Old Golf Course, and various landscaping, agricultural and commercial use sites. When supply exceeds demand, such as during wet winter months, excess recycled water is stored in the on-site impoundment until needed. If recycled water demands exceed supply, March Air Force Base's Expanded Groundwater Extractions and Treatment System (EGETS) may operate and send groundwater flows to blend with recycled water in WMWD's on-site storage ponds at the WWRF. If there is a large discrepancy between recycled water demand and recycled water supply, excess recycled water from the WWRF can be placed in WMWD's existing sewer collection system for conveyance and treatment to WRCRWA, where it is eventually discharged to the Santa Ana River. The volume of influent to the WWRF, and new demand for recycled water is dependent on new development in the Riverside Service Area. Increasing the available supply of recycled water would allow customers who currently use nonpotable water from the Colorado River Aqueduct to switch to a more drought- proof local supply for their nonpotable water needs.

WRCRWA Treatment Plant

The WRCRWA Treatment Plant, a tertiary facility capable of providing recycled water for reuse or for discharge through an outfall to the Santa Ana River, was brought online in 1998. This facility performs high levels of treatment through a number of consecutive wastewater treatment processes. Wastewater from WMWD's retail customers, the City of Norco, Jurupa Community Services District, and Home Gardens Sanitary District is collected through many miles of pipelines, pumped to the Treatment Plant, processed, and discharged into the Santa Ana River.

The WRCRWA Treatment Plant is a 14 MGD tertiary facility that currently discharges all flows to the Santa Ana River. A recent Change of Use Petition has been granted to enable future reuse of recycled water from the WRCRWA Treatment Plant. There are no existing recycled water facilities to deliver the Western Riverside County Regional Wastewater Authority (WRCWRA) water to WMWD's service area so WMWD is exploring other opportunities to make beneficial use of their share of the recycled water. From 2017 to 2019, the average WRCWRA flow generated by WMWD retail customers was 0.73 MGD (about 820 AFY) and is expected to increase to 1.6 MGD (about 1,800 AFY) at buildout.[8]

[7] Western Municipal Water District (WMWD). 2020. Urban Water Management Plan. Website: https://www.wmwd.com/DocumentCenter/View/5339/Western-2020-UWMP_Public-Draft_20210518?bidId=. Accessed November 12, 2021.

[8] Western Municipal Water District (WMWD). 2020. Urban Water Management Plan. Website: https://www.wmwd.com/DocumentCenter/View/5339/Western-2020-UWMP_Public-Draft_20210518?bidId=. Accessed November 12, 2021.

Riverside County Flood Control and Water Conservation District

Storm Drainage

The National Flood Insurance Act (1968) established the National Flood Insurance Program (NFIP), which is based on minimum requirements for floodplain management and is designed to minimize flood damage within Special Flood Hazard Areas (SFHAs). The Federal Emergency Management Agency (FEMA) is the agency that administrates the NFIP. SFHAs are defined as areas that have a 1 percent chance of flooding within a given year. This is also referred to as the 100-year flood. Flood Insurance Rate Maps (FIRMs) were developed to identify areas of flood hazards within a community.

- According to the FIRM catalog, there are FIRMs produced by FEMA for the project site:
  - FIRM Map Number: 06065C0688G and 06065C1351G
  - Map Effective Date: both maps effective dates are August 28, 2008

The project site contains two SFHAs; County Club Creek and County Club Creek North Tributary. Both of these SFHAs are designated as Zone AE with floodways, and Zone X. The Zone AE is the area subject to flooding by the 1 percent annual chance flood with the flood elevations determined.

The floodway is the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1 percent annual chance flood can be carried without substantial increases in flood heights. Zone X are areas of 0.2 percent annual chance flood or 1 percent annual chance flood with average depths less than 1-foot or with drainage areas less than 1 square mile.

The proposed project would construct additional storm drain pipelines and detention facilities throughout the development to control and convey the stormwater runoff to the existing 8-foot by 8-foot reinforced box culvert (RCB) located west of the project underneath the State Route (SR) 91 Freeway. The storm drain system consisting of varying sizes from 18-inch to 96-inch diameter pipes will be designed to convey the 100-year storm. The development would be designed to provide the required 10-year and 100-year flood protection as dictated by the City of Corona and Riverside County Flood Control and Water Conservation District (RCFC&WCD) standards. RCFC&WCD would be responsible for the maintenance and upkeep of storm drains within a public or private right-of-way and the regional detention basin.

Redevelopment of the project site into residential developments would impact the FEMA floodplains and requires a Conditional Letter of Map Revision (CLOMR) prior to issue of a grading permit. CLOMR requests also need to include documented compliance with the Endangered Species Act from the National Marine Fisheries Service (NOAA Fisheries) or the United States Fish and Wildlife Service (USFWS). Prior to inspection for occupancy, a Letter of Map Revision (LOMR) is required.[9] The two letters together would remove the project site from the 100-year flood zone by ensuring that the proposed project and associated improvements mitigate potential impacts from a 100-year flood.

[9] KWC Engineers. 2024. Preliminary Hydrologic Analysis for Trails at Corona. May 2018, Revised April 2019, Revised May 2024.

Solid Waste

Solid waste collection and disposal in Riverside County is provided by the Riverside County Department of Waste Resources. The Riverside County Department of Waste Resources operates five active landfills and administers a contract agreement for waste disposal at the private El Sobrante Landfill. The Department also oversees several transfer station leases, as well as a number of recycling and other special waste diversion programs. All of the private haulers serving unincorporated Riverside County ultimately dispose of their waste to Riverside County-owned or contracted facilities.

Landfill Capacity

All of the active landfills currently located in Riverside County are rated as Class III landfills according to Title 27 of the California Code of Regulations. These landfills only accept nonhazardous, municipal solid wastes. Franchise solid waste collection companies are granted permits to collect commercial and residential waste throughout unincorporated Riverside County under Riverside County's general operating authority. These companies are regulated by the Riverside County Department of Environmental Health. In addition, County landfills accept wastes collected in incorporated cities. Within these cities, solid wastes are either collected by the city as a municipal service or are collected by private firms pursuant to a franchise agreement with the city. As part of its long-range planning and management activities, the Riverside County Department of Waste Resources also ensures that Riverside County has a minimum of 15 years of capacity, at any time, for future landfill disposal.

Energy

Southern California Edison (SCE) provides electricity, and Southern California Gas Company (SoCalGas) provides natural gas service to the Riverside County area. Below is a discussion of each energy source.

Electricity

Electrical power is provided by SCE. The proposed project is located within SCE service territory, and SCE would serve the proposed project's electrical requirements consistent with the California Public Utilities Commission and Federal Energy Regulatory Commission tariffs.

Natural Gas

SoCalGas, which is a Sempra Energy utility, provides natural gas service to the project area. SoCalGas is the nation's largest natural gas distribution utility and provides energy to 21.8 million consumers through 5.9 million meters in more than 500 communities. The company's service territory encompasses approximately 24,000 square miles throughout Central and Southern California.[10]

[10] Southern California Gas Company (SoCalGas). 2021. About SoCalGas web page. Website: https://www.socalgas.com/about-us/company-profile. Accessed November 12, 2021.

City of Corona Existing Conditions

Potable Water

According to the City of Corona 2020 UWMP, the City's water service area is located in the northwestern portion of Riverside County and includes the unincorporated communities of El Cerrito, Coronita, and parts of Temescal Canyon. The City of Corona water service area encompasses approximately 39 square miles. Neighboring cities include Riverside to the northeast and Norco to the north. The eastern portion of the service area is generally bounded by the unincorporated County including the unincorporated community of Home Gardens. The southern and western portions of the service area are bounded by the Cleveland National Forest and other County lands. Prado Flood Control Basin is located adjacent the northwest corner of the City of Corona.

Water Service

Water service is provided to Corona by the City of Corona Utilities Department. The Utilities Department serves approximately 150,000 customers, in an area of about 45 square miles. The proposed project is located within the service area of the Utilities Department, which owns, operates, and maintains the water system within the limits of the City and would be the purveyor of water to the proposed project site. The City has a diverse water supply portfolio including imported water from WMWD, groundwater from two local basins (Temescal Basin and Bedford-Coldwater Basin), and reclaimed water for landscape irrigation and other nonpotable uses.[11]

In 2020, water supplies totaled 36,356 AFY. Actual water use was approximately 34,241 AFY, which is about 94 percent of the available supplies. Approximately 35 percent of water supplies came from groundwater wells owned and operated by the City, 38 percent of the water was imported from WMWD, and 27 percent of water supplies came from reclaimed water. The 2020 UWMP assessed water supply reliability for normal years, single dry years, and five consecutive dry years projected through 2045. All of the City's sources of supply are sustainably managed and are projected to exceed demand through 2045.[12]

Water Treatment Systems

The City's primary sources of imported water are supplied through WMWD, a member agency of Metropolitan. WMWD has multiple sources at its disposal. The City's imported water supply from WMWD consists of treated surface water, untreated surface water, and desalinated brackish groundwater. WMWD supplies treated surface water via the Mills Pipeline from Henry J. Mills filtration plant. The Mills Pipeline delivers treated water directly to the City with an effective capacity of 6.5 MGD. WMWD supplies untreated surface water via the Lower Feeder, which supplies raw water to the City's Lester WTP and to the City's Sierra Del Oro WTP. The Lester WTP has a peak capacity of 30 MGD, and the Sierra Del Oro WTP has a peak capacity of 9.0 MGD. The Lower Feeder is connected to the City's Green River WTP; however, this facility is currently inactive. Additionally, WMWD supplies desalinated brackish groundwater via the Arlington Desalter. Supply from the

[11] City of Corona Utilities Department. 2021. About the Utilities Department web page. Website: https://www.coronaca.gov/government/departments-divisions/department-of-water-and-power/about-dwp. Accessed November 12, 2021.

[12] City of Corona. 2020. Urban Water Management Plan. Website: https://www.coronaca.gov/home/showpublisheddocument/20172/637576204172900000. Accessed November 12, 2021.

Arlington Desalter primarily serves the cities of Norco and Riverside with excess production made available to the City of Corona.

The City acquired the rights to the surface flows of Coldwater Canyon in 1964 when it purchased the assets of the Corona City Water Company. To meet requirements, the surface flow is now spread in percolation ponds and extracted by wells in the Bedford-Coldwater Basin. The initial native safe yield identified in the agreement is 3,300 AFY, and the City's share of this is 64 percent, or 2,112 AFY. The safe yield is recalculated every 5 years. The agreement allows the additional pumping of return flows by the City from the previous fiscal year. Administration of these surface rights is incorporated into the management of the Bedford-Coldwater Basin.[13]

Recycled Water

The City owns and operates three wastewater treatment plants. As of May 2016, following recent upgrades, all supply meets Title 22 requirements for tertiary treated disinfected reclaimed water. Water Recycling Facility (WRF)-1 and WRF-2 provide conventional treatment consisting of primary (screening), secondary (reduction of biomass), tertiary (filtration) and disinfection (chlorination). Treatment at WRF-3 consists of primary (screening), membrane bioreactor (MBR–combined biomass reduction and filtration) and disinfection (chlorination). Although the processes are similar, the configuration of each WRF is unique due to its capacity, site constraints, engineering design conventions at the time of construction, upgrades for regulatory and operational purposes, and use of effluent. Existing average reclaimed water demand is 1,411 gpm (2,276 AFY), or about 17.9 percent of existing production. The remaining production (about 69.3 percent) is allocated to the ponds located at Rincon Street and Lincoln Avenue.[14]

The City completed the 2018 Recycled Water Master Plan (RWMP), which updated the previous RWMP that was developed in December 1999. According to the RWMP, irrigation is the City's primary reclaimed water demand. There are 188 dedicated City irrigation meters and nine public schools with a demand of 244,400,000 gallons per year (465 gpm). The reclaimed water system serves the irrigation demands of 26 City parks, 17 schools, and numerous City, commercial, industrial, and multi-family residential common area landscaping. A small amount of reclaimed water serves industrial dual plumbing (e.g., toilet flushing), sewer flushing, street sweeping, replenishment of cooling water, replenishment of recreational impoundment, firefighting training, and construction needs (e.g., dust control and soil compaction).[15]

Wastewater Systems

Planning Area 6 of the project site is located in the City of Corona. Wastewater collection and treatment services in the City are currently handled by the City of Corona Utilities Department. The City prepared a Sewer Master Plan in 2005 (2005 SMP) that includes detailed description and analysis of the existing and future wastewater collection and treatment systems, loading, modeling, evaluation criteria, and maintenance. The City's existing wastewater system currently provides for

[13] City of Corona. 2020. Urban Water Management Plan. Website: https://www.coronaca.gov/home/showpublisheddocument/20172/637576204172900000. Accessed November 12, 2021.
[14] City of Corona. 2018. Reclaimed Water Master Plan. Website: https://www.coronaca.gov/home/showpublisheddocument/18442/637248910333670000. Accessed November 12, 2021.
[15] Ibid.

collection and treatment of wastewater generated within its corporate boundaries, as well as a small portion of the neighboring City of Norco. The City's wastewater collection system includes approximately 368 miles of gravity sewer and force mains varying in size from 6 to 42 inches in diameter, 14 sewer lift stations, and three wastewater treatment/reclamation plants. All of the sewer flows generated within the City are conveyed by City's collection facilities to one of three wastewater treatment/reclamation plants. These three facilities currently have a combined treatment capacity of 15.5 mgd and have a total effluent of 15,434 AFY in 2020.

Wastewater Treatment Plant 1 (WWTP-1) is located near the western area of the City and receives wastewater flows from a 13,000-acre area that is generally west of Interstate 15 (I-15). WWTP-1 serves the western portion of the City as well as a small portion of the City of Norco. Wastewater flows treated at this facility are treated by commutation, grit removal, primary sedimentation, fine bubble and mechanical aeration, final clarification, and chlorination. All solids are treated at WWTP-1 where treatment involves dissolved air flotation thickening, anaerobic digestion, mechanical dewatering, and sludge drying. WWTP-1 also handles and treats activated sludge from Wastewater Treatment Plant 2 (WWTP-2), and waste sludge from WWTP-3. Existing treatment capacity at WWTP-1 is approximately 11.5 mgd. Future improvements planned for WWTP-1 would increase this treatment capacity to 14.5 mgd. Effluent from WWTP-1 is discharged to Temescal Creek, percolation ponds, and the reclaimed water system. In 2020, WWTP-1's total effluent was 12,336 AFY.

WWTP-2 is located near SR 91 and I-15 and handles flows from approximately 8,300 acres and serves the eastern and northeastern portions of the City. WWTP-2 is a conventional activated sludge treatment plant capable of processing 3.0 mgd of secondary effluent. Secondary treated effluent from WWTP-2 is sent to effluent percolation ponds located at Cota Street and Lincoln Street and the reclaimed water system. In 2020, the total effluent from WWTP-2 was 2,144 AFY.

WWTP-3 is located in the southeastern portion of the City near Cajalco Road. This plant serves the Temescal Canyon area, some portions of south Corona, and the newly expanded middle school in the unincorporated area of El Cerrito. Current capacity at WWTP-3 is 1.0 mgd with an existing average inflow of approximately 0.54 mgd. Ultimate expansion of the WWTP-3 could result in a treatment capacity of 5.0 mgd. Effluent from this plant is disinfected by chlorination and delivered to the City's recycled water system. Solids are transported by the City's sewer collections system to WWTP-1 for future processing. In 2020, the total effluent from WWTP-3 was 954 AFY.

Stormwater

The City prepared a Storm Drain Master Plan in 2003. The plan includes identification and analysis of all stormwater infrastructure in the City, including streets, drains, channels, catch basins, inlets, outlets, detention basins and drainage areas. These are no existing or planned projects to capture runoff for aquifer augmentation.[16]

[16] City of Corona. 2020. Urban Water Management Plan. Website: https://www.coronaca.gov/home/showpublisheddocument/20172/637576204172900000. Accessed November 12, 2021.

Solid Waste

Solid waste generated in the City is coordinated through the City's Public Works Department and hauled away by Waste Management, Inc. (WMI). WMI transports all solid waste collected within the City to the El Sobrante Landfill located southwest of the City. The El Sobrante Landfill accepts regular municipal solid waste and is permitted to accept 16,054 tons of solid waste per day from the counties of Riverside, Los Angeles, Orange, San Diego, and San Bernardino. Currently, the El Sobrante Landfill has a total disposal capacity of approximately 209.9 million cubic yards and can receive up to 70,000 tons per week of refuse. USA Waste must allot at least 28,000 tons per week for County refuse. The landfill's permit allows a maximum of 16,054 tons per day of waste to be accepted into the landfill, due to the limits on vehicle trips. If needed, 5,000 tons per day must be reserved for County waste, leaving the maximum commitment of Non-County waste at 11,054 tons per day. Per the 2022 Annual Report, the landfill had a remaining in-County disposal capacity of approximately 48.7 million tons. In 2023, the El Sobrante Landfill accepted a daily average of 10,341 tons with a period total of approximately 3,184,914 tons. The landfill is expected to reach capacity in approximately 2057.[17]

The Badlands Landfill is the nearest public landfill, approximately 28.52 miles east of the project site is located northeast of the City of Moreno Valley at 31125 Ironwood Avenue and accessed from SR-60 at Theodore Avenue. The landfill is owned and operated by Riverside County. The existing landfill encompasses 1,168.3 acres, with a total disturbance area of 278 acres, of which 150 acres are for refuse disposal. Landfill expansion potential exists at the Badlands Landfill site. Under the 2022 Solid Waste Facility Permit (SWFP), the permitted disturbance area increases from 278 acres to 811 acres, and the refuse disposal area increases from 150 acres to 409 (in multiple stages). The landfill is currently permitted to receive 5,000 tons per day of municipal solid waste (MSW) for disposal and 300 tons per day for beneficial reuse. The site has an estimated total capacity of approximately 68.6 million tons. As of January 1, 2024 (beginning of day), the landfill had a total remaining disposal capacity of approximately 49.8 million tons. Under the 2022 SWFP, the landfill would have a remaining disposal capacity estimated to last, at a minimum, until approximately 2059. From January 2023 to December 2023, the Badlands Landfill accepted a daily average of 2,848 tons with a period total of approximately 874,450 tons.

Additionally, The Lamb Canyon Landfill is approximately 35.13 miles east of the project site, located between the City of Beaumont and City of San Jacinto at 16411 Lamb Canyon Road (SR-79), south of I-10 and north of SR-74. The landfill is owned and operated by Riverside County. The landfill property encompasses approximately 1,189 acres, of which 703.4 acres encompass the current landfill permit area. Of the 703.4-acre landfill permit area, approximately 144.6 acres are permitted for waste disposal. The landfill is currently permitted to receive 5,000 tons per day of MSW for disposal and 500 tons per day for beneficial reuse. The site has an estimated total disposal capacity of approximately 21.1 million tons. As of January 1, 2024 (beginning of day), the landfill has a total remaining capacity of approximately 6.7 million tons. The current landfill remaining disposal capacity is estimated to last, at a minimum, until approximately 2032. From January 2023 to December 2023,

[17] California Department of Resources Recycling and Recovery (CalRecycle). 2021. Solid Waste Information System. El Sobrante Landfill. Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2280?siteID=2402. Accessed November 12, 2021.

the Lamb Canyon Landfill accepted a daily average of 2,049 tons with a period total of approximately 627,127 tons. Landfill expansion potential exists at the Lamb Canyon Landfill site.

Energy

SCE provides electricity, and SoCalGas provides natural gas service to the County of Riverside. Below is a discussion of each energy source.

Electricity

SCE provides electricity service to the project area. SCE has delivered electricity to Southern and Central California for more than 130 years and is one of the nation's largest electric utilities. An SCE Design Representative, Shannon Fillion, confirmed that the proposed project is within SCE service territory, and SCE would serve the proposed project's electrical requirements consistent with the California Public Utilities Commission and Federal Energy Regulatory Commission tariffs.[18] (Appendix K).

Natural Gas

SoCalGas provides natural gas service to the project area (Appendix K). SoCalGas is the nation's largest natural gas distribution utility and provides energy to 21.8 million consumers through 5.9 million meters in more than 500 communities. The company's service territory encompasses approximately 24,000 square miles throughout Central and Southern California.[19]

3.20.2 - Regulatory Framework

Federal Regulations

Federal Water Pollution Control Act

A major piece of federal legislation dealing with wastewater is the Federal Water Pollution Control Act, which is designed to restore and preserve the integrity of the nation's waters. In addition to the Federal Water Pollution Control Act, other federal environmental laws have a bearing on the location, type, planning, and funding of wastewater treatment facilities.

National Safe Drinking Water Act

The United States Environmental Protection Agency (EPA) regulates contaminants of concern to domestic water supply and passed the National Safe Drinking Water Act (SDWA) in 1974. Contaminants of concern relevant to domestic water supply are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. The EPA regulates these types of contaminants through the development of national primary and secondary maximum contaminant levels (MCLs) for water. MCLs and the process for setting these standards were to be reviewed triennially. Amendments to the SDWA in 1986 and 1996 revised the schedule for EPA to develop certain drinking water MCLs and extended the review period to a 6-year cycle.

[18] Southern California Edison (SCE). 2021. About Us web page. Website: https://www.sce.com/about-us. Accessed November 12, 2021.

[19] Southern California Gas Company (SoCalGas). 2021. About SoCalGas web page. Website: https://www.socalgas.com/about-us/company-profile. Accessed November 12, 2021.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), an amendment to the Solid Waste Disposal Act, was enacted in 1976 to address a problem of huge volumes of municipal and industrial solid and hazardous waste generated nationwide. RCRA gives the EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of nonhazardous solid wastes. The 1986 amendments to RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. The key provisions include:

- Identification and listing of hazardous waste and standards applicable to hazardous waste;
- Requires reporting of hazardous waste, permitting for storage, transport, and disposal, and includes provisions for oil recycling and federal hazardous waste facilities inventories;
- Management for solid waste, including landfills;
- Applicability of federal, State, and local laws to federal agencies;
- Procurement (recycling) provisions;
- Citizen suits, judicial review, and enforcement authority; and
- Management, replacement, and monitoring of underground storage tanks.

Federal Hazardous and Solid Waste Amendments

The Hazardous and Solid Waste Amendments (HWSA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

State Regulations

Senate Bill 901—Water Supply and Demand Reliability Assessment

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code § 10610–10656) requires that all urban water suppliers with at least 3,000 customers prepare UWMPs and update them every 5 years. The act requires that UWMPs include a description of water management tools and options used by that urban water supplier to maximize resources and minimize the need to import water from other regions. Specifically, UWMPs must:

- Provide current and projected population, climate, and other demographic factors affecting the supplier's water management planning;
- Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier;

- Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage;
- Describe plans to supplement or replace that source with alternative sources or water demand management measures;
- Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (associated with systems that use surface water);
- Quantify past and current water use;
- Provide a description of the supplier's water demand management measures, including schedule of implementation, program to measure effectiveness of measures, and anticipated water demand reductions associated with the measures; and
- Assess water supply reliability.

Pursuant to the Urban Water Management Planning Act, the City of Corona maintains a UWMP.

Model Water Efficient Landscape Ordinance

California's Model Water Efficient Landscape Ordinance was adopted by the Office of Administrative Law in September 2009 and requires local agencies to implement water efficiency measures as part of their review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance, or incorporate provisions of the ordinance into their own local code requirements for landscaping. For new landscaping projects of 2,500 square feet or more that require a discretionary or ministerial approval, the applicant is required to submit a detailed Landscape Documentation Package that discusses water efficiency, soil management, and landscape design elements.[20]

Recycled Water Policy

On February 3, 2009, by Resolution No. 2009-0011, the California State Water Resources Control Board (State Water Board) adopted a Recycled Water Policy in an effort to move toward a sustainable water future. In the Recycled Water Policy states "we declare our independence from relying on the vagaries of annual precipitation and move toward sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse and the use of stormwater."

The following goals were included in the Recycled Water Policy:

- Increase use of recycled water over 2002 levels by at least 1 million acre-feet per year by 2020 and at least 2 million acre-feet per year by 2030.
- Increase the use of stormwater over use in 2007 by at least 500,000 acre-feet per year by 2020 and at least 1 million acre-feet per year by 2030.
- Increase the amount of water conserved in urban and industrial areas by comparison to 2007 by at least 20 percent by 2020.

[20] California Department of Water Resources (DWR). 2009. Model Water Efficient Landscape Ordinance.

- Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.
- The Recycled Water Policy provides direction to the Regional Water Quality Control Board (RWQCB) regarding issuing permits for recycled water projects, addresses the benefits of recycled water, addresses a mandate for use of recycled water and indicates the State Water Board will exercise its authority to the fullest extent possible to encourage the use of recycled water.

The Recycled Water Policy also indicates that some groundwater basins contain salts and nutrients that exceed or threaten to exceed water quality objectives established in basin plans and states that it is the intent of this Recycled Water Policy that all salts and nutrients be managed on a basin-wide or watershed-wide basis through development of regional or sub-regional management plans. Finally, the Recycled Water Policy addresses the control of incidental runoff from landscape irrigation projects, recycled water groundwater recharge projects, anti-degradation, control of emerging constituents and chemicals of emerging concern and incentives for use of recycled water.

In accordance with the provisions of the Recycled Water Policy, a Constituents of Emerging Concerns (CEC) Advisory Panel was established to address questions about regulating CECs with respect to the use of recycled water. The CEC Advisory Panel's primary charge was to provide guidance for developing monitoring programs that assess potential CEC threats from various water recycling practices, including groundwater recharge/reuse and urban landscape irrigation. On June 25, 2010, the CEC Advisory Panel provided recommendations to the State Water Board and California Department of Public Health in their Final Report "Monitoring Strategies for Chemicals of Emerging Concern in Recycled Water–Recommendations of a Scientific Advisory Panel."[21] The State Water Board used those recommendations to amend the Recycled Water Policy in 2013 (State Water Board Resolution No. 2013-003).

The April 2013 amendment provides direction to the RWQCBs on monitoring requirements for CECs in recycled water. The monitoring requirements pertain to the production and use of recycled water for groundwater recharge reuse by surface and subsurface application methods, and for landscape irrigation. The amendment identifies three classes of constituents to monitor:

- Human health-based CECs: CECs of toxicological relevance to human health.
- Performance indicator CECs: An individual CEC used for evaluating removal through treatment of a family of CECs with similar physicochemical or biodegradable characteristics.
- Surrogates: A measurable physical or chemical property, such as chlorine residual or electrical conductivity, which provides a direct correlation with the concentration of an indicator compound. Surrogates are used to monitor the efficiency of CEC treatment.
- Only groundwater recharge reuse facilities would be required to monitor for CECs and surrogates. Surface application and subsurface application facilities would have different

[21] Geosyntec Consultants. 2015. Monitoring Strategies for Chemicals of Emerging Concern in Recycled Water–Recommendations of a Scientific Advisory Panel.

mandatory CECs and a different monitoring schedule. Monitoring is not required for recycled water used for landscape irrigation projects that qualify for streamlined permitting unless monitoring is required under the adopted salt and nutrient management plan. Streamlined permitting projects must meet the criteria specified in the Policy including compliance with Title 22, application at agronomic rates, compliance with any applicable salt and nutrient management plan, and appropriate use of fertilizers.

Water Conservation Act of 2009

Requirements regarding per capita water use targets are defined in the Water Conservation Act of 2009, which was signed into law in November 2009 as part of a comprehensive water legislation package. Known as Senate Bill (SB) X7-7, the legislation sets a goal of achieving a 20 percent reduction in urban per capita water use Statewide by 2020. SB X7-7 requires that retail water suppliers define in their 2010 UWMPs the gallons per capita per day targets for 2020, with an interim 2015 target.

Assembly Bill 1881

Assembly Bill (AB) 1881 expanded previous legislation related to landscape water use efficiency. AB 1881, the Water Conservation in Landscaping Act of 2006, enacted landscape efficiency recommendations of the California Urban Water Conservation Council for improving the efficiency of water use in new and existing urban irrigated landscapes in California. AB 1881 required the DWR to update the existing Model Local Water Efficient Landscape Ordinance and local agencies to adopt the updated model ordinance or an equivalent. The law also requires the CEC to adopt performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Assembly Bill 2882

AB 2882 was passed in 2008 and encourages public water agencies throughout California to adopt conservation rate structures that reward consumers who conserve water. AB 2882 clarifies the allocation-based rate structures and establishes standards that protect consumers by ensuring a lower base rate for those who conserve water.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed AB 939, the California Integrated Waste Management Act of 1989, effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent by 1995 and 50 percent by 2000; establish a comprehensive Statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorize local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, SB 1016, Wiggins, Chapter 343, Statutes of 2008, introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based

indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

Assembly Bill 341 (75 Percent Solid Waste Diversion)

In 2011, the Legislature implemented a new approach to the management of solid waste. AB 341 (Chesbro, Chapter 476, Statutes of 2011) required that CalRecycle oversee mandatory commercial recycling and established a new Statewide goal of 75 percent recycling through source reduction, recycling, and composting by 2020. This paradigm adds to the policies in AB 939 in several significant ways. First, AB 341 established a Statewide policy goal, rather than a jurisdictional mandate. This places the onus for achieving the goal on the State rather than on the cities and counties that are directly responsible for waste disposal and recycling. Under the law, individual jurisdictions are not required to meet the new policy goal.

AB 341 requires CalRecycle to issue a report to the Legislature that includes strategies and recommendations that would enable the State to divert 75 percent of the solid waste generated in the State from disposal by January 1, 2020, requires businesses that meet specified thresholds in the bill to arrange for recycling services by January 1, 2012, and also streamlines various regulatory processes.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the Legislature, defines the jurisdiction of the CPUC.

Title 24, Energy Efficiency Standards

Title 24, which was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings. The current Building Energy Efficiency Standards are updated on an approximately 3-year cycle). The Energy Commission then developed the current Standards, which continue to improve upon the previous cycle's Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Single-family homes built to the current Standards will use about 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the previous cycle's Standards. In 30 years, California will have saved enough energy to power 2.2 million homes, reducing the need to build 12 additional power plants.

Over time, the energy savings will accumulate as the Standards affect each subsequent year of construction. The savings result from changes to both the residential and nonresidential standards. The Standards affect both newly constructed buildings and alterations to existing buildings. These savings result from retrofit insulation requirements for existing roofs and the energy requirement for renovated lighting systems to meet the current Standards.

Local Regulations

Countywide Integrated Waste Management Plan

The Countywide Integrated Waste Management Plan (CIWMP) was prepared in accordance with the California Integrated Waste Management Act of 1989, Chapter 1095 (AB 939), and is updated every 5 years. The CIWMP outlines and codifies the goals, policies, and programs the County of Riverside and its cities are implementing to create an integrated and cost-effective waste management system that complies with the provisions of AB 939 and its diversion mandates. The CIWMP's components include the Countywide Summary Plan, the Countywide Siting Element, the Source Reduction and Recycling Element, the Household Hazardous Waste Element, and Non-Disposal Facility Element. Each of these elements addresses plans for both Riverside County and each of its cities. The CIWMP was approved by the California Integrated Waste Management Board in September of 1996 and has subsequently been updated at 5-year intervals as required by law.[22]

The Riverside County Department of Waste Resources (RCDWR)is specifically charged with the responsibility of: (1) implementing programs that adhere to the goals, policies, and objectives outlined in Riverside County's Source Reduction and Recycling Element to ensure that unincorporated Riverside County achieves 50 percent diversion of solid waste from landfill disposal; (2) implementing programs that adhere to the goals, policies, and objectives outlined in Riverside County's Household Hazardous Waste Element to reduce the amount of HHW disposed within landfills; (3) continuing to meet the solid waste disposal needs of all Riverside County residents into the future; and (4) maintaining and updating the CIWMP and reporting to the CIWMB on Riverside County's progress in complying with AB 939.[23]

The RCDWR prepares an Annual Report each August that is submitted to CalRecycle. The Annual Report serves as a basis for determining whether the Siting Element and Summary Plan should be revised to include additional disposal capacity, reflect new or changed local and regional solid waste management issues, or include new or changed goals and objectives. The Annual Report is reviewed by the State of California to determine whether the County of Riverside is making progress toward meeting its goals and objectives. The CIWMP is also subject to a 5-year review to assess if revision is necessary and to determine that Riverside County's waste management practices remain consistent with the hierarchy of waste management practices.[24]

RCDWR Design Guidelines for Refuse and Recyclables Collection and Loading Areas

Part of the Riverside County Municipal Water District Planning Section's review of land use/development projects is to ensure adequate space is provided for collection of recyclables and that solid waste disposal capacity of Riverside County facilities is not overburdened. As such, most new development projects are required to provide refuse/recycling collection and loading areas, as well as submit a Waste Recycling Plan. Specifically, the County of Riverside requires recycling storage/collection areas provided within new commercial, industrial, and multi-family developments. The Design Guidelines are intended to assist project proponents in identifying space

[22] County of Riverside. 2015. General Plan Environmental Impact Report. Public Facilities section. Accessed November 12, 2021.
[23] Ibid.
[24] Ibid.

and other design considerations for refuse and recyclables collection and loading areas per the California Solid Waste Reuse and Recycling Act of 1991. Compliance with the Guidelines is necessary for obtaining RCDWR clearance in order to obtain a building permit within unincorporated Riverside County. In addition, projects that have the potential to generate construction or demolition waste (C&D) are required to complete a County of Riverside Waste Recycling Plan to identify the estimated quantity and location of recycling for C&D waste resulting from construction and demolition activities. As part of the Waste Recycling Plan, a waste recycling report is required upon completion of project construction demonstrating the actual quantity of C&D waste recycled.[25]

County of Riverside Zoning Ordinance

Ordinance Number 859: Riverside County Water Efficient Landscape Requirements

Riverside County Ordinance No. 859 establishes the County's water efficient landscape requirements. Ordinance No. 859 applies to all new and rehabilitated landscapes associated with residential uses (including single-family and multi-family units/projects) with a total landscape area equal to or greater than 2,500 square feet which require a discretionary permit and/or approval and all new and rehabilitated landscapes associated with commercial or industrial uses which require a discretionary permit and/or approval. The ordinance requires the submittal of detailed landscape documents that include water budget calculations to demonstrate compliance with the landscape and irrigation efficiency measures specified in the ordinance.

County of Riverside

General Plan

The County of Riverside 2020 General Plan sets forth the following policies that are related to utilities and service systems:

Land Use Element

LU 4.1 Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts:

f. Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought-tolerant landscaping, and water recycling, as appropriate.

Safety Element

S 4.4 Discourage development and activities in areas with limited water and access roads, unless adequate measures are implemented.

Open Space Multipurpose Element

OS 2.2 Encourage the installation of water-conserving systems such as dry wells and graywater systems, where feasible, especially in new developments. The installation

[25] County of Riverside. 2015. General Plan Environmental Impact Report. Public Facilities section. Accessed November 12, 2021.

of cisterns or infiltrators shall also be encouraged to capture rainwater from roofs for irrigation in the dry season and flood control during heavy storms.

OS 3.4 Review proposed projects to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) Permits and require them to prepare the necessary Storm Water Pollution Prevention Program (SWPPP).

OS 4.4 Incorporate natural drainage systems into developments where appropriate and feasible.

Healthy Communities Element

HC 18.9 Encourage the location and design of new developments to visually enhance and not degrade the character of the surrounding area through consideration of the following concepts.

f. Application of water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought-tolerant landscaping, and water recycling, as appropriate.

HC 18.11 In coordination with service agencies, limit or prohibit new development or activities in areas lacking water and access roads in the absence of a plan to address such deficiencies to meet the needs of both new development and within existing disadvantaged communities. Work with community partners and service agencies to establish future plans to meet needs for potential community growth in areas lacking water and road infrastructure.

HC 22.2 Develop a stormwater capture system in areas that do not have the appropriate curb and gutter infrastructure.

City of Corona

General Plan

The City of Corona 2020-2040 General Plan sets forth the following policies that are related to utilities and service systems:

Land Use Chapter

LU-6.1 Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water efficient building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

LU-6.2 Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:

- Landscaping–drought-tolerant species, use of recycled water for irrigation, and other purposes
- Capture of rainwater and reuse on-site
- Building design and construction materials–energy and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques.

LU-20.6 Locate and design development to complement and assure its compatibility with the potential Metropolitan Water District (MWD) water treatment facility, if developed.

Infrastructure and Utilities Chapter

IU-1.5 As a condition of permit approval, require adequate water supply, distribution, pumping, storage, and treatment facilities to be operational prior to the issuance of building permits.

IU-1.7 Require all new development to be served from an approved domestic water supply to protect the health and safety of the public and groundwater supplies.

IU-1.8 Through engineering design, construction practices, and enforcement of water regulatory standards, ensure that existing and new land uses and development do not degrade the City's surface waters and groundwater supplies.

IU-1.9 Require the costs of improvements to the water supply transmission, distribution, pumping, storage, and treatment facilities necessitated by new development be equitably borne by beneficiaries, either through the payment of fees, or construction of the improvements.

IU-2.3 Require incorporation of best available technologies for water conservation, internally and externally, in new construction and associated site design.

IU-2.5 Require that sewer flows be minimized in existing and future developments through water conservation and recycling efforts.

IU-2.7 Require the use of recycled water for landscaped irrigation, grading, and other noncontact uses in new developments, parks, golf courses, sports fields, and comparable uses, where feasible.

IU-2.9 Require that grading plans be designed and implemented to reduce stormwater runoff by capturing rainwater on-site and storing on a temporary, short-term basis to facilitate groundwater recharge rather than relying solely on community drainage facilities.

IU-2.10 Require the use of rainwater capture and storage facilities, techniques, and improvements in residential and nonresidential developments to further objectives for water conservation.

IU-3.4 Require that new development be connected to the municipal sewer system and ensure that adequate capacity is available for the treatment of generated sewer flows and safe disposal of sludge.

IU-3.5 As a condition of approval, require that all new development submit a sewer analysis to the satisfaction of the City of Corona prior to the issuance of building permits.

IU-3.8 Require that new development be connected to the City's sewer system.

IU-4.5 Review development proposals for projects within the City's Sphere of Influence and encourage Riverside County to not approve any project that cannot be accommodated with an adequate drainage system.

IU-5.1 Ensure that existing and new development does not directly degrade or indirectly contribute to the degradation of surface waters or the groundwater system.

IU-5.3 In new developments, minimize the amount of impervious area that is directly connected to piped or channelized drainage systems.

IU-5.5 Require that development projects consider the appropriateness of the channelization of stormwater runoff to facilitate its possible capture and reuse for on-site irrigation and other purposes.

IU-5.7 Require developers to obtain a NPDES permit prior to moving construction equipment onto a development site. The NPDES permit shall be retained at the construction site throughout the construction period, and a copy shall be filed with the City Engineer.

IU-5.9 Require that new developments employ the most efficient drainage technology to control drainage and minimize damage to environmentally sensitive areas.

IU-6.1 Provide an adequate and orderly system for collection and recycling or disposal of solid waste for new and existing development in the City and sphere of influence.

IU-7.1 Require that new development is approved contingent upon its ability to be served with adequate natural gas, energy facilities, and other critical infrastructure.

Environmental Resources Chapter

ER-1.2 Require all public and private grading and construction activities to minimize adverse impacts on the City's water resources through the use of best management practices, as established and updated from time to time by the City of Corona.

ER-2.4 Require the use of water conservation features and materials in the design and construction of all public buildings, projects, and site development while encouraging their use citywide.

3.20.3 - Methodology

The water supply analysis is based on evaluating the existing water supply available to the County of Riverside and the City of Corona, future water supply that is anticipated to be available to or developed by the County of Riverside and the City of Corona, and the comparison of existing and future water demands with the development of the proposed project. Project water demands identified in this Draft Environmental Impact Report (Draft EIR) were calculated based upon per dwelling unit water demand factors further described in the project-specific Preliminary Water Report (Appendix G).

The methodology of determining wastewater service impacts is based on evaluating the existing wastewater infrastructure and capacity available to the County of Riverside and the City of Corona, future wastewater capacity that is anticipated to be available to the County of Riverside and City of Corona, and identification of anticipated future wastewater flows that could potentially result from the proposed project.

The methodology of determining stormwater service impacts is based on evaluating the existing stormwater infrastructure and capacity available to the County of Riverside and City of Corona, future stormwater facilities anticipated to be available to the County of Riverside and City of Corona, and identification of anticipated future stormwater flows that could potentially result from the proposed project.

The solid waste analysis is based on evaluating the existing capacity of nearby landfills that serve the County of Riverside and City of Corona, future solid waste capacity that would be available to the County of Riverside and City of Corona, and the identification of existing solid waste demand and future solid waste demand associated with the proposed project. The analysis also identifies existing goals, policies, and programs that the County of Riverside and City of Corona implements to reduce generated waste.

3.20.4 - Thresholds of Significance

Based, in part, on the criteria identified in Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, as well as Riverside County's environmental checklist, utilities and service systems impacts resulting from the implementation of the proposed project would be considered significant if the proposed project would:

Water

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage systems, whereby the construction or relocation would cause significant environmental effects.

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

Sewer

a) Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects.

b) Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Solid Waste

a) 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.

b) Comply with federal, State, and local management and reduction statutes and regulations related to solid wastes including the County Integrated Waste Management Plan.

Utilities

Would the proposed project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?

a) Electricity?
b) Natural gas?
c) Communication Systems?
d) Street Lighting?
e) Maintenance of public facilities, including roads?
f) Other governmental services?

3.20.5 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

Water Infrastructure

Impact USS-1a: Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage systems, whereby the construction or relocation would cause significant environmental effects?

Source(s): Project Application Materials, including the Preliminary Water Report, Preliminary Hydrologic Analysis, Preliminary Reclaimed Water Report, and Preliminary Wastewater Report; Preliminary Water Quality Management Plans; and City of Corona 2005 Water Master Plan.

Impact Analysis

The proposed project would be developed on the former Mountain View Golf Course, which has been vacant since its closure in 2009. As described in the NOP, the proposed project would construct up to 365 residential dwelling units and infrastructure in Planning Areas 1 through 6 on approximately 105.53 acres of the project site. Approximately up to 46.21 acres would be used for residential uses and the remaining acreage would be dedicated to open space, recreation use, and a 0.78-acre commercial/retail area in Planning Area 2. Thus, the proposed project would increase the water demand, wastewater, and the amount of impervious surface coverage, which would create the potential for increased runoff and flooding compared to the existing conditions at the project site.

The project site is made up of six Planning Areas, five of which (Planning Areas 1-5) are located within the County of Riverside and Planning Area 6 is located within the City of Corona. However, all of the proposed utility services are to be provided by the City of Corona.

Water

A Preliminary Water Report was prepared by KWC Engineers in November 2021 (Appendix G), which evaluated the water facility needs for the proposed project. The proposed project is within the City's northwestern water service area. The existing water facilities in the vicinity of the project are located within the City's Zone 2 (905' high water level [HWL]) and Zone 3 (1060' HWL) water service zones. The Zone 2 area is currently being supplied by the 2.0 mg Mangular Reservoir (905' HWL); however, this zone is deficient in storage volume, so additional water is supplied from the Zone 3 reservoirs through pressure reducing stations. The Zone 3 area is currently being supplied by the 4.0 mg Sierra Del Oro Reservoir (1060' HWL), which receives water from the Sierra Del Oro WTP.[26]

According to the City of Corona 2005 Water Master Plan, there are no master planned water facilities planned within or adjacent to the proposed project. The proposed project would construct water facilities to expand the Zone 2 and Zone 3 service areas to supply water to the proposed development. To support the proposed development in each planning area, the proposed project would construct water facilities within Planning Areas 1 through 5 (905-foot HWL) and Planning Area 6 (1,060-foot HWL) service area to supply the necessary system pressures to support the project's water demands. This project component is no longer proposed to be constructed. The HWL would only be developed to support the development of PA 6 contemplated in the NOP. These water facilities would include a proposed network of 8-inch and 12-inch domestic water lines within the project. These water

[26] KWC Engineers. Preliminary Water Report. November 2021.

facilities would include a proposed network of primarily 8-inch domestic water lines within the project. Each individual Planning Area would have one to two points of connections to the City's domestic water system and would connect to the existing distribution system adjusting to each Planning Area. Table 3.20-2 summarizes the proposed water infrastructure facilities with respect to their approximate locations, alignments, and sizes, consistent with the City's 2005 Water Master Plan and related water system studies in the City's service area. A detailed water facilities report shall be prepared during final design to confirm actual required sizes of pipelines, valving, pumps, and other related appurtenances.

Table 3.20-2: Proposed Infrastructure Improvements

Planning Area	Facility Description	Facility Location	Proposed Pipe Size (inches)	Approximate Length (linear feet)
PA 1	PA 1 Distribution Waterlines	On-site/Off-site	8 12	2,000 200
PA 2	PA 2 Distribution/Fire Waterlines	On-site/Off-site	8	50[1]
PA 3	PA 3 Distribution Waterlines	On-site/Off-site	8	6,125
PA 4	PA 4 Distribution Waterlines	On-site/Off-site	8	2,150
PA 5	PA 5 Distribution Waterlines	On-site/Off-site	8	1,750
PA 6	PA 6 Distribution Waterlines	On-site/Off-site	8	4,200

Notes:
[1] PA 2 to connect to public loop line constructed for PA 1
Source: KWC Engineers. Preliminary Water Report. November 2021.

Additionally, the Preliminary Water Report analyzed the available reservoir storage. The water storage and system pressures required for the homes within the proposed Zone 2 system would be supplied from the Zone 2 Mangular Reservoir and Zone 3 pressure reducing stations. For Zone 3, the water storage would be supplied from the existing excess storage capacities of the Zone 3 Sierra Del Oro Reservoir. According to Table 7-1 in the 2005 Water Master Plan, there is 7.81 million gallon (mg) of excess storage in the existing Zone 3 System. Some of this excess capacity is being utilized to supply the Zone 2 system, which has a storage deficit of approximately 5.23 mg per the Master Plan. Table 3.20-3, Reservoir Storage Requirements, summarizes the required reservoir storage for Zone 2 (Planning Areas 1, 2, 3, and 4) and Zone 3 (Planning Areas 5 and 6) based upon the 2012 DWP Design Policy. As such, no additional storage facilities are required for the proposed project and impacts would be less than significant.

Table 3.20-3: Proposed Project Reservoir Storage

Pressure Zone	Maximum Day Demand (mgd)	Required Operational Storage (mg)	Required Fire Flow Storage (mg)[1]	Required Terminal Storage (mg)	Total Required Storage (mg)
Zone 2	0.208	0.104	0.0	0.010	0.114
Zone 3	0.121	0.061	0.0	0.006	0.067

Notes:
mgd = million gallons per day
mg = million gallons
[1] Fire flow storage is already provided in the existing storage for the zone
Source: KWC Engineers. Preliminary Water Report. November 2021.

Zone 2: The water storage and system pressures required for the homes within the proposed Zone 2 system would be supplied from the Zone 2 Mangular Reservoir and Zone 3 pressure reducing stations.

Zone 3: The water storage would be supplied from the existing excess storage capacities of the Zone 3 Sierra Del Oro Reservoir. According to Table 7-1 in the 2005 Water Master Plan, there is 7.81 mg of excess storage in the existing Zone 3 System. Some of this excess capacity is being utilized to supply the Zone 2 system, which has a storage deficit of approximately 5.23 mg per the Master Plan. No additional storage facilities are required for the project development.

The major proposed piping in the Zone 2 pressure zone would consist of 8-inch distribution lines provided within the development areas with a 12-inch line to the commercial site (PA 2). The major proposed piping in the Zone 3 pressure zone would consist of 8-inch distribution lines provided within the development areas. As further described in the Preliminary Water Report, KWC Engineers performed a computer modeling analysis to determine the recommended on-site water system for the proposed project. Numerous demand conditions were calculated to determine the proposed system pressures and recommended line sizes within each service zone. The results of the computer modeling determined that the proposed piping would provide adequate service for the proposed project for all the demand scenarios considered. Therefore, these proposed water system facilities and their approximate locations, alignments, and sizes are consistent with the City's 2005 Water Master Plan and related water system studies in the City's service area.

Additionally, according to the Preliminary Water Report, the proposed water infrastructure improvements to the existing project site shall provide sufficient water supplies based on demand projections from estimated water usage for Planning Areas 1 through 6 to be on average 183,000 gallons per day or 206.25 AFY which is approximately 1.6 percent of the excess supply in 2020. Therefore, the proposed project would not require new or expanded water facilities and impact would be less than significant.

Reclaimed Water

Reclaimed water would be used for the nonpotable water demands for the proposed project. All Planning Areas would require reclaimed water to serve as irrigation to the project site. A Preliminary Reclaimed Water Report prepared by KWC Engineers in November 2021 examined the existing and proposed reclaimed water facilities. According to the Preliminary Reclaimed Water Report, the proposed project is located in the City of Corona's western service area. The existing reclaimed water facilities in the vicinity of the project site are located within the City's 1008.5 Zone, which would continue to serve the proposed project. The 1008.5 Zone is supplied by the WRF-1 Booster Station, which gains suction directly from the 4.0 mg WRF-1 tank and discharges into the 2.0 mg Border Avenue Reservoir. There are existing 1008.5 Zone 20-inch and 24-inch reclaimed water transmissions lines in Serfas Club Drive, Pine Crest Drive, Paseo Grande, and Kirkwood Drive, which surround the project area. The existing transmission lines that surround the area would provide a source of connection for the site. Proposed 8-inch lines would stub out from the transmission lines to provide one or more sources of connection for each Planning Area's irrigation meter.

The project includes a total of 29.73 acres to be served off the 1008.5 Zone. There are 16.97 acres of slope stabilization, and 12.76 acres of park irrigation. Table 3.20-4 below summarizes the projected average day, maximum month, and peak-hour reclaimed water demands for the proposed project. As shown below the total estimated reclaimed water demand generated by the proposed project is approximately 0.06 mgd average day demand, 0.11 mgd maximum month demand, and 0.16 mgd peak-hour demand. The demand for the PA 2 Commercial property shall be determined during final engineering phase as this demand is anticipated to be negligible.

Table 3.20-4: Reclaimed Water Demand Summary

Reclaimed Water Demand Summary					
Land Use	Quantity (acre)	Demand Factor (GPD/acre)[1]	Average Day Demand (mgd)	Maximum Month Demand (mgd)	Peak-Hour Demand (mgd)
Slope Stabilization	16.97	1,253	0.021	0.038	0.053
Park Irrigation	12.96	3,139	0.041	0.073	0.102
Total	29.73	–	0.062	0.112	0.155

Notes:
GPD/acre = gallons per day/per acre
Mgd = million gallons per day
[1] The projected Average Day Demand reclaimed water duty factor for slope stabilization is 10.5 gallons per year per square foot, or approximately 1,253 GPD per acre. Average Day Demand duty factor for park irrigation is 26.3 gallons per year per square foot, or approximately 3,139 GPD per acre.
Source: KWC Engineers. Preliminary Reclaimed Water Report. November 2021.

The proposed reclaimed water system for the proposed project would be connected to the existing transmission lines in the areas surrounding the project. Given the HWL of the reclaimed water service zone and from discussions with the City, approximate static pressures were calculated at the proposed meter locations to determine potential for connection into the existing reclaimed water

system. As each Planning Area is constructed, the appropriate facilities would be put in place to provide the required reclaimed water supply. Because of existing transmission lines in the area, no single Planning Area would be dependent on another for its source of reclaimed water. The proposed reclaimed water infrastructure facilities and the proposed locations, alignments, and sizes would be consistent with the City's 2018 Draft Reclaimed Water Master Plan and related reclaimed water system studies in the City's service area. Table 3.20-5 below summarizes the reclaimed water infrastructure that the proposed project would implement. With the implementation of these reclaimed water infrastructure, impacts would be less than significant.

Table 3.20-5: Proposed Reclaimed Water Infrastructure

Planning Area	Infrastructure Description	Facility Location	Proposed Pipe Size (inches)	Quantity
PA 1	Reclaimed Water Irrigation Meter	On-site	–	1
	Distribution Reclaimed Water Lines	On-site	8	65 (linear feet)
PA 2	Reclaimed Water Irrigation Meter	On-site	–	1
	Distribution Reclaimed Water Lines	On-site	8	65 (linear feet)
PA 3	Reclaimed Water Irrigation Meter	On-site	–	4
	Distribution Reclaimed Water Lines	On-site	8	460 (linear feet)
PA 4	Reclaimed Water Irrigation Meter	On-site	–	1
	Distribution Reclaimed Water Lines	On-site	8	70 (linear feet)
PA 5	Reclaimed Water Irrigation Meter	On-site	–	1
	Distribution Reclaimed Water Lines	On-site	8	50 (linear feet)
PA 6	Reclaimed Water Irrigation Meter	On-site	–	1
	Distribution Reclaimed Water Lines	On-site	8	–

Source: KWC Engineers, Preliminary Water Report, November 2021.

Wastewater Treatment

A Preliminary Wastewater Report was prepared for the proposed project by KWC Engineers (Appendix G) in November 2021, which evaluated the flow projections to the current and ultimate sewer system and recommend sewer facilities to support the proposed project. The entirety of the proposed project would be served by the City of Corona Utilities Department. The report depends on information from the City's 2005 SMP.

The proposed project would utilize gravity sewers, which have been designed to convey peak flow and maintain a minimum velocity of 2 feet per second at design capacity to prevent the deposition of solids. Additionally, all force main sewers would be designed to convey Peak Wet Weather Flow (PWWF) and maintain a minimum velocity of 4 feet per second at the minimum design pumping capacity to prevent the deposition of solids. To minimize excessive wear and tear of the pipe, pipes would be designed to not exceed a maximum velocity of 6 feet per second. All lift stations would be sized to accommodate the influent PWWF and based upon a 60 percent pump efficiency and 90 percent motor efficiency unless manufacturer specifications recommend otherwise.

PAs 1 through 5 are in the City of Corona Utilities Department Sewershed 10 and would connect into the existing sewer system in Serfas Club Drive and Pine Crest Drive. Planning Area 6, located on Kirkwood Drive, is on the edge of the Utilities Department Sewershed 10 and 14. Sewershed 14 has a large number of existing deficient pipes located downstream of the proposed project, near WWTP 1. Therefore, to support the development scenario in PA 6 contemplated in the NOP, PA 6 would be required to connect to the proposed sewer system in PA 5 and drain via the existing trunk sewer system to WWTP 1 via Sewershed 10. As previously mentioned, the current treatment capacity of WWTP 1 is 11.5 mgd with an expected future reliable treatment capacity of 14.5 mgd with improvements. The project's proposed sewer flows would tie into the City's existing trunk sewer system at Serfas Club Drive, Pine Crest Drive, and Frontage Road. In total, to support the development contemplated in the NOP the proposed project would construct the following sewer infrastructure features:

- Construction of 8-inch on-site gravity sewer lines within each planning area of the proposed project.
- Construction of 160 gpm Sewer Lift Station and 4-inch force main within PA 1.
- Construction of off-site 8-inch gravity sewer lines from on-site sewer system to existing sewer system connection points.

As further described in the Preliminary Wastewater Report, the analysis of projected sewage flows for the proposed project, and its estimated sewer contribution to the overall WWTP-1 peak flow treatment volume is consistent with the wastewater facilities identified with the City of Corona 2005 SMP. The Preliminary Wastewater Report also analyzed the off-site sewer impacts, a hydraulic analysis was performed along the downstream trunk sewer system from the project's sewer connection points to the WWTP-1 near Railroad Street. The sewer modeling data contained in the 2005 SMP was used for the analysis data on the sewer collection system. The results of the analysis found that the existing downstream pipeline segments are considered deficient in the existing, post-project, and ultimate conditions and would eventually be required to be replaced with larger capacity pipelines. Therefore, the proposed project would be required to pay fair share contributions to offset impacts to the deficient wastewater pipelines. The necessary improvements include the replacement of approximately 200 linear feet of sewer lines in two locations and are currently in the design phase. As such, impacts would be less than significant.

Stormwater Drainage System

As discussed above, the proposed project would increase the impervious surfaces on the project site. PWQMPs (Planning Areas 1 through 5) and (Planning Area 6) and a Preliminary Hydrologic Analysis were developed by KWC Engineers in October 2024 to address the increased runoff that would leave the project site and drainage patterns. The PWQMP evaluated the potential effects of runoff for the proposed project under methodology guidelines provided by the Riverside County for Storm Water Quality Ordinance and the City of Corona Storm Water Quality Ordinance (Corona Municipal Code § 15.36, Title 13 Chapter 13.27 and City Council Ordinance No. 2291 and 2828) and concluded the following:

Planning Area 1, 2, and 4: If the full development of Planning area 2 were to occur, the following improvements would be included. The existing drainage patterns of the site were identified and preserved. In the existing condition, the site drains westerly across the site along several valleys and small ravines. The existing and proposed drainage patterns are identified on the Water Quality Management Plan (WQMP) Site Plan (as well as identified in the project Preliminary Hydrologic Analysis). Using a system of, bioretention basins, self-retaining areas, and storm drain piping, off-site flow would by-pass the site and would not be co-mingled with development runoff which needs to be treated at the proposed designated Best Management Practice (BMP) treatment areas.

Planning Area 3: The existing drainage patterns of the site were identified and preserved. In the existing conditions of the site, the northern and southern portion of the site drains westerly across several valleys and small ravines. The portion of the site connecting the northern and southern halves drains to the north across the site through several valleys and ravines. The existing and proposed drainage patterns are identified on the WQMP Site Plan (as well as identified in the project Preliminary Hydrologic Analysis). Using a system of bioretention basins, modular wetland systems, detention basins, self-treating areas, and storm drain piping, off-site flow would by-pass the site and would not be co-mingled with development runoff which needs to be treated at the proposed designated BMP treatment areas.

Planning Area 5: The existing drainage pattern of the site were identified and preserved. In the existing condition, the southwest corner of the site drains northerly toward Planning Area 3 through valleys and ravines. Eight hundred feet easterly of the southern corner of the site, the existing conditions begin to drain northeasterly toward the existing retention basin through valley and ravines. The existing and proposed drainage patterns are identified on the WQMP Site Plan (as well as identified in the project Preliminary Hydrologic Analysis). Using a system of modular wetland systems/underground storage, bioretention basins, and storm drain piping, off-site flow would by-pass the site and would not be co-mingled with development runoff which needs to be treated at the proposed designated BMP treatment areas.

Planning Area 6: If the full development of Planning area 6 were to occur, the following improvements would be included. The existing drainage pattern of the site were identified and preserved. In the existing condition the site drains northerly across the site along several valleys and a large ravine. The large ravine running across our site from southeast to northeast would be preserved and left as open space undisturbed area. The existing and proposed drainage patterns are identified on the WQMP Site Plan (as well as identified in the project Preliminary Hydrologic Analysis). Using a system of flow-by basins, retention basin, and storm drain piping, off-site flow would by-pass the site and would not be co-mingled with development runoff which needs to be treated at the proposed designated BMP treatment areas. These project components are no longer proposed to be constructed. The bioretention basin would only be developed to support the development of PA 6 contemplated in the NOP.

The impervious areas in Planning Areas 1 through 6 have been minimized in relation to the size of the project site and the relative density of the development. The site design proposes public roadways, residential lots, landscaped slopes, and natural open space. The proposed roadway widths are

designed to meet City of Corona Standards. Additionally, roof runoff in Planning Areas 1 through 6 has been designed to drain into pervious landscape areas with each residential lot prior to discharge onto streets or connection to proposed on-site storm drain systems. The 2-year storm runoff from development would be collected and conveyed to proposed WQMP treatment areas for treatment prior to discharge or connection to proposed on-site storm drain system.

According to the Preliminary Hydrologic Analysis, each of the Planning Areas would contain different BMPs for stormwater management for water capturing, cleansing and discharging into the stormwater system. All development containing water quality systems would comply with National Pollutant Discharge Elimination System (NDPES) requirements in effect at the time of approval. If the full development of Planning area 2 and 6 were to occur, planning areas would include the following BMPs:

- Planning Area 1: one bioretention basin and one self-retaining area
- Planning Area 2: one bioretention basin and one modular wetland system
- Planning Area 3: four bioretention basins, one modular wetland system, and one self-treating area
- Planning Area 4: four bioretention basins and one self-retaining area
- Planning Area 5: one modular wetland system/underground storage and one bioretention basin
- Planning Area 6: two bioretention basins[27]

Additionally, the proposed project would also include two on-site drainage systems. The first being a collection and conveyance drainage system (i.e., detention basin) in Planning Area 3 and the other would be an existing open space natural flow drainage system, developed from an existing pond, in Planning Area 5. The drainage systems are designed to utilize the upstream natural drainage course in PA 1 and the existing pond within PA 5 to provide adequate erosion control and 100-year flood protection. The system would be designed to ensure that on-site flows and off-site flows do not commingle, so that on-site flows are treated by the bioretention basins and modular wetlands before being released into the stormwater system.

In order to limit the discharge at the SR-91 Freeway culvert, a proposed detention basin in Planning Area 3 would mitigate the increase runoff from the proposed project. The detention basin would serve to capture runoff during high stormwater flow events. According to the Preliminary Hydrologic Analysis, the SR-91 Freeway culvert capacity analysis indicated a maximum discharge of approximately 970 cfs. Presently, the 100-year 3-hour storm exceeds the 970 cfs capacity of the SR-91 Freeway culvert. The proposed detention basin in PA 3 would need to mitigate for increase runoff due to the proposed development and limit the 100-year discharge to meet the existing culvert capacity. The detention basin would have a storage volume of 17.25 acre-feet with 2:1 side slope and a height of 16.5 feet. The outlet structure is a single 3-foot-tall by 6-foot-wide opening placed at the

[27] The bioretention basin would only be developed to support the development of PA 6 contemplated in the NOP.

basin bottom that limits the outflow from the basin and provides the required attenuation to limit the downstream flowrate to the SR-91 Freeway culvert capacity**.** Table 3.20-6 provides a comparison between the existing, proposed (no detention basin in PA 3), and proposed (with detention basin in PA 3) condition outflows at the downstream outlet point located at the SR-91 Freeway culvert. As shown below, the implementation of the detention basin in PA 3 would result in peak flows that are lower than the existing conditions and the culvert maximum of 970 cfs.

Table 3.20-6: Hydrograph Summary for 100-year Storm Frequency, Existing, and Proposed Conditions at Project Outlet

Duration (hour)	Existing Conditions		Project without PA 3 Detention Basin		Project with PA 3 Detention Basin	Change from Existing Conditions to Project with PA 3 Detention Basin (+/-)
	Peak Flow (cubic feet per second)	Total Volume (acre-feet)	Peak Flow (cubic feet per second)	Total Volume (acre-feet)	Peak Flow (cubic feet per second)	Peak Flow (cubic feet per second)
3	1,025.5	104.2	1,166	105.5	924.8	-100.7
6	977.3	131.6	1,088.2	133.5	923.4	-53.9
24	633.2	303.2	669.1	308.3	614.3	-18.9
Source: Preliminary Hydrologic Analysis, April 2024 (Appendix G).						

The proposed project would construct additional storm drain pipelines throughout the development to control and convey the stormwater runoff to the existing SR-91 Freeway culvert. The storm drain system consisting of varying sizes from 18-inch to 96-inch diameter pipes would be designed to convey the 100-year storm as dictated by the City of Corona and RCFC&WCD standards. RCFC&WCD would be responsible for maintenance of the regional detention basin and storm drain system. As such, RCFC&WCD would have the right and would regularly and routinely maintain the detention basin, its inlet and outlet, and storm drain facilities as needed. Overall, the PWQMP analysis and implementation of BMPs serve to illustrate that the proposed storm drainage system would slow, reduce, and meter the volume of runoff leaving the project site and ensure that downstream storm drainage facilities are not inundated with project-related stormwater. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation required.

Level of Significance After Mitigation

Less than significant impact.

Water Supplies

Impact USS-1b:	**Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?**

Source(s): Project Application Materials, including the Preliminary Water Report, Preliminary Hydrologic Analysis, Preliminary Reclaimed Water Report, and Preliminary Wastewater Report; Preliminary Water Quality Management Plans; and City of Corona 2005 Water Master Plan.

Impact Analysis

As discussed in Impact USS-1a, water supply to the entire proposed project would be provided by the City of Corona Utilities Department. A Preliminary Water Report was prepared by KWC Engineers in November 2021. The purpose of the report is to discuss and address the existing water system, estimate project water demands, and propose pipelines needed to support the proposed project and adjacent developments. It also identifies the approximate water distribution line alignments and pipe sizes (Appendix G). The entire proposed project would be connected to the Utilities Department water supply. As such, the criteria utilized in this report are in accordance with the City of Corona 2005 Water Master Plan, land use plan. According to the City of Corona 2005 Water Master Plan, there is currently no Master Plan water facilities in place for the proposed project area. A Water Supply Assessment was not required for the project because it does not exceed the thresholds outlined in SB 610 including, but not limited to, proposing more than 500 homes.

Table 3.20-7, Proposed Project Water Demand Summary, summarizes the proposed project's water demands for Average Day Demand, Maximum Day Demand, and Peak-hour Demand for Planning Areas 1-6. The total estimated water demand generated by the proposed project is approximately 0.27 mgd Average Day Demand, 0.48 mgd Maximum Day Demand, and 0.65 mgd Peak-hour Demand.

Table 3.20-7: Proposed Project Water Demand Summary

Planning Area	Average Day Demand (mgd)	Average Day Demand (AFY)	Maximum Day Demand(mgd)	Peak-hour Demand (mgd)
Planning Area 1	0.016	17.93	0.028	0.036
Planning Area 2	0.001	1.12	0.002	0.003
Planning Area 3	0.074	82.95	0.132	0.167
Planning Area 4	0.025	28.02	0.045	0.056
Planning Area 5	0.017	19.06	0.03	0.048
Planning Area 6	0.051	57.17	0.091	0.146
Total	**0.183**	**206.25**	**0.329**	**0.455**

Planning Area	Average Day Demand (mgd)	Average Day Demand (AFY)	Maximum Day Demand(mgd)	Peak-hour Demand (mgd)
Notes: mgd = million gallons per day AFY = acre-feet per year Source: KWC Engineers. Preliminary Water Report. November 2021).				

The water report determined the following water duty factors to project everyday water demands for the project as:

- 4,000 GPD/acre for Medium Density Residential
- 3,750 GPD/acre for Low Density Residential
- 1,610 GPD/acre for General Commercial

Per the City of Corona Water Master Plan, Planning Areas 1, 2, 3, and 4 have a peak-hour factor of 1.26, and Planning Area 5 and 6 have a peak-hour factor of 1.60.

As previously discussed, water service is provided to Corona by the City of Corona Utilities Department. In 2020, the City's water supplies totaled 36,356 AFY. Actual water use was approximately 34,241 AFY, which is about 94 percent of the available supplies. Approximately 35 percent of water supplies came from groundwater wells owned and operated by the City, approximately 16,239 AFY; 38 percent of the water was imported from WMWD, approximately 18,005 AFY; and 27 percent of water supplies came from reclaimed water, approximately 12,695 AFY. The 2020 UWMP assessed water supply reliability for normal years, single dry years, and five consecutive dry years projected through 2045. Table 3.20-8 describes the Utilities Department projected water supply and demand from 2025 through 2045 for normal years, single dry years, and five consecutive dry years.

Table 3.20-8: City of Corona Utilities Department Projected Water Supplies and Demands

Totals			2025	2030	2035	2040	2045
Supply Totals (AFY)			**47,572**	**47,572**	**47,572**	**47,572**	**47,572**
Demand Total (AFY)							
Normal Year	Demand		**37,555**	**37,768**	**38,017**	**38,216**	**38,351**
	Surplus		10,017	9,804	9,555	9,356	9,221
Single Dry Year	Demand		**39,358**	**39,581**	**39,842**	**40,051**	**40,192**
	Surplus		8,214	7,991	7,730	7,521	7,380
Five Consecutive Dry Year	Year 1	Demand	**38,382**	**38,599**	**38,854**	**39,057**	**39,195**
		Surplus	9,190	8,973	8,718	8,515	8,377
	Year 2	Demand	**40,635**	**40,865**	**41,135**	**41,350**	**41,496**
		Surplus	6,937	6,707	6,437	6,222	6,076

Totals			2025	2030	2035	2040	2045
	Year 3	Demand	**42,212**	**42,452**	**42,731**	**42,955**	**43,107**
		Surplus	5,360	5,120	4,841	4,617	4,465
	Year 4	Demand	**41,987**	**42,225**	**42,503**	**42,726**	**42,877**
		Surplus	5,585	5,347	5,069	4,846	4,695
	Year 5	Demand	**38,757**	**38,977**	**39,234**	**39,439**	**39,579**
		Surplus	8,815	8,595	8,338	8,133	7,993
Notes: AFY = acre-feet per year Source: City of Corona 2020 Urban Water Management Plan.							

All of the City's sources of supply are sustainably managed and are projected to exceed demand through 2045.28 At the full development of the proposed project which includes Planning Areas 2 and 6, the estimated water usage would be on average 183,000 gallon per day (GPD) or 206.25 AFY which is approximately 0.57 percent of the Utilities Department's total water supply and approximately 9.75 percent of the Utilities Department's excess supply in 2020. As shown in Table 3.20-3, and discussed above in Impact USS-1a, there are sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry and multiple dry years. Additionally, these estimates are based on full buildout as contemplated in the NOP. Should Planning Area 2 and Planning 6 remain as open space with no development, the estimated water usage would further decrease. Without the development on Planning Areas 2 and 6, the estimated water usage would be 132,000 GPD or 147.96 AFY which is approximately 0.41 percent of the Utilities Department's total water supply and approximately 7 percent of the Utilities Department's excess supply in 2020. Therefore, the City of Corona would have sufficient water supplies available in addition to the proposed improvements that would adequately serve the proposed project. As such, no new or expanded entitlements are needed. There is adequate supply to meet demand through 2045 and impacts to water supply would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

[28] City of Corona. 2020. Urban Water Management Plan. Website: https://www.coronaca.gov/home/showpublisheddocument/20172/637576204172900000

Sewer Facilities

Impact USS-2a: **Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?**

Source(s): Project Application Materials, including the Preliminary Water Report, Preliminary Hydrologic Analysis, Preliminary Reclaimed Water Report, and Preliminary Wastewater Report; Preliminary Water Quality Management Plans; and City of Corona 2005 Water Master Plan.

Impact Analysis

As mentioned in Impact US-1a, Planning Areas 1 through 5 are located within the County of Riverside. However, the proposed project would not be connected to the County of Riverside's wastewater system; all of the proposed utility services, including wastewater treatment would be provided by the City of Corona Utilities Department. The proposed project's impact to the existing wastewater systems were identified in the Preliminary Wastewater Report prepared by KWC Engineers in November 2021. The report provides information identifying the contributions to the current and ultimate sewer system and recommends sewer facilities to support the proposed project. The criteria used in the wastewater report are in accordance with the City's 2005 SMP and the 2012 Corona Department of Water and Power (CDWP) Design Policy.

Sewage flows for the proposed project were calculated using the following sewage generation factors:

- Medium Density (6-15 dwelling unit per acre [DU/acre]): 240 GPD/DU
- General Community Commercial: 1,050 GPD/acre
- Residential Low Density (3-6 DU/acre)/Low Medium Density (6-8 du/ac): 270 GPD/DU

Table 3.20-9 shows the calculated values for Average Dry Weather Flow (ADWF) and the Peak Dry Weather Flow (PDWF) for the proposed project. Calculations are based on the proposed land use plan and sewer generation factors stated above. The estimated PDWF for the proposed project based on the City's peak flow equation is approximately 0.6708 cfs.

Table 3.20-9: Projected Sewage Flows

Project Sewer Drainage Area[1]	PA within Sewer Drainage Area	Tributary Sewershed	Land Use	Quantity within each Drainage Area	Unit Flow Factor	Average Dry Weather Flow (ADWF)		Peak Dry Weather Flow (PDWF)	
						mgd	cfs	mgd	cfs
A	PA 1	10	MDR	66 units	240 GPD/unit	0.0158	0.0245	0.0416	0.0643
B	PA 2	10	NC	0.78 acre	1,050 GPD/ac	0.0008	0.0013	0.0027	0.0042
C	PA 4	10	MDR	35 units	240 GPD/unit	0.0084	0.013	0.0232	0.0359

Project Sewer Drainage Area[1]	PA within Sewer Drainage Area	Tributary Sewershed	Land Use	Quantity within each Drainage Area	Unit Flow Factor	Average Dry Weather Flow (ADWF)		Peak Dry Weather Flow (PDWF)	
						mgd	cfs	mgd	cfs
D	PA 4	10	MDR	12 units	240 GPD/unit	0.0029	0.0045	0.0087	0.0134
E	PA 3; PA 5	10	MDR	107 units	240 GPD/unit	0.0257	0.0397	0.0648	0.1003
F	PA 3; PA 5	10	MDR	89 units	240 GPD/unit	0.0214	0.033	0.0547	0.0846
G	PA 6	10	LDR	56 units	270 GPD/unit	0.0151	0.0234	0.0398	0.0616
					Totals	**0.0901**	**0.1394**	**0.2057**	**0.3182**

Notes:
cfs = cubic feet per second
GPD = gallons per day
LDR = Low Density Residential
MDR = Medium Density Residential
mgd = million gallons per day
NC = Neighborhood Commercial
[1] Visualization of the sewer drainage areas is available at the Sewer Node Demand Areas exhibit in Appendix C of the Preliminary Wastewater Report
Source: KWC Engineers. Preliminary Wastewater Report. November 2021.

Drainage Area A

Drainage Area A includes PA 1, which consists of 66 proposed Medium Density Residential (MDR) lots. PA 1 drains to a proposed lift station on the northwestern corner of the site. Wastewater would be pumped from the lift station, via force main to a proposed manhole on the southeastern side of the site. Wastewater flows would then be conveyed by a proposed gravity main in Serfas Club Drive until it reaches existing sewer manhole 1-21-10005 near the intersection of Serfas Club Drive and Pine Crest Drive. The estimated PDWF for Drainage Area A is 0.0643 cfs. The proposed public maintained lift station would be designed to accommodate a PWWF of 0.0813 cfs or 37 gpm but would be oversized to a capacity of 160 gpm to provide a velocity of 4.0 feet per second in a 4-inch force main. The pump station design configuration would consist of two slide rail mounted submersible pumps installed in a 5-foot inside diameter wet well. The two pumps of equal pumping capacity would provide adequate standby capacity if one pump is out of service. The lift station facilities (i.e., wet well, meter/valve vault, aboveground pump controls, telemetry, and back generator) shall be designed in accordance with City requirements.

Drainage Area B

Drainage Area B includes Planning Area 2, a proposed 0.78-acre commercial site. This area would drain via 4-inch sewer lateral to a proposed sewer line in Serfas Club Drive. The proposed line in Serfas Club Drive would convey sewerage flows from the surrounding planning areas and connect to

existing Node 1-21-10005 in Serfas Club Drive. The PDWF for Drainage Area B is approximately 0.0042 cfs.

Drainage Area C

Drainage Area C consists of 35 proposed MDR lots in PA 4. Sewerage flows from this area would be conveyed by gravity main to the proposed gravity sewer line in Serfas Club Drive, where it ultimately would connect to existing manhole Node 1-21-10005 near the intersection of Serfas Club Drive and Pinecrest Drive. The estimated PDWF for Drainage Area C is 0.0359 cfs.

Drainage Area D

Drainage Area D consists of 12 proposed MDR lots in PA 4. This area would connect to the existing sewer system in Pine Crest Drive at existing Node 1-21-10013. The approximate PDWF for Drainage Area D is 0.0134 cfs.

Drainage Area E

Drainage Area E is made up of a combined 107 MDR lots in both PAs 3 and 5. This proposed sewer network would connect to the existing sewer line in Frontage Road, which would ultimately connect to the existing sewer line Serfas Club Drive. The PDWF for Drainage Area E is approximately 0.1003 cfs.

Drainage Area F

Drainage Area F consists of 89 proposed MDR lots in PAs 3 and 5. This drainage area would connect to the existing sewer line in Pine Crest Drive. The PDWF for this area is approximately 0.0846 cfs.

Drainage Area G

Drainage Area G is composed of 56 LDR lots in PA 6. This drainage area would cross Kirkwood Drive and connect to the proposed Planning Area 5 sewer system. The PDWF is approximately 0.0616 cfs and is tributary to the existing manhole 1-21-10005 near the intersection of Serfas Club Drive and Pine Crest Drive.

All on-site sewer facilities are sized for 8-inch gravity sewer lines, which are to be constructed within the street right-of-way or dedicated utility easements. The pipe capacity of an 8-inch gravity sewer line is sufficient to accommodate the flows within the project site based on the projected sewer flow.

Future sewage flows were also analyzed due to portions of Coronita surrounding the project area not currently utilizing City sewer services. Coronita is not located within the City of Corona's jurisdictions; however, the City's 2005 SMP notes that the developments in this area have exhibited poor septic tank performance and would eventually be converted to operate on a City-maintained gravity sewer system. Therefore, the City of Corona plans to ultimately convert Coronita from private septic tanks to City sewer services. As shown in Table 3.20-10, the drainage areas affected by the surrounding development of Coronita, unincorporated Riverside County, future conversion to City sewer services are Drainage Area A, F, H, and I.

Table 3.20-10: Proposed Project and Coronita Projected Sewer Flows

Sewer Drainage Area	Proposed Flows from the Project		Projected Ultimate Flows from Coronita			Total ADWF		Total PDWF	
	ADWF (cfs)	PDWF (cfs)	Expected Quantity	ADWF (cfs)	PDWF (cfs)	MGD	CFS	MGD	CFS
A	0.0245	0.3565	74 du	0.0309	0.0796	0.0358	0.0554	0.0525	0.0813
B	0.0013	0.0042	0	0.0	0.0	0.0008	0.0013	0.0027	0.0042
C	0.013	0.0359	0	0.0	0.0	0.0084	0.0045	0.0232	0.0359
D	0.0045	0.0134	0	0.0	0.0	0.0029	0.0397	0.0087	0.0134
E	0.0397	0.1003	0	0.0	0.0	0.0257	0.051	0.0648	0.1003
F	0.033	0.0847	43 du	0.018	0.018	0.033	0.0234	0.0815	0.1262
G	0.0234	0.0616	0	0.0	0.0	0.0151	0.0234	0.0398	0.0616
H	0.0	0.0	6.73 ac 323 du	0.1459	0.3318	0.0943	0.1459	0.2143	0.3318
I	0.0	0.0	138 du	0.0576	0.1538	0.0373	0.0576	0.0912	0.1412
J	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
K	0.0	0.0	119 du	0.0497	0.1232	0.0321	0.0497	0.0796	0.1232
L	0.0	0.0	39 du	0.0163	0.0442	0.0105	0.0163	0.0285	0.0442
Total	1.394	0.6229	6.73 ac 736 du	0.3184	0.6959	0.2959	0.4578	0.8242	1.2758

Notes:
ADWF = Average Dry Weather Flow
cfs = cubic feet per second
PDWF = Peak Dry Weather Flow
Source: KWC Engineers. Preliminary Wastewater Report. November 2021.

As discussed in Impact USS-1a, Planning Areas 1 through 5 are in Sewershed 10 and would connect into the existing sewer system in Serfas Club Drive and Pine Crest Drive. Planning Area 6, located on Kirkwood Drive, is on the edge of Sewershed 10 and 14. Sewershed 10 is the City's most westerly sewershed extending from Kirkwood Drive to the westerly edge of the city limits, and from the northerly service area boundary to the southerly city limits, including the Corona Airport. This area includes five sewer lift stations. The Ahmanson, Green River, and Prado Sewer Lift Stations serve the westerly portion of the sewershed. The Sierra Del Oro Lift Station collects the flows generated by a portion of the Sierra Del Oro development, as well as flows from the tributary areas of Ahmanson, Green River, and Prado lift stations. The Sierra Del Oro List Station pumps the wastewater easterly along SR-91 to the gravity system that flows to WWTP-1 via the 21-inch Railroad Trunk Sewer. Sewershed 14 has many existing deficient pipes located downstream of the project site, near WWTP-1. Therefore, PA 6 would connect to the proposed sewer system in PA 5 and drain via the existing

trunk sewer system to WWTP-1 via Sewershed 10. The project's proposed sewer flows would tie into the City's existing trunk sewer system at Serfas Club Drive, Pine Crest Drive, and Frontage Road. The current treatment capacity of WWTP-1 is 11.5 mgd with an expected future reliable treatment capacity of 14.5 mgd with improvements.

To analyze the off-site sewer impacts, a hydraulic analysis was performed along the downstream trunk sewer system from the proposed project's sewer connection points to WWTP-1 near Railroad Street. The sewer flow projections show that the existing downstream pipeline segments are deficient based on the City's criteria in the existing, post-project, and ultimate conditions and would eventually be required to be replaced with larger capacity pipelines. The existing deficient pipelines total 71 linear feet of 42-inch pipe, 240 linear feet of 21-inch pipe, 2,500 linear feet of 18-inch pipe, and 156 linear feet of 12-inch pipe. The post-project condition would create an additional 546 linear feet of deficient existing 21-inch pipe. The ultimate condition would create an additional 380 linear feet of deficient existing 21-inch pipe and 1,152 linear feet of deficient existing 8-inch pipe. Therefore, the proposed project would be required to pay fair share contributions to offset impacts to the deficient wastewater pipelines. The fair share contributions would go toward an existing project for the sewer line improvements included in the City of Corona Adopted Capital Improvements Plan FY 2022 to FY 2026. The necessary improvements include the replacement of approximately 200 linear feet of sewer lines in two locations and are currently in the design phase. As such, impacts would be less than significant.

In summary, the Preliminary Wastewater Report recommends the construction of 8-inch on-site gravity sewer lines within each Planning Area of the project, a 160 gpm Sewer Lift Station and 4-inch force main within Planning Area 1, and off-site 8-inch gravity sewer lines from an on-site sewer system to existing sewer system connection points. Additionally, as stated above, the proposed project would be required to pay fair share contributions to support the construction of new sewer lines to WWTP-1. All of the sewer facilities would be designed to the CDWP current Design Policy and Standards. Therefore, with the improvements outlined in the Preliminary Wastewater Report there would be adequate treatment capacity within the City of Corona to serve the entire proposed project, and the relocation or construction of new or expanded wastewater treatment facilities or the expansion of existing facilities would not be required. As such, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Sewer Treatment Capacity

Impact USS-2b:	**Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Source(s): Project Application Materials, including the Preliminary Water Report, Preliminary Hydrologic Analysis, Preliminary Reclaimed Water Report, and Preliminary Wastewater Report; Preliminary Water Quality Management Plans; City of Corona 2020 Urban Water Management Plan; and City of Corona 2005 Water Master Plan.

Impact Analysis

Wastewater Treatment

As discussed in Impact USS-2a above, the proposed project is located in the City of Corona Utilities Department sewer sphere of influence. The City's existing wastewater system currently provides for collection and treatment of wastewater generated within its corporate boundaries, as well as a small portion of the neighboring City of Norco. The City's wastewater collection system includes approximately 368 miles of gravity sewer and force mains varying in size from 6 to 42 inches in diameter, 14 sewer lift stations, and three wastewater treatment/reclamation plants. All of the sewer flows generated within the City are conveyed by City's collection facilities to one of three wastewater treatment/reclamation plants. These three facilities currently have a combined treatment capacity of 15.5 mgd and have a total effluent of 15,434 AFY in 2020.

Planning Areas 1 through 5 are in Sewershed 10 and would connect into the existing sewer system in Serfas Club Drive and Pine Crest Drive. Planning Area 6, located on Kirkwood Drive, is on the edge of Sewershed 10 and 14. Sewershed 14 has a large number of existing deficient pipes located downstream of the project site, near WWTP-1; therefore, to support the development contemplated in the NOP PA 6 would be required to connect to the proposed sewer system in PA 5 and drain via the existing trunk sewer system to WWTP-1 via Sewershed 10. The project's proposed sewer flows would tie into the City's existing trunk sewer system at Serfas Club Drive, Pine Crest Drive, and Frontage Road.

WWTP-1 is located near the western area of the City and receives wastewater flows from a 13,000-acre area that is generally west of I-15. WWTP-1 serves the western portion of the City as well as a small portion of the City of Norco. Wastewater flows treated at this facility are treated by commutation, grit removal, primary sedimentation, fine bubble and mechanical aeration, final clarification, and chlorination. WWTP-1 consists of preliminary treatment, two secondary treatment facilities (Plant 1A and 1B), and a tertiary treatment facility. Up to 5.5 mgd of the flow from the headworks is directed to Plant 1A, which provides a biological nitrogen removal activated sludge process and secondary clarification. Up to 6.0 mgd is conveyed through Plant 1B, which has two oxidation ditches with biological nitrogen removal and secondary clarification. The secondary effluent is either sent to the tertiary treatment facility or to the Lincoln Avenue and Cota Street percolation ponds. The tertiary process produces Title 22 recycled water that can be used for irrigation and/or is discharged to Butterfield Drain, a tributary of Temescal Creek. The maximum flow to the tertiary facility is 9.0 mgd. Combined, both plants are operated to handle a total instantaneous design peak flow of 37.7 mgd. Existing treatment capacity at WWTP-1 is

approximately 11.5 mgd. Future improvements planned for WWTP-1 would increase this treatment capacity to 14.5 mgd. Effluent from WWTP-1 is discharged to Temescal Creek, percolation ponds, and the reclaimed water system. Table 3.20-11 below provides WWTP-1's total effluent from 2016 to 2020 compared to its capacity

Table 3.20-11: WWTP-1 Effluent Compared to its Capacity, 2016-2020

Year	Total Effluent		WWTP-1 Existing Capacity		Available Capacity Remaining	
	AFY	mgd	AFY	mgd	AFY	mgd
2016	12,164	9.04	15,470	11.5	3,306	2.46
2017	12,684	9.43	15,470	11.5	2,786	2.07
2018	12,969	9.64	15,470	11.5	2,501	1.86
2019	12,519	9.31	15,470	11.5	2,951	2.19
2020	12,336	9.17	15,470	11.5	3,134	2.33

Notes:
AFY = acre-feet per year
mgd = million gallons per day
Source: City of Corona. Urban Water Management Plan, 2020.

The proposed project is projected to have an ADWF of approximately 0.09 mgd (0.14 cfs) and a PDWF of approximately 0.2 mgd (0.32 cfs). Therefore, there is enough additional capacity to accommodate the wastewater flows from the proposed project. As discussed in Impact USS-2a, the Preliminary Wastewater Report also examined the project sewage flows from the surrounding Coronita area, which is planned to eventually connect to the City's sewer systems and discharge wastewater to WWTP-1. The Preliminary Wastewater Report found that the combined projected discharge from the proposed project and the projected connections in Coronita for ADWF is approximately 0.29 mdg and is approximately 0.82 mgd for PDWF. Even with the additional flows from Coronita, there would be additional capacity for the proposed project. As such, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Solid Waste Generation

Impact USS-3a: 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?

Source(s): Project Application Materials, City of Corona 2020-2040 General Plan and EIR, CalReycle Solid Waste Information System (SWIS), and CalRecycle Estimated Solid Waste Generation Rates.

Impact Analysis

As mentioned in Impact USS-1, the project proposes to connect all Planning Area utilities, including solid waste disposal by the City of Corona; even though Planning Areas 1 through 5 are located within the County of Riverside. Solid waste disposal would be provided by WMI. WMI is contracted by the City of Corona as the sole hauler of solid waste and provider of recycling services in the City. Solid waste service within the City is coordinated through the City's Public Works Department. WMI provides refuse collection to residential, commercial, and industrial customers. The company is responsible for 99,930 residential pickups in the City each week; 2,962 commercial customers typically with pick up service twice a week; and 286 industrial customers with roll off containers in the City.

WMI transports all solid waste from the City to the El Sobrante Landfill. Although owned by WMI, the landfill was constructed as a partnership between Riverside County and WMI in 1986. The El Sobrante Landfill, located at 10910 Dawson Canyon in Corona, is a Class III landfill that accepts regular MSW. The site is permitted to accept approximately 16,000 tons of solid waste per day from the counties of Riverside, Los Angeles, Orange, San Diego, and San Bernardino. The landfill has approximately 468 acres of permitted area for disposal activities with approximately 144 million cubic yards of remaining capacity. Table 3.20-12 shows the solid waste capacity information for the El Sobrante Landfill.

Table 3.20-12: Active Landfills Serving the Proposed Project

Active Landfills (days per year open)	Max. Permitted Throughput (tons/day)	Actual Average Disposal (tons/day)[1]	Max. Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Estimated Landfill Closure Date
El Sobrante	16,054	5,999	209,910,000	143,977,170	01/01/2051

Notes:
[1] As of 2020, when the City of Coronal 2020-2045 General Plan Technical Update EIR was approved.
Source: California Department of Resources Recycling and Recovery (CalRecycle); Solid Waste Information System (SWIS) 2021; City of Corona, 2020-2045 General Plan Technical Update EIR.

Using a solid waste generation factor of 12.23 pounds per household per day, provided by CalRecycle, the proposed project is estimated to generate approximately 4,464 pounds per day (1.99

tons per day).[29] Given that there is approximately 10,055 tons per day of capacity at the landfill, there is enough available capacity to accommodate the proposed project.

The project would be required to comply with federal, State, and local statutes that would reduce the amount of solid waste generated by the proposed project and diverted to landfills, which in turn would aid in the extension of the life of affected disposal sites. The proposed project would comply with all applicable solid waste statutes and regulations; as such, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Solid Waste Regulations

Impact USS-3b:	**Comply with federal, State, and local management and reduction statutes and regulations related to solid wastes including the County Integrated Waste Management Plan?**

Source(s): Project Application Materials, City of Corona 2020-2040 General Plan and EIR, CalReycle SWIS, and CalRecycle Estimated Solid Waste Generation Rates.

Impact Analysis

The proposed project would be required to comply with AB 939, which requires that local jurisdictions divert at least 50 percent of all solid waste generated by January 1, 2000, through source reduction, recycling, and composting. The CIWMP was prepared in accordance with the California Integrated Waste Management Act of 1989, Chapter 1095 (AB 939). The City's waste management efforts include waste prevention (or "source reduction"), recycling and composting, and combustion or disposal of waste into landfills. The City's waste management efforts center around the following programs: mandatory recycling for residential, commercial, and multi-family uses; household hazardous waste and electronic waste program; organics, mulch, compost, and tree recycling; bulky item pickup; waste oil/filter program; and construction and demolition recycling. As of 2017, there were 41 solid waste diversion programs in the City of Corona, including those for composting, household hazardous waste collection, public education programs, recycling, source reduction at businesses and schools, and special waste materials such as tires and

[29] California Department of Resources Recycling and Recovery (CalRecycle). 2021. Generation Rates web page, residential sector generation rates table. Website: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates. Accessed November 24, 2021.

concrete/asphalt/rubble.[30] Compliance with the diversion requirement in AB 939 is measured in part by comparing actual disposal rates with target disposal rates; disposal rates at or below target rates are consistent with AB 939. For 2015, the latest year for which data was approved, the target disposal rates for Corona were 8.6 pounds per day (ppd) per resident, and 18.6 ppd per employee; actual disposal rates in 2015—6.7 ppd per resident and 15.5 ppd per employee—were below target rates and thus were consistent with AB 939.[31] The proposed project is not anticipated to conflict with the County policies, other mandatory policies such as AB 341, or the CIWMP because it would comply with requirements regarding solid waste disposal, and the project site would be served by a solid waste disposal provider. Thus, the proposed project would have a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Non-Water Utilities

Impact USS-4: **Impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?**

a) Electricity

b) Natural gas

c) Communications Systems

d) Street Lighting

e) Maintenance of public facilities, including roads

f) Other governmental services.

Source(s): Project Application Materials, Utility Companies

Impact Analysis

a.) Electricity

SCE provides electricity service to the project area. SCE has delivered electricity to Southern and Central California for more than 130 years and is one of the nation's largest electric utilities. An SCE Design Representative confirmed that the proposed project is within SCE service territory, and SCE

[30] City of Corona. 2020. 2020-2040 General Plan Technical Update EIR. Website: https://www.coronaca.gov/home/showpublisheddocument/17290/637122799157100000. Accessed November 24, 2021.

[31] California Department of Resources Recycling and Recovery (CalRecycle). 2019. Jurisdiction Diversion/Disposal Rate Summary, Corona 2015. Website: https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006. Accessed November 24, 2021.

would serve the proposed project's electrical requirements consistent with the CPUC and Federal Energy Regulatory Commission tariffs.[32] During construction, the proposed project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other sources. Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during site clearing, grading, paving, and building construction. The types of equipment could include gasoline- and diesel-powered construction and transportation equipment, including trucks, bulldozers, frontend loaders, forklifts, and cranes. Other equipment could include construction lighting, field services (office trailers), and electrically driven equipment such as pumps and other tools. Single-wide mobile office trailers, which are commonly used in construction staging areas, generally range in size from 160 square feet to 720 square feet. A typical 720-square-foot office trailer would consume approximately 19,923 kilowatt-hour (kWh) during the approximately 3-year construction period (Appendix B).[33]

Operation of the proposed project would consume energy as part of building operations and transportation activities. Building operations for the proposed project would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, and electronics. Based on CalEEMod energy use estimations, operations (for both the residential and commercial buildings) would consume approximately 3.02 million kWh of electricity on an annual basis (Appendix B). California's Renewables Portfolio Standard (RPS) requires that 33 percent of electricity retail sales be served by renewable energy sources by 2020. The proposed project would be served with gas provided by SoCalGas. SoCalGas offers renewable natural gas captured from sources like dairies, wastewater treatment plants and landfills.[34] The proposed project would be served with electricity provided by SCE. In 2019, SCE's power mix included 35 percent eligible renewable (biomass and biowaste, geothermal, eligible hydroelectric, solar, and wind), 33 percent unspecified sources of power, 16 percent natural gas, 8 percent large hydroelectric, and 8 percent nuclear. SCE also offers a Green Rate 50 percent option that sources 68 percent of its power mix from eligible renewable energy sources, and a Green Rate 100 percent option that sources 100 percent of its power mix from eligible renewable energy sources.[35]

Existing lines for electricity exist in the surrounding streets of Serfas Club Drive, Ridgeview Terrace, Mountain View Drive, Pine Crest Drive, Paseo Grande, and Kirkwood Drive. The existing lines are proposed to be extended into the project area via underground conduits and connect to those necessary for the proposed project. These utility services would be located underground within all of the proposed project's internal streets, with aboveground appurtenances (transformers, etc.) behind

[32] Southern California Edison (SCE). 2021. About Us web page. Website: https://www.sce.com/about-us. Accessed November 12, 2021.

[33] Electricity use for field services was calculated by multiplying the estimated annual electricity use for a single-wide mobile office trailer by the number of years of construction for the proposed project. These calculations and assumptions can be found in the Energy appendix.

[34] Southern California Gas Company (SoCalGas). Renewable Gas. Website: https://www.socalgas.com/sustainability/renewable-gas. Accessed October 27, 2021.

[35] Southern California Edison (SCE). 2019 Power Content Label. https://www.sce.com/sites/default/files/inline-files/SCE_2019PowerContentLabel.pdf. Accessed October 27, 2021.

or adjacent to face of curbs or sidewalks at various locations. Therefore, the existing facilities would be sufficient, and impacts would be less than significant.

b.) Natural Gas

SoCalGas provides natural gas service to the project area. SoCalGas is the nation's largest natural gas distribution utility and provides energy to 21.8 million consumers through 5.9 million meters in more than 500 communities. The company's service territory encompasses approximately 24,000 square miles throughout Central and Southern California.[36] It is not anticipated that natural gas would be consumed as part of project construction. Based on CalEEMod energy use estimations, operations (for both the residential and commercial buildings) would consume an estimated 12.2 million British thermal unit (MBtu) of natural gas on an annual basis (Appendix B). Existing lines for natural gas exist in the surrounding streets of Serfas Club Drive, Ridgeview Terrace, Mountain View Drive, Pine Crest Drive, Paseo Grande, and Kirkwood Drive. The existing lines are proposed to be extended into the project area via underground conduits and connect to those necessary for the proposed project. These utility services would be located underground within all of the proposed project's internal streets, with aboveground appurtenances (transformers, etc.) behind or adjacent to face of curbs or sidewalks at various locations. Therefore, the existing facilities would be sufficient, and impacts would be less than significant.

c.) Communication Systems

SBC would provide the land line telephone service for the residents of the proposed project. Cable TV and high-speed internet services are provided by Comcast of Los Angeles. The existing facilities would be sufficient, and impacts would be less than significant.

d.) Street Lighting

A Master Homeowner's Association (HOA) would be formed as the common area mechanism for the project site. Maintenance of private/quasi-public entities, such as streetlights, would be the responsibility of the HOA. According to the Specific Plan, maintenance responsibilities for public parks, right-of-way, open space, landscape areas, and street lighting may be divided among Community Services Districts (CSDs), Mello-Roos Community Facilities Districts, Landscape and Lighting Districts, Master Homeowner's Association or other similar associations or districts. The Trails at Corona Specific Plan identifies the HOA, CSDs, the County of Riverside, and the City of Corona as responsible for maintenance of the proposed project's streetlights. No expanded facilities would be required, and as such, impacts would be less than significant. See Table 3.20-14 below, which provides more detail on the maintenance responsibility of entities within the proposed project.

[36] Southern California Gas Company (SoCalGas). 2021. About SoCalGas web page. Website: https://www.socalgas.com/about-us/company-profile. Accessed November 12, 2021.

e.) Maintenance of public facilities, including roads

As discussed above, successful operation of maintenance district and associations is important in ensuring appropriate long-term maintenance of the project site. Maintenance of private/quasi-public open space and recreation facilities, private roadways, commercial circulation and common landscape areas, and residential common areas would be the responsibility of the residential and commercial associations that are formed within the project area, including the HOA. Maintenance responsibilities for public parks, rights-of-way, open space, landscape areas, and street lighting may be divided among CSDs, Mello-Roos Community Facilities Districts, Landscape and Lighting Districts, Master HOA or other similar associations or districts. Maintenance and upkeep of private common areas and amenities must also comply with the Master HOA Code, Covenants, and Restrictions that govern the project site. RCFC&WCD would be responsible for the maintenance and upkeep of storm drains within a public or private right-of-way and the regional detention basin. As such, RCFC&WCD would have the right and would regularly and routinely maintain the basin, its inlet and outlet, and storm drain facilities, as needed. The associations shall be responsible for private roads, parking, open space areas, signing, landscaping, irrigation, common areas, on-site sewers, storm drains, retention basins and other responsibilities as necessary. Table 3.20-13 below provides the maintenance responsibility of different private/public entities in the proposed project. An "X" indicates that the organization identified by the "X" is responsible for the maintenance of that entity. As such, no public facilities would need to expand, and impacts would be less than significant.

Table 3.20-13: Maintenance Responsibility for the Proposed Project

Entity	HOA	CSA or Public Agency	County of Riverside Transportation	Riverside County Flood Control	City of Corona	Other Service Provider
Common open space (including common area slopes)	X					
Natural open space	X	X				X
Parks	X	X				
Landscape parkways within public right-of-way		X	X			
Monumentation and hardscape elements	X					
Public water/sewer					X	
Storm drains/drainage within public right-of-way			X	X		
Storm drains/drainage within private right-of-way	X			X		
Water quality management facilities (including BMPs)	X	X				X

Entity	HOA	CSA or Public Agency	County of Riverside Transportation	Riverside County Flood Control	City of Corona	Other Service Provider
Sidewalks and trails within public right-of-way		X	X			
Sidewalks and trails within private right-of-way	X					
Street lighting	X	X	X		X	
Street sweeping	X	X				
Public streets			X			
Private Streets	X					
Manufactured slopes	X					
Rear yard maintenance	X					
Regional Detention Basin				X		
Existing Recreational Pond	X					
Notes: HOA = Homeowner's Association Source: Trails at Corona Draft Specific Plan.						

f.) Other governmental services

Presently, no other governmental services would be provided to the proposed project; therefore, no additional facilities would be required, and no impacts would occur.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

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3.21 - Wildfire

This section describes the existing conditions for the potential for wildfires in the project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to wildfire that could result from implementation of the project. Information in this section is based on information provided by the County of Riverside 2020 General Plant, City of Corona 2020-2040 General Plan, Geographic Information System (GIS) database, California Department of Forestry and Fire Protection (CAL FIRE) Fire Hazard Severity Zone in State or Federal Responsibility Area Maps, and Project Application Materials.

3.21.1 - Existing Conditions

Wildfire Hazard Area Designations

County of Riverside

Much of Riverside County (County), particularly throughout the western and central areas, is located in a Fire Hazard Severity Zone (FHSZ). Most of these areas are designated "Very High" Fire Hazard Severity Zones (VHFHSZ) in State or Federal Responsibility Areas, while some of these areas are designated VHFHSZ in Local Responsibility Areas (LRAs).[1] Furthermore, according to Table S-1, Multi-Hazard Safety Actions, in the County of Riverside 2020 General Plan Safety Element, the County is categorized as high risk for wildland fires.

City of Corona

Based on historical frequency of wildfires and local knowledge, the City of Corona (City) has accepted the CAL FIRE determinations by adopting the fire hazard severity zones. Corona Fire provides services through a contract with Riverside County to the unincorporated communities of Coronita, Home Gardens, El Cerrito, and Temescal Valley. Under this contract, Corona Fire provides backup services to Home Gardens, secondary to the services provided by County Station No. 13 in Home Gardens. The County, CAL FIRE, and the United States Forest Service collaborate to serve the local, State, and federal responsibility areas. Each year, Corona Fire responds to more than 13,000 calls for structural fires, freeway and roadway accidents, wildland fires, hazardous material incidents, search and rescue, and emergency medical services, among others.[2]

Project Site

According to the County of Riverside 2020 General Plan Safety Element, the portion of the project site (Planning Areas 1 through 5) is not listed as a VHFHSZ for LRAs.[3] According to Riverside County's Map My County GIS database, the project area is not categorized as having a risk from wildland fires.[4] According to the City of Corona 2020-2040 General Plan, Figure PS-11 Wildfire Hazard Severity Zone, the portion of the project site that is in the City (Planning Area 6) is not located in a Wildfire

[1] Office of the State Fire Marshall. 2009. Very High Fire Hazard Severity Zones in LRA. December 21. Website: https://osfm.fire.ca.gov/media/5911/corona.pdf. Accessed November 8, 2021.
[2] City of Corona. 2020. 2020-2040 General Plan, Safety Element. Website: https://www.coronaca.gov/home/showpublisheddocument/17292/637396648435970000. Accessed November 8, 2021.
[3] County of Riverside. 2020. General Plan, Safety Element. Website: https://planning.rctlma.org/Portals/14/genplan/2021/elements/Ch06_Safety_092821.pdf. Accessed November 1, 2021.
[4] County of Riverside. 2019. Map My County Geographic Information (GIS). Website: https://gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public. Accessed May 23, 2019.

Hazard Severity Zone.[5] Additionally, according to the General Plan Figure PS-10 Wildfire History map, Planning Area 6 has never experienced a wildfire between 1990 and 2021.

Wildfire-conducive Conditions

Grassland or other vegetation in California is easily ignited, particularly in dry seasons. Wildfire is a serious hazard in high dry fuel load areas, particularly near areas of natural vegetation and steep slopes since fires tend to burn more rapidly on steeper terrain. Wildfire is also a serious hazard in areas of high wind given that fires will travel faster and farther geographically when winds are higher. Furthermore, wildfire is more likely in areas where electric power lines are located above ground where they can come into contact with either vegetation or building materials.

County of Riverside

According to the County of Riverside 2020 General Plan Safety Element, a significant portion of the County is undeveloped and consists of rugged topography with highly flammable vegetation. In particular, the hillside terrain of the County has a substantial fire risk. Fire potential for the County is typically greatest in the months of August, September, and October, when dry vegetation coexists with hot, dry Santa Ana winds. However, in Riverside County, fires with conflagration potential can occur at any time of the year.

The Safety Element notes that the Santa Ana winds have caused large amounts of damage and increased the fire damage level dramatically. Santa Ana winds are generally defined as warm, dry winds that blow from the east or northeast (offshore). These winds occur below the passes and canyons of the coastal ranges of Southern California. Santa Ana winds often blow with exceptional speed in the Santa Ana Canyon. The complex topography of Southern California, combined with various atmospheric conditions, creates numerous scenarios that may cause widespread or isolated Santa Ana events. Commonly, Santa Ana winds develop when a region of high pressure builds over the Great Basin (the high plateau east of the Sierra Nevada and west of the Rocky Mountains, including most of Nevada and Utah). Santa Ana winds commonly occur between October and February with December having the highest frequency of events. Summer events are rare. Wind speeds are typically north to east at 40 miles per hour (mph) through and below passes and canyons with gusts to 58 mph. Stronger Santa Ana winds can have gusts greater than 69 mph over widespread areas and, in rare instances, gusts greater than 115 mph in specific areas. Frequently, the strongest winds in the basin occur during the night and morning hours due to the absence of a sea breeze.[6] Therefore, there is a statistically significant chance that this worst-case fire suppression scenario could occur.

City of Corona

Corona is surrounded by extensive open space—including the Cleveland National Forest, Chino Hills, Corona Hills, Gavilan Hills, and Temescal Valley—all susceptible to wildfire. The hillsides that surround the City are subject to wildfires during the summer weather. Cyclical drought in Southern

[5] City of Corona. 2020. 2020-2040 General Plan. Website: https://www.coronaca.gov/home/showpublisheddocument/17292/637396648435970000. Accessed November 1, 2021.
[6] County of Riverside. 2021. Riverside County General Plan Safety Element. September 28. Website: https://planning.rctlma.org/Portals/14/genplan/2021/elements/Ch06_Safety_092821.pdf. Accessed November 23, 2021.

California followed by seasonally wet years have also resulted in a dramatic increase in vegetation growth and dying, resulting in an increasing frequency of wildfires. This has become more of a threat in the City as urban development has encroached into open space areas in many communities, expanding the wildland urban interface.[7]

Project Site

The property consists of the former Mountain View Golf Course, which is no longer operational and has remained vacant. As a former golf course, the property consists of remnant fairways, cart paths, a clubhouse foundation slab, and other features, including former golf course ponds. As noted in Section 3.4, Biological Resources, the majority of the site appears to be regularly mowed. The site is entirely surrounded by urban development, the majority being residential uses. As such, the project site does not contain wildfire-conducive conditions. However, the foothills of the Santa Ana Mountains are located approximately 1 mile west and south of the project site, with VHFHSZ areas located as close as 0.5 mile of the project site.[8] According to the County of Riverside General Plan Safety Element, the combination of complex terrain, Mediterranean climate, and productive natural plant communities, along with ample natural ignition sources, has created conditions for extensive wildfires. Risk and vulnerability to unincorporated Riverside County from wildfire is of significant concern, especially in the forests and shrublands in the western county. Three types of fires are of concern to unincorporated Riverside County: (1) wildfires, (2) wildland urban interface fires, and (3) structural fires.[9]

Emergency and Evacuation Routes/Access

Emergency management functions in the City of Corona are coordinated through the Emergency Management Division under the Corona Fire Department and adhere to the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). SEMS is a statewide California system that police officers, firefighters, and other emergency and disaster responders use in disaster events. SEMS is the cornerstone of California's emergency response system and the fundamental structure for the response phase of emergency management. The system unifies all elements of California's emergency management community into a single integrated system.

County of Riverside

The Riverside County Emergency Management Department (EMD) works to implement emergency programs that aim to address the four phases of emergency management: mitigation, preparation, response, and recovery. The EMD drafted and published the 2018-2021 EMD Strategic Plan, which contains a framework of common goals and priorities that intend to improve coordination and focus among the personnel to meet the mission of the department.[10] However, the 2018-2021 EMD Strategic Plan does not specify any emergency or evacuation routes. Further, the Riverside County

[7] County of Riverside. 2021. Riverside County General Plan Safety Element. September 28. Website: https://planning.rctlma.org/Portals/14/genplan/2021/elements/Ch06_Safety_092821.pdf. Accessed November 23, 2021.
[8] California Department of Forestry and Fire Protection (CAL FIRE). 2009. Very High Fire Hazard Severity Zones in LRA. December 21. Website: https://osfm.fire.ca.gov/media/5911/corona.pdf. Accessed November 23, 2021.
[9] County of Riverside. 2021. Riverside County General Plan Safety Element. September 28. Website: https://planning.rctlma.org/Portals/14/genplan/2021/elements/Ch06_Safety_092821.pdf. Accessed November 23, 2021.
[10] Riverside County: Emergency Management Division. Website: https://www.rivcoemd.org/About-Us. Accessed November 23, 2021.

Mountain Area Safety Taskforce has developed evacuation routes for mountain communities; however, the project site is not located within the mountain counties and would not impact the evacuation routes.[11]

City of Corona

The City of Corona has prepared an emergency operations plan to ensure the most effective allocation of resources for the maximum benefit and protection of the civilian population in time of emergency. To ensure the effectiveness of emergency planning and hazard mitigation, the Corona Fire Department works with an array of community partners. These include utility service providers (water, power, and sanitation), schools, community organizations, residents, and other local entities. Mutual and automatic aid agreements are also maintained with numerous surrounding local, State, and federal agencies to allow for appropriate backup services in case of an emergency, disaster, or other similar event.

Project Site

Based on the Addendum to the Strategic Plan and confirmation by the Riverside County Fire Department (RCFD), the project area is considered to be within the "suburban" category. "Suburban" is described as medium- to medium-high density residential, light industrial, and/or light commercial. As a light industrial use, the proposed project would align with the aforementioned characterization. The standard response time for a suburban land use is 6 minutes 30 seconds.

There are three Riverside County fire stations within a 5-mile radius of the project site:

- Riverside County Fire Department Station No. 57, 3367 Corydon Avenue, Norco, CA 92860 (approximately 3.94 miles away).
- Riverside County Fire Department Station No. 13, 3777 South Neece Street, Corona, CA 92879 (approximately 4.61 miles away).
- Riverside County Fire Department Station No. 14, 1511 Hamner Avenue, Norco, CA 92860 (approximately 3.19 miles away).

There are six City of Corona fire stations within a 5-mile radius of the project site:

- Corona Fire Station No. 1, 540 Magnolia Avenue, Corona, CA 92879 (approximately 2.73 miles away).
- Corona Fire Station No. 2, 225 East Harrison Street, Corona, CA 92879 (approximately 2.51 miles away).
- Corona Fire Station No. 3, 790 South Smith Avenue, Corona, CA 92882 (approximately 0.74 mile away).
- Corona Fire Station No. 4, 915 McKinley Street, Corona, CA 92879 (approximately 4.69 miles away).

[11] Riverside County Mountain Area Safety Taskforce. 2010. Mountain Communities Evacuation Routes. Website: http://rvcweb.org/MASTPortal/Portals/0/EvacRoutes/WUIEvacRoutes.pdf. Accessed September 16, 2021.

- Corona Fire Station No. 5, 1200 Canyon Crest Drive, Corona, CA 92882 (approximately 1.24 miles away).
- Corona Fire Station No. 6, 110 West Upper Drive, Corona, CA 92882 (approximately 2.72 miles away).

According to the City of Corona 2020-2040 General Plan, the proposed project is within the Response Zone for Corona Fire Station No. 3.

In terms of evacuation routes near the project site, the most likely evacuation route would be State Route (SR) 91 (in the east/west direction), SR-71 (in the north/south direction), and Interstate 15 (I-15) (in the north/south direction).

Post-fire Slope Instability and Drainage Pattern Changes

Slope instability from wildfire scarring of the landscape can result in slope instability in the form of more intensive flooding and landslides. These post-fire slope soils and altered drainage patterns can more easily creep away downslope sides of foundations and reduce lateral support.

The County of Riverside

According to the County of Riverside General Plan 2015 Safety Element, unincorporated Riverside County contains regions susceptible to slope instability. This instability can include deep-seated landslides, rockfalls, soil slumps, and debris flows. Most areas susceptible to slope instability are designated for open space or rural development. Land subsidence and related issues have been well-documented in unincorporated Riverside County, and most of the early documented cases of subsidence affected only agricultural land or open space. As urban areas have expanded, so too have the impacts of subsidence on structures for human occupancy.[12]

City of Corona

With the many waterways traversing the City, the risk of flooding is a concern. The City's landscape ranges from the alluvial fan at the Prado Dam Basin to the abruptly rising terrain of the Santa Ana Mountains in the southwest area of the City. The general drainage pattern runs in a northwesterly direction toward the Santa Ana River. Substantial flows reach the mouths of the canyons and then spread out on the alluvial fan formed by several watercourses draining from the mountains. Seasonal rains can be intense, particularly in the foothills, making Corona susceptible to flooding. The hillsides that surround the City are subject to mudslides during storm events.

Corona's flood-prone areas are given two designations. Special Flood Hazard Areas (SFHAs), or the 100-year zone, have a 1 percent chance of flooding in any given year. Northwestern Corona, from Prado Dam to the Airport and westward through Santa Ana Canyon, is covered by a SFHA. Mabey Canyon Wash and Temescal Creek are also SFHAs. A large portion of central Corona is within a

[12] County of Riverside. 2021. Riverside County General Plan Safety Element. September 28. Website: https://planning.rctlma.org/Portals/14/genplan/2021/elements/Ch06_Safety_092821.pdf. Accessed November 23, 2021.

"moderate" or 500-year flood zone, with a 0.2 percent chance of flooding in any year. This includes areas around Temescal Wash, Mabey Canyon Wash, Main Street Wash, and the Arlington Channel.[13]

Project Site

As noted in Section 3.7 Geology and Soils, the proposed project contains some slopes with 15 to 25 percent slope angles, and a small portion of the project site near Planning Areas 1 and 3 has low to locally moderate susceptibility to seismically induced landslides and rockfalls. The project site does not contain any slopes steeper than 25 percent and the proposed project would not create cut or fill slopes higher than 10 feet. The project site has not experienced previous wildfires and does not contain slopes with little to no vegetation caused by a fire. According to the City of Corona 2020-2040 General Plan Figure PS-5 Flood Hazards, the portion of the proposed project in the City (Planning Area 6) is not located in either of the City's Flood Hazard Zones. Additionally, the project site is not located in an area ranked as zero for Landslide Susceptibility, meaning that it has an extremely low chance of landslide based on the rock strength and slope class.

3.21.2 - Regulatory Framework

Federal Regulations

United States Department of Interior

Review and Update of the 1995 Federal Wildland Fire Management Policy

1. **Safety—**Firefighter and public safety is the first priority. All Fire Management Plans and activities must reflect this commitment.
2. **Fire Management and Ecosystem Sustainability—**The full range of fire management activities will be used to help achieve ecosystem sustainability, including its interrelated ecological, economic, and social components.
3. **Response to Wildland Fire—**Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected, dictate the appropriate management response to the fire.
4. **Use of Wildland Fire—**Wildland fire will be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions contained in operational plans.
5. **Rehabilitation and Restoration—**Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, and safety and to help communities protect infrastructure.
6. **Protection Priorities—**The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other

[13] City of Corona. 2020. 2020-2040 General Plan. Website: https://www.coronaca.gov/home/showpublisheddocument/17292/637396648435970000. Accessed November 1, 2021.

property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have been committed to an incident, these human resources become the highest value to be protected.

7. **Wildland Urban Interface—**The operational roles of federal agencies as partners in the wildland urban interface are wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify the mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer and may also enter into formal agreements to assist State and local governments with full structural protection.)
8. **Planning—**Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations.
9. **Science—**Fire Management Plans and programs will be based on a foundation of sound science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical, and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science program. Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, Fire Management Plans, and implementation plans.
10. **Preparedness—**Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.
11. **Suppression—**Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.
12. **Prevention—**Agencies will work together and with their partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires.
13. **Standardization—**Agencies will use compatible planning processes, funding mechanisms, training and qualification requirements, operational procedures, values-to-be-protected methodologies, and public education programs for all fire management activities.
14. **Interagency Cooperation and Coordination—**Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.

15. **Communication and Education—**Agencies will enhance knowledge and understanding of wildland fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.
16. **Agency Administrator and Employee Roles—**Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency administrators are responsible and will be held accountable for making employees available.
17. **Evaluation—**Agencies will develop and implement a systematic method of evaluation to determine effectiveness of projects through implementation of the 2001 Federal Fire Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

State Regulations

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Responding to hazardous-materials incidents is one part of this plan. The plan is administered by the California Governor's Office of Emergency Services, which coordinates the responses of other agencies. When the City of Corona experiences an emergency, an Emergency Operations Center (EOC) may be opened. In the event an EOC is opened, emergency response team members coordinate efforts and work with local fire and police agencies, emergency medical providers, the California Highway Patrol, CAL FIRE, California Department of Fish and Wildlife, and California Department of Transportation (Caltrans).

California Department of Forestry and Fire Protection Threat Potential Mapping

CAL FIRE has mapped fire threat potential throughout California. CAL FIRE maps fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The threat levels include No Fire Threat, Moderate, High, and Very High fire threat. Further, the maps designate the City of Corona as the LRA of the project site. Additionally, CAL FIRE produced a 2010 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. The CAL FIRE Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Building Standard Code

The State of California provided a minimum standard for building design through the current California Building Standards Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The current CBC is based on the most recent International Building Code but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are

plan-checked by local City and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and particular types of construction.

California Public Resources Code

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors[14] on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code [PRC] § 4442).
- Appropriate fire suppression equipment would be maintained during the highest fire danger period—from April 1 to December 1 (PRC § 4428).
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC § 4427).
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (PRC § 4431).

Local Regulations

County of Riverside General Plan

The County of Riverside 2020 General Plan establishes the following policies related to wildfire hazards that are related to this analysis:

Safety Element

Policy S-5.1

- Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following: All proposed development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire and Building and Safety departments.
- All proposed development and construction shall meet minimum standards for fire safety as defined in the Riverside County Building or County Fire Codes, or by

[14] A spark arrestor is any device that prevents the emission of flammable debris from a combustion source (i.e., fireplaces, internal combustion engines, and wood burning stoves).

County zoning, or as dictated by the Building Official or the Transportation Land Management Agency based on building type, design, occupancy, and use.

- All proposed development and construction shall meet minimum standards for fire safety as defined in the Riverside County Building or County Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency based on building type, design, occupancy, and use.
- In addition to the standards and guidelines of the California Building Standards Code and California Fire Code fire safety provisions, continue to implement additional standards for high-risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Protection Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor hinder evacuation from fire, including potential blockage of stairways or fire doors.
- In addition to the standards and guidelines of the California Building Standards Code and California Fire Code fire safety provisions, continue to implement additional standards for high-risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Protection Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor hinder evacuation from fire, including potential blockage of stairways or fire doors.
- Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County Ordinances.
- Proposed development and construction in Fire Hazard Severity Zones shall use single loaded roads to enhance fuel modification areas, unless otherwise determined by the Riverside County Fire Chief.
- Proposed development and construction in Fire Hazard Severity Zones shall provide a defensible space or fuel modification zones to be located, designed, and constructed that provide adequate defensibility from wildfires.

Policy S-5.2 Encourage continued operation of programs for fuel breaks, brush management, controlled burning, revegetation and fire roads.

Policy S-5.3 Monitor fire prevention measures (such as fuel reduction) through a site-specific fire prevention plan to reduce long-term fire risks in the Very High Fire Hazard Severity Zones.

Policy S-5.4 Limit or prohibit development or activities in areas lacking water and access roads.

Policy S-5.5 Encourage proposed development in Fire Hazard Severity Zones to develop where fire and emergency services are available or planned.

Policy S-5.6 Demonstrate that the proposed development can provide fire services that meet the minimum travel times identified in Riverside County Fire Department Fire Protection and EMS Strategic Master Plan.

Policy S-5.7 Minimize pockets of flammable vegetation that increase likelihood of fire spread through conceptual landscaping plans to be reviewed by Planning and Fire Departments in the Fire Hazard Severity Zones. The conceptual landscaping plan of the proposed development shall at a minimum include:

- Plant palette suitable for high fire hazard areas to reduce the risk of fire hazards.
- Retention of existing natural vegetation to the maximum extent feasible.
- Removal of on-site combustible plants.

Policy S-5.8 Design to account for topography of a site and reduce the increased risk from fires in the Fire Hazard Severity Zones located near ridgelines, plateau escarpments, saddles, hillsides, peaks, or other areas where the terrain or topography affect its susceptibility to wildfires by:

- Providing fuel modification zones with removal of combustible vegetation but minimizing visual impacts and limiting soil erosion.
- Replacing combustible vegetation with fire resistant vegetation to stabilize slopes.
- Submitting topographic map with site-specific slope analysis.
- Submitting erosion and sedimentation control plans.
- Providing a minimum 30 foot of setback from the edge of the fuel modification zones.
- Minimizing disturbance of 25 percent or greater natural slopes.

Policy S-5.9 Reduce fire threat and strengthen firefighting capability so that the County could successfully respond to multiple fires.

Policy S-5.11 Utilize ongoing brush clearance fire inspections to educate homeowners on fire prevention tips by implementing annual countywide weed abatement program.

Policy S-5.12 Conduct and implement long range fire safety planning, including stringent building, fire, subdivision, and municipal code standards, improved infrastructure, and improved mutual aid agreements with the private and public sector.

Policy S-5.13 Develop a program to utilize existing reservoirs, tanks, and water wells in the County for emergency fire suppression water sources.

Policy S-5.15 Continue to utilize the Riverside County Fire Department Fire Protection Plan and EMS Strategic Master Plan as the base document to implement the goals and objectives of the Safety Element.

Policy S-5.16 Encourage property owners to utilize clustering and Transfer of Development Rights (TDR) program when developing lands within Fire Hazard Severity Zones by:

- Restricting the development of a property through placement of conservation easement.
- Acquiring the conservation easements similar to that of MSHCP Program.

Policy S-5.18 Ensure that the Fire Department has appropriate municipal staffing and fire protection planning staff that meet the needs of development pressure and adequately respond to long range fire safety planning.

Policy S-5.19 Implement a coordination program with fire protection and emergency service providers to reassess fire hazards after wildfire events and to adjust fire prevention and suppression needs, as necessary.

Riverside County Fire Department

The RCFD is the Operational Area Coordinator for the California Fire and Rescue Mutual Aid System for all fire service jurisdictions in Riverside County. The RCFD also has several automatic aid agreements with other city jurisdictions as well as the adjacent National Forests. The County of Riverside contracts with the State of California for fire protection. Public Resources Code (PRC) 4142 affords legal authority for CAL FIRE to enter into agreements with local government entities to provide fire protection services with the approval of the Department of General Services. By virtue of this authority, CAL FIRE administers the RCFD.

Temescal Canyon Area Plan

The information below regarding wildland fires is from the 2018 Temescal Canyon Area Plan (TCAP), which sets forth policies for the Temescal Canyon Area, in which the project is located. As a result of the vast amounts of undeveloped, sloping terrain and the presence of certain types of vegetation such as the oak woodlands and chaparral habitat, much of the Temescal Canyon Area is subject to a high risk of fire hazards. Methods to address this hazard include such techniques as avoidance of building in high risk areas, creating setbacks that buffer development from hazard areas, maintaining brush clearance to reduce potential fuel, use of low fuel landscaping, and careful application of fire-retardant building techniques. The TCAP contains the following policy regarding wildfire hazards:

TCAP 3.2 Hillside development and grading shall be allowed in accordance with policies found in the Hillside Development and Slope section of the General Plan Land Use Element and the Scenic Resources section of the Multipurpose Open Space Element. The specific plan shall include design guidelines and development standards for hillside development and grading which shall apply in place of more general Riverside County design guidelines and standards.

TCAP 5.4 Preserve areas subject to erosive flooding in a natural state.

TCAP 5.5 Encourage intensive recreation development, such as parks and golf courses, along the riverbanks above and out of erosive flooding areas.

TCAP 21.1 Protect life and property from wildfire hazards through adherence to the Fire Hazards section of the General Plan Safety Element.

City of Corona General Plan

The City of Corona 2020-2040 General Plan establishes the following policies related to wildfire hazards that are related to this analysis:

Land Use

LU-10.3 Minimize the removal of native landscape and integrate with new residential development, to the extent feasible and practical for fire control; require adherence to building construction and site designs necessary to minimize risks from wildfire, such as implementation of fuel modification areas, concrete tile roofs and boxed eaves.

LU-10. Require that new development and major rehabilitations be located, designed, and built to maintain natural drainages, riparian vegetation, and the viability of habitats, except as necessary to protect from flooding or wildfire, or that impacted areas be properly mitigated.

LU-16. Accommodate open spaces that can be used for recreation and conserved to protect significant plant and animal habitats and population from the risks of flood, fire, and seismic hazards in accordance with the designations of the land use plan.

LU-16.7 Work with Corona Fire, CAL FIRE and Forest Service and with property owners in affected areas to reduce and minimize the hazards associated with wildfire in the hillsides and open spaces, consistent with the goals and policies of the safety element.

LU-22.10 Collaborate with local, County, and regional governmental agencies to provide water, sewer, public safety, fire response, and other appropriate municipal services; coordinate emergency response services through mutual and automatic aid agreements.

LU-22.14 Require that all proposed development in the Very High Fire Severity Zones provide appropriate protection against wildfires in accordance with State law, the California Building and Fire Codes, and regulations promulgated by the Board of Forestry and Fire Protection and CAL FIRE.

LU-23.6 Allow emergency responders to use the Corona Municipal Airport to respond to local and regional emergencies and disasters (urban and wildland fire, hazardous material response, etc.).

Healthy Community

CE-1.11 Provide all residential, commercial, and industrial areas with efficient and safe access for emergency vehicles, including undeveloped areas or those on the hillsides in high or Very High Fire Hazard Severity Zones.

Public Services

PS-8.3 Maintain mutual aid, automatic aid, and other multi-agency cooperative agreements to ensure that urban fire, wildfire, tactical response, hazmat, and other services are available at all times.

PS-8.9 Continue to monitor and adhere to the latest changes in state legislation and guidelines with respect to fire planning, prevention, and suppression.

PS-9.4 Maintain safe and accessible evacuation routes throughout the community; take precautions and ensure backup or mitigations for routes crossing high hazard areas (e.g., flood, seismic, high fire, etc.).

PS-9.6 Work cooperatively with CAL FIRE, US Forest Service, Department of Corrections, and other agency stakeholder to advocate for the installation and maintenance of fire breaks in wildland areas surrounding Corona.

PS-10.2 Require all improved and new homes, structures, and facilities in the Very High Fire Hazard Severity Zones to adhere to additional fire safe design standards consistent with state law and local practice.

PS-10.6 Require fuel modification plans and vegetation clearance standards for development in VHFHSZs to protect structures from wildfire, protect wildlands from structure fires, and provide safe access routes for the community and firefighters within the project boundary, which may be extended pursuant to required findings when in accordance with state law, local ordinance, rule or regulation and no feasible mitigation measures are possible.

PS-10.7 Condition approval of parcel maps and tentative maps in VHFHSZs based on meeting or exceeding the SRA Fire Safe Regulations and the fire hazard reduction around buildings and structures regulations within the project boundary, which may be extended pursuant to required findings when in accordance with state law, local ordinance, rule or regulation and no feasible mitigation measures are possible.

3.21.3 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, as well as Riverside County's environmental checklist, wildfire impacts resulting from the implementation of the proposed project would be considered significant if located in or near a State Responsibility Area (SRA) or lands classified as a VHFHSZ and if the proposed project would:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

e) Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

3.21.4 - Project Impacts and Mitigation Measures

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

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Area 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Area 2 and 6 is no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Area 2 and 6.

Emergency Response/Evacuation Plan Consistency

Impact WILD-1:	**Substantially impair an adopted emergency response plan or emergency evacuation plan?**

Source(s): County of Riverside 2020 General Plan Safety Element, City of Corona 2020-2040 General Plan, GIS database, CAL FIRE Fire Hazard Severity Zone in State or Federal Responsibility Area Maps, and Project Application Materials

Impact Analysis

The proposed project is not located in an SRA, lands classified as a VHFHSZ, or other hazardous fire areas that may be designated by a Fire Chief. As previously discussed, the project site is not located in a VHFHSZ for LRAs. The project area is not located in a Wildfire Hazard Severity Zone and has never experienced a wildfire between 1990 and 2021. However, the proposed project is located approximately 0.5 mile east of an area designated as a VHFHSZ in an LRA. The following is an analysis of the proposed project's impact on adopted emergency response plans or emergency evacuation plan.

During construction, it is expected that construction equipment and vehicles would be accessing and leaving the project site, which in turn could potentially impede evacuation or emergency vehicle access. However, as discussed under Section 3.18 Transportation and Section 3.9 Hazards, the proposed project would result in less than significant impacts related to emergency vehicle access. Furthermore, blockage of an evacuation route would not occur during project construction because the proposed project would not result in road closures to either SR-91, SR-71, or I-15, the most likely evacuation routes from the project site.

As indicated in Section 3.16, Public Services, and Section 3.9, Hazards and Hazards Materials, the proposed project would be adequately served by police and fire services, including respective evacuation or emergency vehicle access. The proposed project would not create a permanent increase in population unaccounted for in the County of Riverside 2020 General Plan and the City of Corona 2020-2040 General Plan that could lead to overwhelming calls for emergency services.[15] In addition, the proposed project would be designed in accordance with the County's and City's standards to accommodate emergency vehicle access by providing two points of access to the project site that would be available to emergency vehicles. Furthermore, blockage of an evacuation route would not occur during project operation because the proposed project would not result in road closures to either SR-91, SR-71, or I-15, the most likely evacuation routes from the project site. With adherence to County of Riverside 2020 General Plan Policies S-5.1 through S-5.19 and the City of Corona 2020-2040 General Plan policies described above that set forth recommendations and requirements related to fire prevention features, the proposed project would not conflict with the 2018-2021 Strategic Fire Plan or County of Riverside General Plan Safety Goals.

Furthermore, the proposed project would be consistent with the TCAP because it would comply with the County of Riverside 2020 General Plan Safety Element goals and policies. Therefore, impacts related to an adopted emergency response plan or evacuation plan would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Exposure Project Occupants to Pollutant Concentrations from Wildfire

Impact WILD-2:	**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.**

Source(s): County of Riverside 2020 General Plan Safety Element, City of Corona 2020-2040 General Plan, GIS database, CAL FIRE Fire Hazard Severity Zone in State or Federal Responsibility Area Maps, and Project Application Materials

Impact Analysis

The proposed project is not located in an SRA, lands classified as VHFHSZ, or other hazardous fire areas that may be designated by a Fire Chief. As previously discussed, the project site is not located in a VHFHSZ for LRAs. The project area is not located in a Wildfire Hazard Severity Zone and has never experienced a wildfire between 1990 and 2021. However, the proposed project is located

[15] County of Riverside. 2021. Riverside County General Plan Safety Element. Website: https://planning.rctlma.org/Portals/14/genplan/2021/elements/Ch06_Safety_092821.pdf. Accessed November 9, 2021.

approximately 0.5 mile east of an area designated as a VHFHSZ in an LRA. The following is an analysis of the proposed project's impact on wildfire risks due to slope, prevailing winds, and other factors.

The project site is located in the western portion of Riverside County (Planning Areas 1–5) and partially within the City of Corona (Planning Area 6). The area surrounding the project site consists of urban development without steep terrain or unmanaged open space areas prone to wildfires. The closest open space area is located approximately 2 miles south of the project site. The South Coast Air Quality Management District (SCAQMD) monitors Southern California's air quality at a number of stations. The closest station to the project site is located at the Chino Airport, approximately 6.52 miles to the north. According to the SCAQMD, the average wind speed at the Chino Airport from 2012 to 2018 was 6.24 mph.[16] In addition, the project site has not previously experienced wildfire. Given that the project site is not located in or near an area of steep terrain or historical wildfire burn nor experiences consistent high winds, the project site would not be prone to greater wildfire risk.

According to the CAL FIRE FHFSZ online viewer, the project site is not listed as a VHFHSZ for LRAs. According to Riverside County's Map My County GIS database, the project area is not categorized as having a risk from wildland fires. The project site does not contain any slopes steeper than 25 percent and the proposed project would not create cut or fill slopes higher than 10 feet. Furthermore, project structures would be required to comply with the California Fire Code provisions related to emergency/fire access and use of building materials that would limit the spread of wildfire to the greatest extent possible. Therefore, impacts related to exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of wildfire would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Infrastructure that Exacerbates Fire Risk

Impact WILD-3:	**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?**

Source(s): County of Riverside 2020 General Plan Safety Element, City of Corona 2020-2040 General Plan, GIS database, CAL FIRE Fire Hazard Severity Zone in State or Federal Responsibility Area Maps, and Project Application Materials

[16] South Coast Air Quality Management District (SCAQMD) Meteorological Data. Website: http://www.aqmd.gov/home/air-quality/meteorological-data/data-for-aermod. Accessed November 23, 2021.

Impact Analysis

The proposed project is not located in an SRA, lands classified as VHFHSZ, or other hazardous fire areas that may be designated by a Fire Chief. As previously discussed, the project site is not located in a VHFHSZ for LRAs. The project area is not located in a Wildfire Hazard Severity Zone and has never experienced a wildfire between 1990 and 2021. However, the proposed project is located approximately 0.5 mile east of an area designated as a VHFHSZ in an LRA. The following is an analysis of the proposed project's impact on fire risk due to the installation or maintenance of infrastructure that would result in impacts to the environment.

The proposed project consists of the development of a mixed-use community, including open space with parks and trails, residential areas of low and medium densities, a retail/commercial site, and associated parking lots on 104.8 acres. The proposed project would include adequate emergency access with connections to Pine Crest Drive, Mountain View Drive, and Paseo Grande. The proposed project would not require the installation of firebreaks because it is in an urban area surrounded by existing development with little natural vegetation. The proposed project would not require emergency water sources, because potable water is currently provided by the Western Municipal Water District, which has adequate water supplies available to serve the proposed project and future development during normal, dry, and multiple dry years. New electrical power and natural gas lines on and connecting to the project site would be installed below ground, minimizing potential ignition and related fire risk above ground. The project site would be developed in accordance with the CBC, Uniform Fire Code, County of Riverside 2020 General Plan, and City of Corona 2020-2040 General Plan. Therefore, impacts related to infrastructure that exacerbates fire risk would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Flooding and Landslide Hazards Due to Post-fire Slope Instability/Drainage

Impact WILD-4:	**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?**

Source(s): County of Riverside 2020 General Plan Safety Element, City of Corona 2020-2040 General Plan, GIS database, CAL FIRE Fire Hazard Severity Zone in State or Federal Responsibility Area Maps, and Project Application Materials

Impact Analysis

The proposed project is not located in an SRA, lands classified as VHFHSZ, or other hazardous fire areas that may be designated by a Fire Chief. As previously discussed, the project site is not located in a VHFHSZ for LRAs. The project area is not located in a Wildfire Hazard Severity Zone and has never experienced a wildfire between 1990 and 2021. However, the proposed project is located approximately 0.5 mile east of an area designated as a VHFHSZ in an LRA. The following is an analysis of the proposed project's impact to people or structures, including downslope or downstream flooding or landslides.

The project site does not contain any slopes steeper than 25 percent and the proposed project would not create cut or fill slopes higher than 10 feet. The project site is relatively level and located in an urbanized area surrounded by urban development. The project site has also not been affected by previous wildfires that could have resulted in drainage changes or loss of vegetation. Therefore, impacts related to flooding and landslide hazards due to post-fire slope instability or drainage changes would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Significant Risk of Loss, Injury, or Death Due to Wildland Fires

Impact WILD-5:	**Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?**

Source(s): County of Riverside 2020 General Plan Safety City of Corona 2020-2040 General Plan, Element, GIS database, CAL FIRE Fire Hazard Severity Zone in State or Federal Responsibility Area Maps, and Project Application Materials

Impact Analysis

The proposed project is not located in an SRA, lands classified as VHFHSZ, or other hazardous fire areas that may be designated by a Fire Chief. as previously discussed, the project site is not located in a VHFHSZ for LRAs. The project area is not located in a Wildfire Hazard Severity Zone and has never experienced a wildfire between 1990 and 2021. However, the proposed project is located approximately 0.5 mile east of an area designated as a VHFHSZ in an LRA. The following is an analysis of the proposed project's impact to people or structures involving wildland fires.

As described under Impacts Wild-1 through Wild-4-, the proposed project would not impair an adopted emergency response plan or evacuation route, expose residents to significant wildfire risks, require additional infrastructure to prevent wildfires, or expose people or structures to downstream

flooding or landslides due to post-fire slope instability. As a result, the proposed project would not expose people to a significant foreseeable risk of loss, injury, or death due to wildfire. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

CHAPTER 4: CUMULATIVE EFFECTS

4.1 - Introduction

California Environmental Quality Act (CEQA) Guidelines Section 15130 requires the consideration of cumulative impacts within an Environmental Impact Report (EIR) when a project's incremental effects are cumulatively considerable. Cumulatively considerable means that ". . . the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those which are outside of the control of the lead agency.

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

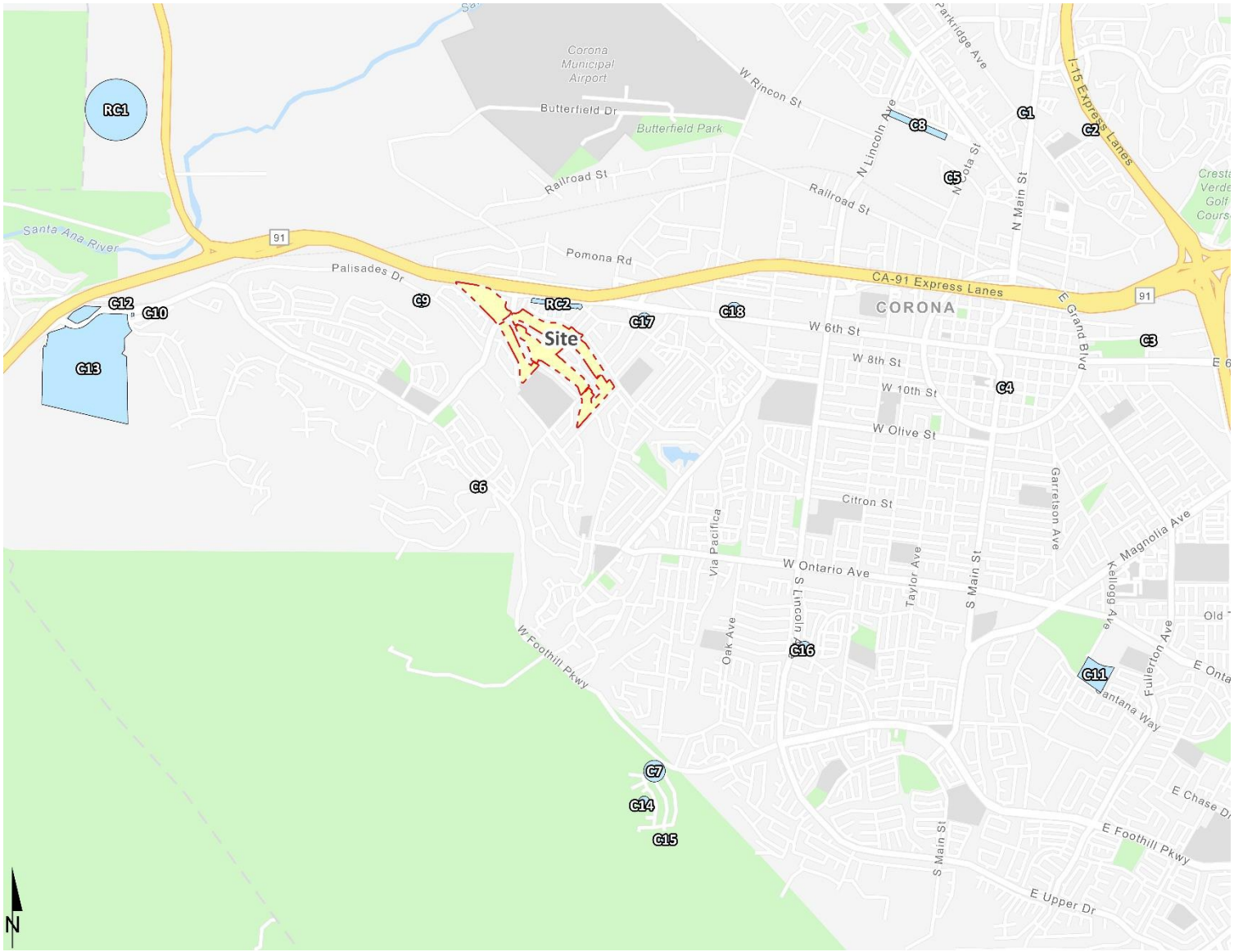
The proposed project's cumulative impacts were considered in conjunction with other proposed and approved projects in the County of Riverside and City of Corona. The degree to which past projects are included within the list of projects is generally limited, due to the fact that current environmental conditions are already considered as part of the baseline and existing environmental setting. Table 4-1 provides a list of the other projects considered in the cumulative analysis and Exhibit 4-1 depicts the locations of the cumulative projects.

Table 4-1: Cumulative Projects

	Jurisdiction	Project	Characteristics	Quantity	Units
1	City of Corona	148 Multi-family Units	Multi-family Housing	148	DU
2	City of Corona	45 Townhomes	Residential Condo/Townhouse	45	DU
3	City of Corona	86 Affordable Units	Single-family Residential	86	DU
4	City of Corona	Corona Regional Medical Expansion	Hospital	212,000	SF
5	City of Corona	Four Industrial Buildings	General Light Industrial	95,500	SF
6	City of Corona	Sierra Bella	Single-family Residential	237	DU
		Skyline Heights	Single-family Residential	297	DU

	Jurisdiction	Project	Characteristics	Quantity	Units
7	County of Riverside	Three Industrial Buildings	General Light Industrial	731,000	SF
8	City of Corona	Four Industrial Buildings	General Light Industrial	47,643	SF
9	City of Corona	Taco Bell with Drive Through	Fast Food with Drive Through	2,080	SF
10	County of Riverside	Peppermint Ridge Expansion	Assisted Living	3,840	SF
11	City of Corona	Drive Through Restaurant	Fast Food with Drive Through	2,400	SF
12	City of Corona	Green River Ranch Specific Plan	Industrial Park High-Cube Cold Storage Warehouse Super Convenience Market with Gas Station Fast Food Restaurant with Drive Through Hotel Single-Family Residential	634,481 111,950 12 2,500 150 32	SF SF VFP SF RM DU
13	City of Corona	Skyline Village	Multi-family Housing Shopping Center	78 27,334	DU SF
14	City of Corona	TTM No. 33135	Single-family Residential	62	DU
15	City of Corona	TTM No. 36608	Single-family Residential	23	DU
16	City of Corona	DPR2020-0014	Gas Station with Convenience Market	2,959	SF
17	City of Corona	PP2018-0005	Health/Fitness Center	37,000	SF
18	County of Riverside	Prado Raceway	Racetrack	163	AC
19	County of Riverside	TPM 38715	Shopping Center and Fast Food with Drive Through	51,675	SF

Notes:
AC = acres
DU = dwelling units
RM = rooms
SF = square feet
VFP = Vehicle Fuel Positions
Source: Urban Crossroads, TIA Report 2024, Appendix J.



Source: Urban Crossroads, 2024.

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Exhibit 4-1
Cumulative Development Location Map

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4.2 - Cumulative Impact Analysis

The cumulative impact analysis below is guided by the requirements of CEQA Guidelines Section 15130. Key principles established by this section include:

- A cumulative impact only occurs from impacts caused by the proposed project and other projects. An EIR should not discuss impacts that do not result from the proposed project.
- When the combined cumulative impact from the increment associated with the proposed project and other projects is not significant, an EIR need only briefly explain why the impact is not significant; detailed explanation is not required.
- An EIR may determine that a project's contribution to a cumulative effect impact would be rendered less than cumulatively considerable if a project is required to implement or fund its fair share of mitigation intended to alleviate the cumulative impact.

The cumulative impact analysis that follows relies on these principles as the basis for determining the significance of the proposed project's cumulative contribution to various impacts. Specifically, this analysis evaluates whether the impacts of the proposed project, together with the impacts of cumulative development, could result in a cumulatively significant impact. This analysis then considers whether incremental contribution of impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for the proposed project's cumulative effects to rise to the level of a significant impact.

At the time of this analysis, the project applicant proposed the development of a 0.78-acre neighborhood commercial space with approximately 10,000 square feet of quick service food retail use on Planning Areas 2 and 56 single-family detached residences and a new trail system on Planning Area 6. However, the development of Planning Areas 2 and 6 are no longer contemplated and this acreage would remain undeveloped. Consistent with the Notice of Preparation (NOP) and the original project proposal, this Draft EIR analyzes the full development of Planning Areas 2 and 6.

4.2.1 - Aesthetics, Light, and Glare

The geographic scope of the cumulative aesthetics, light, and glare analysis is the area surrounding the project site. This is the area within view of the project and, therefore, the area most likely to experience changes in visual character or experience light and glare impacts.

Visual Character

The proposed project consists of the development of 365 residential dwelling units on approximately 105 acres of the site, a commercial/retail area in Planning Area 2 that would contain approximately 10,000 square feet of quick serve food retail uses, existing open space, and a trail system trails on a former golf course. The project vicinity is characterized by suburban development and open space, including single-family residential uses, Cesar Chavez Academy, Coronita Elementary School, and commercial areas off State Route (SR) 91. Much of the surrounding project area has been developed within the past 50 years in compliance with the County of Riverside 2020 General Plan and the City of Corona 2020-2040 General Plan as well as the current Municipal Code requirements related to

design and visual character. Compliance with these standards, as well as the City's review and approval role in the planning process has ensured a visually compatible and cohesive development pattern in the surrounding area. Therefore, there is currently no existing cumulatively significant visual aesthetic impact within the area surrounding project site. Moreover, the proposed project's contribution to the less than significant cumulative impacts is not cumulatively considerable. As discussed in Impact AES-1(a) through Impact AES-1(c), to ensure a less than significant contribution to cumulative impacts, the proposed project will be required to implement all applicable General Plan, Municipal Code and Ordinance Code policies during the design review process.

Light and Glare

The project vicinity has existing sources of light and glare. All new light fixtures associated with cumulative projects would be subject to the provisions of the Riverside County Ordinance No. 915, which regulates outdoor lighting by setting standards for outdoor lighting. Ordinance No. 915 requires all outdoor luminaries to be located adequately shielded and directed such that no direct light falls outside the parcel of origin or onto the public right-of-way, thereby ensuring that cumulative projects would direct light within their own boundaries. Furthermore, similar to the proposed project, cumulative projects would be required to comply with Chapter 8.80 of the Riverside County Code of Ordinances which provides minimum requirements for outdoor lighting in order to reduce light trespass and to protect the health, property, and well-being of residents in the unincorporated areas of the County. Given that the project's immediate vicinity is outside of the previsions indicated in Riverside County Ordinance No. 655; therefore, it does not apply. Compliance with applicable local regulations would ensure that cumulative impacts would be less than significant.

The proposed project's incremental contribution to less than significant cumulative impacts related to light and glare would not be significant. As discussed in detail in Impacts AES 2-AES 3b, the proposed project would comply with all applicable guidelines related to the scenic quality of the development. The proposed project would establish design guidelines that includes policies, standards, and guidelines for land development within the project site in conformance with Section 65450 *et seq.* of the Government Code, the County of Riverside General Plan, and County Ordinance No. 348 (Land Use Ordinance) as well as Riverside County Ordinance No. 348.4896. (SP Zoning Ordinance) and Ordinance No. 915. Further, the development standards for the parks and open space areas. Compliance with these regulations ensures that cumulative impacts are less than significant. Finally, due to the distance of the proposed project and the cumulative projects from Mt. Palomar, there would be no interference with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655.

Consistency with the Municipal Code, which implements the City's General Plan, the County's Code of Ordinances and General Plan, Ordinance No. 915 and Riverside County Ordinance Chapter 8.80 would be required during the design review process to ensure that the proposed project complies with all policies designed to mitigate visual impacts, tree protection standards, and standards to minimize light and glare. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact relating to aesthetics, light, and glare.

4.2.2 - Agriculture Resources and Forest Resources

There are no agricultural or forestry resources within the project site or on surrounding land uses. Additionally, none of the projects listed in Table 4-1 include agricultural or forestry uses. Therefore, there are no cumulative agricultural impacts related to development of Planning Areas 1-5. PA 6 is zoned as Agricultural. However, the City of Corona 2020-2040 General Plan Environmental Impact Report (General Plan EIR) outlines that some of the areas zoned as Agricultural are designated as uses other than Agriculture (A) by the current land use plan, including Estate Residential (ER), Low Density Residential (LDR), Office Professional (OP), and Light Industrial (LI). The General Plan EIR states that agricultural uses would continue to be permitted on these land use designations; however, the build out of the General Plan would convert farmland which has nonagricultural land use designations to nonagricultural use, and the associated loss of agricultural production would constitute a significant and unavoidable impact with no feasible mitigation measures to reduce the impact. Since impacts to land zoned Agricultural were wholly discussed within the General Plan EIR and the proposed project site is included in the areas analyzed by the General Plan EIR, development of the proposed residential project on land designated as LDR but zoned Agricultural would be consistent with the General Plan. The project site has not been used historically, nor is it currently used for agricultural production. As such, the Draft EIR determined that the proposed project would have a less than significant impact with respect to agriculture. Therefore, because the development of nonagricultural uses on agriculturally zoned land was already contemplated in the General Plan EIR, the proposed project would not have a cumulatively considerable contribution.

There are no designated forestry lands on the project site and the proposed project does not contemplate the conversion of forestry land. Therefore, there are no cumulative impacts related to forestry resources.

4.2.3 - Air Quality

The geographic scope of the cumulative air quality analysis is the South Coast Air Basin (SoCAB). The SoCAB includes all of Orange County and the non-desert regions of Los Angeles County, Riverside County, and San Bernardino County. Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The SoCAB represents the area most likely to be affected by emissions as a result of the proposed project. The following section describes these conditions as they pertain to the SoCAB. South Coast Air Quality Management District (SCAQMD) requests that a cumulative impact analysis be performed to evaluate the combined air quality impacts of the proposed project and impacts from existing and proposed future development in the area.

Project regional impacts are assessed for consistency with the applicable air quality plan through a qualitative analysis of whether the proposed project is consistent with the assumptions used to demonstrate attainment of air quality standards. As discussed in Section 3.3, Air Quality, the region is nonattainment for the federal and State ozone standards, the State particulate matter, including dust, 10 micrometers or less in diameter (PM_{10}) standards, and the federal and State particulate matter, including dust, 2.5 micrometers or less in diameter ($PM_{2.5}$) standards. However, as discussed in Section 3.3, Air Quality, because the proposed project would not exceed the SCAQMD thresholds

of significance on a project-level, it would also not result in a cumulatively considerable contribution to these regional air quality impacts.

The proposed project's maximum daily construction emissions from Phase I and Phase II would exceed the SCAQMD's thresholds for volatile organic compound (VOC) emissions prior to mitigation measures during architectural coating activities in 2025. As such, MM AIR-1a, which stipulates the use of ultra-low VOC products containing no greater than 10 grams of VOC per liter of product, would be required to reduce VOC emissions to below significance thresholds. The project would become operational in 2023, and total operational emissions would not exceed SCAQMD threshold of significance without mitigation. Therefore, the proposed project does not have a cumulatively considerable contribution. Additionally, the proposed project would comply with all applicable SCAQMD rules and regulations, and the proposed project would not result in a regional exceedance of criteria air pollutants. Thus, the project in conjunction with other planned or approved projects would not result in cumulatively significant operational air quality impacts. This impact would be less than significant.

4.2.4 - Biological Resources

The project site is located in an area characterized by urban development and infrastructure; accordingly, habitats in these areas tend to be characterized as highly disturbed, and impacts would be localized. As shown on Exhibit 4-1, some of the cumulative projects listed in Table 4-1 are located on sites with the potential to impact burrowing owl and nesting birds, including the least Bell's vireo, coastal California gnatcatcher, southwestern willow flycatcher, and the tricolored blackbird and, therefore, would be required by local, State and federal regulations for special-status species, including those set forth in the Multiple Species Habitat Conservation Plan (MSHCP), as well as the California Endangered Species Act (CESA) to mitigate such impacts. Because of the urban and built-up nature of the area and the implementation of mitigation required, cumulative impacts would be less than significant.

The proposed project would not have a considerable contribution to existing less than significant cumulative impacts. As discussed in Section 3.4, Biological Resources, the proposed project has the potential to have a significant impact on burrowing owl and nesting birds, including the least Bell's vireo, coastal California gnatcatcher, southwestern willow flycatcher, and the tricolored blackbird. MM BIO-1 and MM BIO-2 would require pre-construction surveys for these species and implementation of protection measures if they are found to be present. The required mitigation would ensure the project's incremental contribution on special-status wildlife species would be less than cumulatively considerable by requiring the proposed project to implement avoidance and minimization measures for construction work during nesting season.

The proposed project would not have a cumulatively considerable contribution to impacts to sensitive riparian communities and wetlands. Under full development of Planning Area 6, implementation of MM BIO-3 would be required to compensate for potential impacts and would reduce impacts to below a level of significance. MM BIO-3 is proposed, which requires compensation for impacts to sensitive riparian vegetation. However, it should be noted that the project would not involve the development of PA-6 and the pond located in PA-5 will be preserved. Therefore, the

riparian vegetation found in these areas will not be impacted. No mitigation is required if PA 6 remains undeveloped.

As shown on Exhibit 4-1, some of the other projects listed in Table 4-1 are located on sites with similar biological attributes and, therefore, would be required to comply with existing regulations and mitigate for impacts on sensitive riparian communities and wetlands. The required mitigation would further reduce the project's incremental contribution to sensitive riparian communities and wetlands to less than cumulatively considerable. The proposed project has the potential to have significant impacts to the fish and wildlife movement corridors. As discussed above, special-status and migratory nesting birds protected under the Migratory Bird Treaty Act (MBTA) have the potential to occur within the project site, and the site may support the movement of these species within the larger area. Implementation of MM BIO-1, MM BIO-2, and compliance with federal and State regulations related to the protection of migratory fish and wildlife species would reduce impacts to these species to a less than significant level. As shown on Exhibit 4-1, some of the projects listed in Table 4-1 are located on sites with similar biological attributes and, therefore, would be required to mitigate for impacts on wildlife movement corridors in a manner similar to the proposed project. The required mitigation would reduce the cumulative impacts to less than significant. Moreover, the project's incremental contribution to wildlife movement corridors to less than cumulatively considerable.

In addition, potential cumulative projects that could result in significant adverse impacts with respect to the biological resources thresholds would be required to comply with biological and other related permit requirements, including those set forth in local policies and ordinances, including the MSHCP, intended to mitigate such impacts. Therefore, cumulative impacts related to compliance with Habitat Conservation Plans and local policies and ordinances would be less than significant. The project has been designed and conditioned to comply with all MSHCP conservation goals and guidelines as well as all local policies and ordinances. Accordingly, the proposed project would not have any incremental contribution to this impact. All other project-related biological resource impacts (e.g., conservation plans) were found to be less than significant and did not require mitigation. Other projects that result in similar impacts would be required to mitigate for their impacts thereby reducing potential cumulative impacts to below a level of significance. Because the proposed project's incremental impact on all of these remaining biological resources is less than significant, it would not have a cumulatively considerable contribution to any existing significant cumulative impact.

4.2.5 - Cultural Resources

Cultural resource impacts tend to be localized because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as disruption of soils; therefore, in addition to the project site itself, the geographic scope of the cumulative cultural resources analysis is the project vicinity including the area near the project site would be the area most affected by project activities (generally within a 500-foot radius). As shown on Exhibit 4-1, the nearest cumulative project listed on Table 4-1 is approximately 562 feet from the project site, therefore less than significant cumulative impacts are anticipated with regard to cultural resources impacts are anticipated.

Construction activities associated with development projects in the project vicinity may have the potential to encounter undiscovered cultural resources. These projects would be required to mitigate for impacts through compliance with applicable federal and State laws governing cultural resources, including the provisions of Senate Bill (SB) 18 and Assembly Bill (AB) 52, Section 15064.5 of the CEQA Guidelines, and Sections 5024.1 and 5097 of the Public Resources Code. Accordingly, because cumulative development would be required to comply with long-term planning documents, and regulatory agency guidance establishing policies (including, but not limited to., evaluation requirements and inadvertent discovery procedures) that reduce impacts to potential cultural resources, cumulative impacts would be less than significant.

Additionally the proposed project would not have a cumulatively considerable contribution to the less than significant cumulative impact with required mitigation. The likelihood of any significant cultural resources on the project site are very low given the developed nature of the site, previous disruptions to its ground and the lack of any known resource within its boundaries. Although there is the possibility that previously undiscovered resources could be encountered by subsurface earthwork activities, the implementation of standard construction mitigation measures would ensure that undiscovered cultural resources are not adversely affected by project-related construction activities, which would prevent the destruction or degradation of potentially significant cultural resources in the project vicinity. Given the low potential for disruption, and the comprehensiveness of mitigation measures that would apply to this project and those in the vicinity, the proposed project would not make a cumulatively considerable contribution to the less than significant cumulative impact on cultural resources. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to cultural resources.

4.2.6 - Energy

The geographic scope of the cumulative energy analysis is the Southern California Edison (SCE) electricity service area, which encompasses approximately 50,000 square miles of Southern California, and the Southern California Gas Company (SoCalGas) service area, which provides natural gas service to a territory encompassing approximately 20,000 square miles throughout Central and Southern California. Electrical power is provided by SCE via overhead power lines. All cumulative projects would be required to comply with local, State, and federal policies that address energy conservation and energy efficiency, such as complying with the City of Corona and County of Riverside Climate Action Plan (CAPs), California Code of Regulations Title 13, Sections 2449 and 2485, and the latest California Energy Code. Future development projects in the SCE and SoCalGas service areas would be required to comply with Title 24 energy efficiency standards as well as stipulations from the CAP. Compliance with these regulations, policies and ordinances would combine to reduce the energy demand, water use, amount of materials and wood use, and carbon dioxide emissions of buildings. Accordingly, potential cumulative impacts would be less than significant.

Moreover, the proposed project would not have a significant incremental contribution to cumulative impacts. The proposed project is located within SCE service territory, and SCE would serve the

proposed project's electrical requirements consistent with the California Public Utilities Commission and Federal Energy Regulatory Commission tariffs.

Electricity and natural gas consumption during constructions of the project would not result in wasteful, inefficient, and unnecessary consumption of energy due to the temporary nature of construction and the financial incentives for the efficient use of energy-consuming resources. The project would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the State's Title 24 energy efficiency standards. The proposed project would also be required to comply with stipulations originating from the City and County General Plan and the County of Riverside CAP policies. Therefore, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact on energy consumption.

4.2.7 - Geology and Soils

The geographic scope of the cumulative geology, soils, and seismicity analysis is the project vicinity. Adverse effects associated with geologic, soil, and seismic hazards tend to be localized, and the area near the project site would be the area most affected by project activities (generally within a 0.25-mile radius) as shown in Exhibit 4-1. Development in the project vicinity has not included any uses or activities which would result in geology, soils, or seismicity impacts (such as mining or other extraction activities), and there is no existing cumulatively significant impact.

Development projects in the project vicinity may have the potential to be exposed to seismic hazards. Potentially adverse environmental effects associated with seismic hazards, as well as those associated with expansive soils, topographic alteration, and erosion, usually are site-specific and generally do not result in cumulative effects. Cumulative projects would be exposed to similar ground shaking during seismic events as the proposed project, but development of individual projects would not increase the potential for impacts related to seismic hazards to occur. Individual development proposals would be reviewed separately by the appropriate public agency depending on location and undergo environmental review if appropriate. In the event that future cumulative development would result in impacts related to geologic or seismic impacts, those potential project or site-specific impacts would be addressed in accordance with the requirements of CEQA. New buildings would be constructed utilizing current design and construction methodologies for earthquake resistant design as required by relevant regulations. Compliance with the California Building Standards Code (CBC), National Pollutant Discharge Elimination System (NPDES) permits, laws and regulations mentioned in Section 3.7, Geology and Soils, would ensure that cumulative development would have less than significant impacts associated with geology, soils, or seismicity. As shown on Exhibit 4-1, the nearest cumulative project listed on Table 4-1 is approximately 562 feet from the project site, therefore cumulative impacts are anticipated to be less than significant in regard to geology and soils.

Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be significant. Although the project site would not contain unstable slope conditions, it could still experience landslides due to seismic shaking and/or extreme storm events and would require MM GEO-1, which would include earthwork and grading specifications

recommended for the proposed project. Further, the project site could experience uneven subsidence resulting in distress to project structure foundations, a potentially significant impact, and would be mitigated to a less than significant level by MM GEO-2, which would ensure site remedial grading is conducted to prevent subsidence impacts. As previously discussed, the proposed project would be required to comply with provisions of the CBC, excavation and grading requirements, and mandatory NPDES permit requirements to ensure that potential impacts related to site-specific geotechnical conditions remain at less than significant levels. For these reasons, the proposed project's contribution to cumulative impacts on geology, soils, and seismicity are not cumulatively considerable and the cumulative impact would be less than significant. As such, the proposed project, in conjunction with other projects, would not have a cumulatively significant impact associated with seismic hazards.

Moreover, the proposed project would not contribute to a cumulative impact on liquefaction, lateral spreading, or landslides. As discussed above, impacts related to subsidence or collapse are less than significant with implementation of MM GEO-3 and 4 and adherence to local, State, and federal regulations. Since the proposed project would experience less than significant impacts associated with subsidence or collapse impacts and these potential impacts are site-specific, the proposed project's contribution to cumulative subsidence or collapse is less than cumulatively considerable, and thus less than cumulatively significant. The proposed project would not contribute to a cumulative impact on liquefaction, lateral spreading, or landslides.

Regarding soil erosion, development activities could lead to adverse impacts to soils that could cause unstable ground surfaces and increased sedimentation in nearby streams and drainage channels. As cumulative development occurs, all future projects must comply with the federal, State, and pertinent local regulations regarding development which would ensure less than significant cumulative impacts. The project site contains fill soils that that may not be suitable to support urban development. MM GEO-3 requires on-site soils to be prepared with several specifications that would reduce erosion impacts to less than significant levels, and MM GEO-4 requires compliance with applicable building regulations such as the CBC, County, and City regulations, and geotechnical recommendations detailed in the Geotechnical Investigation as soil samples at the site were determined to have expansive soil potential. As shown on Exhibit 4-1, some of the projects listed in Table 4-1 would be exposed to expansive soil hazards or unstable geologic units and therefore, would be expected to implement similar grading and soil engineering practices to address those impacts. The proposed project would not contribute to any significant cumulative impact due to expansive soils or unstable soil units. Since the proposed project would have to comply with federal and State regulations and required mitigation measures that are designed to minimize impacts to projects on a wide geographic scale, the project's contribution to any significant cumulative erosion impact would be less than cumulatively considerable.

Cumulative development would not contribute to potential impacts on the soils related to septic tanks since new development requires a demonstration of adequate leach fields and septic tanks. Additionally, the proposed project would connect to existing sewer lines contained within existing roadways. Project grading as part of construction would take place within the project site boundaries and would not impact subsurface sewage disposal systems currently in use. Therefore, implementation of the proposed project would not contribute to potential cumulative impacts

related to soils supporting septic systems. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to geology, soils, and seismicity, assuming compliance with regulatory requirements.

4.2.8 - Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions are inherently cumulative in nature because GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, the analysis under Impact GHG-1 and Impact GHG-2 also address cumulative impacts.

The appropriate scope of analysis is the global climate and impacts from GHG emissions result in global climate change. The geographic scope of the cumulative GHG emissions analysis is the SoCAB, which encompasses Orange County, Los Angeles County (excluding the Antelope Valley), Ventura County, Riverside County (excluding the Coachella Valley and the desert region) and San Bernardino County (excluding the desert region). Air quality is impacted by topography, dominant air flows, atmospheric inversions, location, and season. Therefore, using the SoCAB represents the area most likely to be impacted by air emissions. While an individual project cannot generate enough GHG emissions to effect a discernible change in global climate, the proposed project may participate in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on global climate change.

The CAP is a geographic specific plan that was adopted by the County of Riverside for reducing GHG emissions under the control or influence of the County consistent with AB 32 (California Global Warming Solutions Act of 2006) and subsequent State legislation and State agency action to address climate change. The CAP has adopted a target of reducing GHG emissions down to 15 percent below 2008 levels within the County of Riverside by 2020. This reduction target is compliant with AB 32 and is therefore consistent with the State's efforts to reduce GHG emissions globally and substantially lessen the cumulative contribution to GHG impacts. The 2019 CAP revisions emphasize the need for specific GHG reductions for 2035 and 2050 needed to reduce emissions to 80 percent below 1990 levels by 2050. The CAP includes GHG screening tables with energy efficient implementation measures that would help to achieve the target reduction. Pursuant to the CAP, projects that achieve at least 100 points based on the County's screening tables are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report. As such, further project-specific GHG quantification is not required. Consistent with CEQA Guidelines, such projects are determined to have a less than significant individual and cumulative impact for GHG emissions.

The proposed project in conjunction with other planned or approved projects would emit new GHG emissions. The proposed project's annual operational plus amortized construction emissions in 2035 would generate 3,396 metric tons (MT) carbon dioxide equivalent (CO_2e) per year, which exceeds the screening threshold of 3,000 MT CO_2e per year.

However, according to the County's CAP, projects that implement 100 points of reduction measures from the applicable screening tables would be determined to have a less than significant individual impact for GHG emissions. As demonstrated in Section 3.8 Greenhouse Gas Emissions and in Appendix B, the proposed project would implement a total of 115 points of reduction measures.

The project would therefore be consistent with the overarching goals of AB 32 and the strategies of the California Air Resources Board (ARB) Scoping Plan, as well as the regulatory measures adopted to further AB 32 goals. Because this project, under either threshold, would be consistent with the ARB Scoping Plan, the project's GHG emissions would not be cumulatively significant. For the reasons described above and in GHG-1 and GHG-2, the incremental impacts of the proposed project related to GHG emissions are not cumulatively considerable. Therefore, the proposed project would not have a significant cumulative impact.

4.2.9 - Hazards and Hazardous Materials

The geographic scope of the cumulative hazards and hazardous materials analysis is the project area as shown in Exhibit 4-1. Adverse effects of hazards and hazardous materials tend to be localized; therefore, the area near the project area would be most affected by project activities. Hazards and hazardous materials are extensively regulated at the federal, State, and local levels. Cumulative projects would be subject to the requirements and regulations set forth by the United States Department of Transportation (USDOT), California Department of Transportation (Caltrans), California Highway Patrol (CHP), the local Certified Unified Program Agency (CUPA), and local regulations related to transport, use, and disposal of hazardous materials. Cumulative projects will also be required to implement a Storm Water Pollution Prevention Plan (SWPPP) and comply with the California Code of Regulations during construction, site grading, excavation operations, and building demolition. Accordingly, cumulative development would not result in physical changes that would result in a significant environmental effect.

Within the project vicinity, there are two adjacent properties (Song's Arco Station located at 800 Serfas Club Drive, and Mobil No. 18 located at 616 Paseo Grande Road in the City of Corona) that are listed as Leaking Underground Storage Tank (LUST) sites. However, the LUST cases were closed in 2007 and 2013, respectively. No other land uses within the project vicinity utilize large quantities of hazardous materials or involve hazardous activities, and there is no existing cumulatively significant impact. Additionally, other projects listed in Table 4-1 that have become contaminated from past uses or possess characteristics that involve the routine handling of large quantities of hazardous materials, would be required to mitigate for their impacts. Because hazards and hazardous materials exposure is generally localized and development activities associated with the other projects listed in Table 4-1 may not coincide with the proposed project, this effectively precludes the possibility of cumulative exposure. For these reasons cumulative projects would have a less than significant effect.

Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be significant. A Phase I Environmental Site Assessment (Phase I ESA) was prepared for the proposed project and found transite pipes on-site containing asbestos. MM HAZ-1 would include the recommendations in the Geotechnical Investigation. The findings of the 2016 Phase II ESA indicated no reported concentrations of total petroleum hydrocarbons (TPH) or VOCs above the method-reporting limit in any of the soil samples analyzed. Soil sampling occurred for an additional Phase II ESA, which determined that there were trace amounts of several recognized chlorinated pesticides and herbicides present within the limits of the project site. While no impacts are anticipated due to contaminated soils or from the existing rubbish and transite pipes located on-site, if such soils or rubbish are later determined to be hazardous, all standard hazardous materials

remediation and removal procedures are required to be adhered to. Because the proposed project's impact due to hazards and hazardous materials can be reduced to below a level of significance as described above and in Section 3.9, Hazards and Hazardous Materials, the proposed project's incremental contribution would not be cumulatively considerable.

Cumulative impacts related to emergency response and evacuation plans would be less than significant. The proposed project would comply with the City and County's emergency response plans. Additionally, adjacent jurisdictions also have emergency response plans and emergency evacuation plans. Furthermore, larger regional and statewide resource areas are regulated by State agencies to address larger-scale statewide issues. For these reasons, cumulative impacts associated with emergency response and evacuation plans are less than significant. Moreover, the proposed project's incremental contribution to these less than significant cumulative impacts would not be significant. The proposed project would not impair the implementation of, or physically interfere with, an emergency response plan and/or emergency evacuation plan. The County of Riverside and City of Corona will review the proposed project to ensure it does not interfere with their respective established emergency operations plans. Therefore, the proposed project would not have a significant cumulative impact.

4.2.10 - Hydrology and Water Quality

The analysis area for evaluation of cumulative impacts to hydrology and water quality generally includes areas within 0.5 mile of the project site. Hydrologic and water quality impacts tend to be localized; therefore, the area near the project site would be most affected by project activities as shown in Exhibit 4-1. Cumulative impacts would be less than significant because cumulative development, infrastructure, and planning projects would be subject to numerous federal, State, and local requirements responsible for maintaining flood protection features, including the United States Army Corps of Engineers (USACE), California Department of Water Resources (DWR), and California Department of Fish and Wildlife (CDFW). Accordingly, all cumulative projects would be subject to local, State, and federal permit requirements and would be required to comply with City ordinances and General Plan policies, as well as other water quality regulations that control construction-related and operational discharge of pollutants in stormwater. The water quality regulations implemented by the Regional Water Quality Control Board (RWQCB) take a basin-wide approach and consider water quality impairment in a regional context. For example, the Construction General Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the Municipal Separate Storm Sewer System (MS4) Permit works with all municipalities to manage stormwater systems to be collectively protective of water quality. For these reasons and because of the nature and types of surrounding development, existing stormwater infrastructure, and regulatory requirements have ensured that no cumulatively significant impacts related to water pollutants or flooding exist within the project vicinity.

The proposed project would involve short-term construction and long-term operational activities that would have the potential to degrade water quality in downstream water bodies. However, the proposed project would include implementation of various mandatory construction and operational water quality control measures to prevent the release of pollutants into downstream waterways. As determined in the Preliminary Hydrological Analysis, the capacity of the existing stormwater culvert

that serves the project site is exceeded. Additionally, the sewer lines that currently serve the surrounding area and would serve the proposed project were found to be deficient by the Preliminary Wastewater Report. The proposed project would implement stormwater capture features at the site that would reduce to flow to existing culvert to below capacity as well as pay fair share contributions that would support the repair of the deficient sewer lines. The required mitigation would ensure the project's incremental contribution to the already less than significant cumulative water quality impact would be less than cumulatively considerable.

The project site is within Federal Emergency Management Agency (FEMA) Flood Zone AE and X. The proposed project would impact the FEMA Flood zones. Therefore, MM HYD-1 and MM HYD-1 are proposed. MM HYD-1 and MM HYD-2 require the project proponent to present the County of Riverside with a Conditional Letter of Map Revision (CLOMR) and a subsequent Letter of Map Revision (LOMR) prior to the issuance of grading permits for any portion or phase of the project. Other projects that are within the FEMA Flood Zone area would be required to comply with applicable County requirements. The required mitigation would reduce the project's contribution to the already less than significant cumulative flood zone impact to less than cumulatively considerable.

All other project-related hydrology impacts (e.g., groundwater, drainage and 100-year flood hazards) were found to be less than significant and do not require mitigation. Because all project-related hydrology impacts are less than significant, the proposed project would not have a cumulatively considerable contribution to any significant cumulative impact for these impacts.

4.2.11 - Land Use and Planning

The geographic scope of the cumulative land use analysis is the western Riverside County and City of Corona area. Land use decisions are made at the County and City level; therefore, the Riverside/Corona area is an appropriate geographic scope. Development within unincorporated Riverside County is governed by the County of Riverside 2020 General Plan and the County Code and development within the City of Corona is governed by the City of Corona 2020-2040 General Plan and the Municipal Code which ensure logical and orderly development and require discretionary review to ensure that projects do not result in land use impacts due to inconsistency with the General Plan(s) and other regulations. Development projects in the Riverside/Corona area would continue to be required to demonstrate consistency with all applicable County of Riverside 2020 General Plan and County Code requirements and applicable City of Corona 2020-2040 General Plan and Municipal Code requirements. This would ensure that these projects comply with applicable planning regulations. Those projects listed in Table 4-1 that have been previously approved have been deemed consistent with all applicable General Plan and Specific Plan requirements. For pending projects, the lead agency would be required to issue findings demonstrating consistency with the applicable General Plan and County/Municipal Code requirements if they are ultimately approved. For these reasons cumulative impacts with respect land use are less than significant.

The proposed project's incremental contribution to cumulative land use impacts would also not be significant. Planning Areas 1, 2, 3, 4, and 5 are currently designated as Open Space Recreation (OS-R) and zoned as One-Family Dwellings (R-1) under the County of Riverside 2020 General Plan. Planning Area 6 is designated LDR and zoned Agriculture (A) under the City of Corona 2020-2040 General Plan

Land Use Designation and Zoning. The proposed project would develop 365 dwelling units on approximately 105 acres within the areas designated OS-R (County of Riverside) and LDR (City of Corona) and preserving the remainder of the land as open space and recreational uses. Therefore, a proposed General Plan Amendment from OS-REC to Medium Density Residential (MDR), as well as a change of zoning from R-1 to Specific Plan (S-P), has been submitted to the County as part of the entitlements process for the proposed project. Thus, the proposed land use changes would serve to accommodate residential use and preserve existing open space use, which was found to be a less than significant impact and for these reasons the proposed project's incremental contribution to land use impacts would be less than significant. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to land use.

4.2.12 - Mineral Resources

The geographic scope of the cumulative mineral resource analysis is the project's Aggregate Mineral Resource area within the County. According to the County of Riverside 2020 General Plan, the proposed project site is designated MRZ-3 by the State Mining and Geology Board (SMGB), which are areas where the available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposit in these areas is undetermined. The area surrounding the project site is also classified as MRZ-3. Neither the County of Riverside 2020 General Plan nor the City of Corona 2020-2040 General Plan identify any significant mineral resources on the project site or in the project vicinity, as the project site and surrounding area does not have an MRZ2a or MRZ-2b designation. For these reasons cumulative impacts with respect regional availability of mineral resources would be less than significant.

Additionally, the proposed project would have a less than significant contribution because there are no aggregate mining operations on the project site or within the surrounding area nor is this project area designated as a resource recovery site. Accordingly, the proposed project would not have a cumulatively considerable contribution to the loss of mineral resources of value to the State or region because the site has been depleted of all economically recoverable aggregate materials.

4.2.13 - Noise

Noise impacts tend to be localized; therefore, the geographic scope of the cumulative noise analysis is the immediate project vicinity as shown in Exhibit 4-1. The analysis in Section 3.13, Noise, includes a cumulative analysis of existing, proposed, and anticipated future noise levels near the project site. Outdoor noise measurements taken at the project site indicate that the average ambient noise levels are within the "normally acceptable" or "conditionally acceptable" range for all land uses. For these reasons cumulative impacts with respect to noise would be less than significant.

The proposed project's construction noise levels may cause a temporary substantial increase in noise levels at nearby receptors. MM NOI-1a is included that would require implementation of construction noise attenuation measures to reduce noise levels; however, construction noise levels may exceed adopted standards at certain nearby receptors and. Other projects listed in Table 4-1 would be required to implement similar mitigation and adhere to Municipal Code restrictions regarding construction noise. It is highly unlikely that a substantial number of the cumulative

projects would be constructed simultaneously and close enough to one another for noise impacts to be compounded, given that the projects are at widely varying stages of approval and development. Therefore, it is reasonable to conclude that construction noise from the proposed project would not combine with noise from other development projects to cause cumulatively significant noise impacts.

During operation, a significant impact would occur if the proposed project would expose residential noise-sensitive land uses to traffic noise levels in excess of 60 dBA CNEL. The analysis found that noise levels would be in excess of the County's normally acceptable land use compatibility standard of 60 dBA CNEL. Therefore, design measures must be incorporated into the proposed project to ensure that the interior noise level standard of 45 dBA CNEL is maintained. Similarly, a significant impact would occur if the project would result in a substantial increase in traffic noise levels above levels that would exist without the project. The proposed project's contribution to vehicular noise levels would not exceed the applicable thresholds of significance, which take into account existing noise levels as well as noise from trips associated with other planned or approved projects. Thus, the proposed project would not combine with other projects to cause a cumulatively considerable increase in ambient roadway noise. The highest projected traffic noise levels along modeled surface roadway segments in the proposed project vicinity would occur along Serfas Club Drive, between Frontage Road and Pine Crest Drive, which would range up to 68 dBA CNEL as measured at 50 feet from the centerline of the outermost travel lane. However, implementation of MM NOI-1b would be required to ensure traffic noise impacts from SR-91 would be reduced to less than significant and would ensure persons are not exposed to noise levels in excess of acceptable standards.

Because vibration is a highly localized phenomenon, there would be no possibility for vibration associated with the project to combine with vibration from other projects because of their distances from the project site. Therefore, there would be no cumulative impact related to vibration. The proposed project's construction and operational vibration levels would not exceed identified thresholds, and impacts would be less than significant. Accordingly, the proposed project's incremental contribution to noise and vibration impacts would be less than significant. Other projects listed in Table 4-1 would be required to evaluate noise and vibration impacts and implement mitigation, if necessary, to minimize noise impacts pursuant to local regulations. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to noise.

4.2.14 - Paleontological Resources

The geographic scope of the cumulative paleontological resources analysis is the project vicinity. Paleontological resource impacts tend to be localized because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as disruption of soils; therefore, in addition to the project site itself, the area near the project site would be the area most affected by project activities (generally within a 500-foot radius).However, as shown in Exhibit 4-1, there are no cumulative projects within the vicinity of the project site.

Construction activities associated with development projects in the project vicinity may have the potential to encounter undiscovered paleontological resources. These projects would reduce

impacts through compliance with applicable federal and State laws governing paleontological resources, which reduce potential cumulative impacts to paleontological resources to less than significant. The majority of impacts to paleontological resources are site-specific and are therefore generally mitigated on a project-by-project basis. Additionally, as needed, projects would incorporate individual mitigation for site-specific geological units present on each individual project site. Accordingly, cumulative impacts to paleontological resources are less than significant. Furthermore, the proposed project would have a less than significant contribution to cumulative impacts because it would be required to conform to federal and State policies that protect paleontological resources, including Section 5097 of the California Public Resources Code.

The likelihood of any significant paleontological resources on the project site are very low given the developed nature of the site, previous disruptions to its ground and the lack of any known resource within its boundaries. Although there is the possibility that previously undiscovered resources could be encountered by subsurface earthwork activities, the implementation of standard construction mitigation measures would ensure that undiscovered paleontological resources are not adversely affected by project-related construction activities, which would prevent the destruction or degradation of potentially significant paleontological resources in the project vicinity. For all the reasons detailed above and given the low potential for disruption, and the comprehensiveness of mitigation measures that would apply to this proposed project and those in the vicinity, the proposed project would not make a cumulatively considerable contribution to any potentially significant cumulative impact on paleontological resources. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to paleontological resources.

4.2.15 - Population and Housing

The geographic scope of the cumulative population and housing analysis is the County of Riverside and City of Corona. Population growth is typically measured in relation to the size of the applicable jurisdiction and, thus, the County of Riverside and the City of Corona are the appropriate geographical areas. The project site is currently designated for residential use by the County's Zoning Ordinance and, thus, the project proposes a specific plan for the project area that contemplates support of the population growth. Similarly, the City of Corona portion of the proposed project is currently designated as residential use by the City of Corona 2020-2040 General Plan and this portion of the proposed project would also be within the Specific Plan area and subsequently would support the population growth. None of the cumulative projects propose a significant reduction in housing availability, therefore there is no significant cumulative impact related to the displacement of people or housing. Additionally, as they are reviewed, other development projects in the County of Riverside and City of Corona would be reviewed for impacts on population growth and would be required to demonstrate consistency with the applicable General Plans. For these reasons cumulative impacts with respect to population and housing would be less than significant.

The proposed project would not contribute to unplanned population growth or displace people or housing. Instead, the proposed project would improve housing availability in the City and County by developing 365 dwelling units, which would be 100 percent active adults and age restricted to 60 years old and older. During the construction phase, the proposed project is estimated to create

approximately 236 temporary on-site construction jobs in both unincorporated County of Riverside and the City of Corona, which is expected to be filled from the existing regional workforce. The proposed project is expected to add up to 744 total residents approximately 652 persons to the County of Riverside's population and approximately 119 persons to the City of Corona's population. This represents an increase of 0.17 percent relative to the County's unincorporated population of 389,905 and an increase of 0.07 percent relative to the City of Corona's population of 169,454. Accordingly, growth inducement impacts were found to be less than significant. Therefore, the proposed project's incremental contribution to population and housing impacts would be less than significant. The proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to population and housing.

4.2.16 - Public Services

The geographic scope of the cumulative public services analysis is the service area of each of the providers serving the proposed project. Because of differences in the nature of the public service and utility topical areas, they are discussed separately.

Fire Protection and Emergency Medical Services

The geographic scope of the cumulative fire protection and emergency medical services analysis is the Riverside County Fire Department's (RCFD) service area via California Department of Forestry and Fire Protection (CAL FIRE) contracted services and the City of Corona Fire Department (CFD). A significant cumulative environmental impact would result if cumulative growth exceeded the ability of RCFD, CAL FIRE, and the CFD to adequately serve their service areas, thereby requiring construction of new facilities or modification of existing facilities. Development projects within these service areas would be required to comply with City and County requirements and General Plan policies that address fire protection services, including the payment of impact fees designed to ensure adequate facilities. Therefore, cumulative impacts would be less than significant.

The proposed project's incremental contribution to less than significant cumulative impacts would not be significant. As discussed under Impact PS-1(a), implementation of the proposed project would not create a need for new or physically altered facilities. The proposed project would develop a total of 365 dwelling units on approximately 105 acres and includes open space, trails, and passive recreational areas. The proposed project is estimated to add 730 new residents combined to the County of Riverside and City of Corona population. The nearest RCFD Fire Station to the project site is approximately 4.5 miles away, and the nearest CFD Fire Station is approximately within 0.96 mile away. Because of the travel distance of the fire stations in relation to the proposed project site, the response times from all County Fire Stations are longer than the Riverside County standard of 4 minutes. The proposed project would contribute to a an increased number of emergency and public service calls due to the increased presence of structures, traffic, and population. These impacts would be mitigated by mandatory impact fees.

The CFD would be the main provider of fire emergency services. Average fire response times for the project area are currently 6 minutes and 21 seconds, and the goal response time is met 93.75 percent of the time. The proposed project would increase the call volume by approximately 50 calls per year based on CFD's per capita response projections. Thus, the project applicant shall pay the

required service and development fees pursuant to the Corona "Fire Facilities Fund" as amended in the Chapter 3.36 of the Municipal Code. Additionally, the proposed project would comply with all applicable requirements of the California Fire Code, including provision of adequate emergency access points, and it would be accessible to fire apparatus. Therefore, proposed project's incremental contribution to fire protection services would be less than significant. The proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to fire protection and emergency medical services.

Police Protection

The geographic scope of the cumulative police protection and emergency medical services analysis is the Riverside County Sheriff's Department and the City of Corona Police Department (CPD). A significant cumulative environmental impact would result if this cumulative growth exceeded the ability of the Riverside County Sheriff's Department and CPD to adequately serve their service area, thereby requiring construction of new facilities or modification of existing facilities. All cumulative projects within the Department's and CPD's service area would be required to comply with City and County ordinances and other policies that address police protection services. Therefore, cumulative impacts would be less than significant.

The proposed project's incremental contribution to less than significant cumulative impacts would not be significant. As discussed under Impact PS-1(b), implementation of the proposed project would not create a need for new or physically altered facilities for the Riverside County Sheriff's Department or CPD to provide police protection services to its service area.

The proposed project would develop a total of 365 dwelling units on approximately 105 acres and includes open space, trails, and passive recreational areas. The Riverside County Sheriff's Department station that would provide law enforcement services to the proposed project is the Jurupa Valley Station (JVS) located at 7477 Mission Boulevard in Riverside, California, which is approximately 13 miles from the project site. The increase in population from the proposed project would generate approximately 4 to 5 calls for service per day for JVS, resulting in approximately 1,460 to 1,825 calls for service annual. Given that the proposed project would increase the population in the JVS service area by 652 new residents, the sworn officers to resident ratio would be 4.4 officers per 1,000 residents after the proposed project is completed. Therefore, the 2.3 percent increase in the JVS service area population would not be considered significant because the sworn officer to resident ratio still exceeds the one officer per 1,000 residents standard.

Under the development contemplated in the NOP, Planning Area 6 would increase the population of the City of Corona by approximately 118 residents. The proposed project would have minimal impact on the response times for the CPD. The target staffing ratio for the CPD is one officer per 1,000 residents. Given the City's estimated current population of 168,382 residents, based on the California Department of Finance estimates and the current staffing of 250 sworn officers, the current ratio is approximately 1.49 officers per 1,000 residents, which exceeds the one officer per 1,000 residents ratio. Other development projects within the Sheriff Department and CPD service area would be reviewed for impacts on police protection and would be required to address any potential impacts with mitigation. Given current staffing levels, existing facilities are sufficient to

serve the proposed project in conjunction with existing and cumulative projects. Therefore, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to police protection.

Schools

The geographic scope of the cumulative school analysis is the Corona-Norco Unified School District (CNUSD), which encompasses parts of Riverside County, Corona, Norco, Eastvale, and Jurupa Valley. Regional growth resulting from past, present, and reasonably foreseeable projects would result in increased demand for additional school facilities. Like development in the City and County, the CNUSD is expected to receive Development Impact Fees (DIFs) from cumulative development within other jurisdictions including Norco, Eastvale, and Jurupa Valley. The payment of school impact fees would ensure that school facilities can accommodate future students. Therefore, cumulative impacts would be less than significant.

The proposed project's incremental contribution to less than significant cumulative impacts would not be significant. The proposed project would develop a total of 365 dwelling units on approximately 105 acres and includes open space, trails, and passive recreational areas. The proposed project would be age restricted to 60 years old and older and therefore would not add any new students to CNUSD. Other development projects within CNUSD would be reviewed for impacts on schools and would be required to pay development fees. Therefore, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to schools.

Libraries

The geographic scope of the cumulative libraries analysis is the Riverside County Library System and the City of Corona Public Library. A significant cumulative environmental impact would result if cumulative growth exceeded the ability of the library system to adequately serve people within their service area, thereby requiring construction of new facilities or modification of existing facilities. All cumulative projects would be required to comply with City and County ordinances and other policies that address library facilities and services. Therefore, cumulative impacts would be less than significant.

The proposed project's incremental contribution to less than significant cumulative impacts would not be significant. The County of Riverside operates a system of 38 library branches and two book mobiles (one serving Coachella Valley and one serving western Riverside County) to serve unincorporated populations. The nearest County of Riverside Library to the project site is the Home Gardens Library located approximately 4.7 miles east of the project site. The County's ability to support the needs of future growth is dependent upon its ability to secure sites for, construct and stock new libraries on a timely basis. At present, there is no specific funding mechanism for expansion of library facilities. Therefore, the project applicant would be required to pay the current DIF for library services to offset any impact on the current County library branches before receiving building permits.

The City of Corona operates one public library for the existing approximately 168,382 residents. The proposed project would increase Corona's current population by 118 new residents, which represents an approximately 0.07 percent increase in population, resulting in a minimal increase in demand to existing resources and programming. The City of Corona uses DIFs from residential uses to fund library facilities within the City. The project applicant would be required to pay the current DIF rate before obtaining permitting. Therefore, the proposed project's incremental contribution to cumulative impacts to libraries would be less than significant. Other development projects within the service area of the Riverside County Public Library System and the Corona Public Library would be reviewed for impacts on the libraries and would be required to pay development fees. Therefore, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to libraries.

Health Services

The geographic scope of the cumulative health services analysis are two hospitals in the City of Corona—Corona Regional Medical Center–Main at 800 South Main Street (approximately 2.2 miles east), and Corona Regional Medical Center–Magnolia at 730 Magnolia Avenue (approximately 3.3 miles east) that would serve the project site. A significant cumulative environmental impact would result if cumulative growth exceeded the ability of the hospitals to adequately serve people within their service area, thereby requiring construction of new facilities or modification of existing facilities. It is anticipated that the existing hospitals have capacity for the additional population expected from the proposed project. No specific adopted criteria are maintained for determining future needs for public hospital or medical clinics. In addition, due to the proximity of existing medical centers to the project site, existing facilities have the capacity to serve the proposed project and future projects in the area. Therefore, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be significant. As discussed under Impact PS-1(e), based on the current ratio of residents to hospitals, the proposed project's increase in new residential population will represent only a nominal shift in hospital facilities per capita in the County. For these reasons, impacts of the proposed project on health services are not cumulatively considerable and the cumulative impact would be less than significant. The proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to health services.

4.2.17 - Recreation

The geographic scope of the cumulative recreation analysis is the County of Riverside county limits and the City of Corona city limits. Within the County and City limits are regional parks, neighborhood parks, community parks, regional parks, trails, community gardens, and historic sites. Further, all cumulative projects would be required to comply with City and County ordinances and General Plan policies that address parks and recreational facilities, such as paying park in lieu fees and maintaining adequate parkland ratios. Therefore, cumulative impacts to parks and recreational facilities would be less than significant.

The proposed project's incremental contribution to less than significant cumulative impacts would not be significant. As discussed under Impacts REC-1(a) and REC-1(b), implementation of the

proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated. Moreover, the construction of parks and other recreational facilities contemplated by the proposed project are not expected to result in an adverse physical effect on the environment. The proposed project would develop 365 dwelling units and a commercial/retail area on approximately 105 acres of the project site and preserve the remaining acreage as open space and recreational use. The proposed project is estimated to add approximately 770 new residents to the County and City's population. The proposed project proposes to develop approximately 47 acres of open space, which exceeds the Riverside County provision of 3 acres of parkland per 1,000 population, and the City of Corona's provision for 3 acres of parkland per 1,000 residents in the City. The proposed project would provide a trail network and passive use areas (open space and greenway). The provision of these facilities would be expected to offset the increased demand for such facilities because project residents would be expected to use the facilities closest to where they live. As such, the proposed project would not create substantial impacts related to parks and other recreational facilities. Therefore, impacts of the proposed project on parks and other recreational facilities are not cumulatively considerable and, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to recreation.

4.2.18 - Transportation and Traffic

The geographic scope of the cumulative transportation analysis is the roadway network within the Coronita portion of the County of Riverside, and the western portion of the City of Corona. Changes to the State CEQA Guidelines were adopted in December 2018, requiring all lead agencies to adopt Vehicle Miles Traveled (VMT) as a replacement for automobile delay-based Level of Service (LOS) as the new measure for identifying transportation impacts for land use projects. Therefore, the analysis of transportation impacts includes a VMT analysis based on applicable County and City screening thresholds to determine whether the proposed project would have an impact related to VMT and, if so, whether that impact would be significant. The proposed project would result in less than significant impacts as the project generated VMT per capita would be 9.69, which falls below the County's adopted standard of 15.2. As part of this analysis, the Cumulative Plus Project Conditions, which is the cumulative estimates for 2040 in addition to the project impacts, was evaluated. Under this scenario VMT per capita was 11.57 for the Specific Plan, resulting in less than significant impacts.

While the City of Corona and County of Riverside recognize that vehicle delay as represented by LOS deficiencies are not analyzed as potential environmental impacts under CEQA, the County's General Plan addresses LOS for new development projects. Therefore, the proposed project's impacts to LOS was still analyzed and included in the discussion of impacts for informational purposes. As discussed in Section 3.18, Transportation, of this Draft EIR, study facilities consist of 34 existing and future study intersections and 29 roadway segments.

Existing (2023) Conditions

Intersections

The following study area intersections are currently operating at an unacceptable LOS during the peak-hours:

- Paseo Grande and Via Del Rio (No. 21)–LOS E AM peak-hour only.
- Paseo Grande and Pine Crest Drive (No. 24)–LOS E AM peak-hour only.
- Paseo Grande and Ontario Avenue (No. 25)–LOS E AM peak-hour only.

When taking into consideration the queues associated with the congestion on the SR-91 Freeway during the morning commute period, the following additional intersections were also found to operate at an unacceptable LOS under Existing traffic conditions:

- Green River Road and SR-91 Westbound Ramps (No. 1)–LOS F AM peak-hour only.
- Green River Road and SR-91 Eastbound Ramps (No. 2)–LOS F AM peak-hour only.
- Auto Center Drive and Wardlow Road (No. 5)–LOS F AM peak-hour only.
- Auto Center Drive and SR-91 Westbound Ramps (No. 6)–LOS F AM peak-hour only.
- Serfas Club Drive and SR-91 Eastbound Ramps (No. 7)–LOS F AM peak-hour only.
- Serfas Club Drive and Frontage Road (#8)–LOS F AM peak-hour only.

Roadway Segments

The study area roadway segments are currently operating at an acceptable LOS based on the daily roadway capacity thresholds and minimum LOS criteria.

Freeway Off-Ramp Queues

There are no movements that are currently experiencing queueing issues during the weekday AM or weekday PM peak 95th percentile traffic flows.

EAP (2027) Conditions

Intersections

There are no additional study area intersections anticipated to operate at an unacceptable LOS with the addition of project traffic for EAP (2027) traffic conditions from the locations identified previously for Existing traffic conditions.

Roadway Segments

The study area roadway segments are anticipated to continue to operate at an acceptable LOS based on the daily roadway capacity thresholds and minimum LOS criteria with the addition of project traffic under EAP (2027) traffic conditions.

Freeway Off-Ramp Queues

Consistent with Existing traffic conditions, there are no movements that are anticipated to experience queueing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of project traffic for EAP (2027) traffic conditions.

EAPC (2027) Conditions

Intersections

The following study area intersections are anticipated to operate at an unacceptable LOS under EAPC (2027) traffic conditions:

- Paseo Grande and Via Santiago (No. 20)–LOS F AM peak-hour only.
- Paseo Grande and Via Del Rio (No. 21)–LOS F AM peak-hour only.
- Paseo Grande and Pine Crest Drive (No. 24)–LOS F AM peak-hour only.
- Paseo Grande and Ontario Avenue (No. 25)–LOS F AM peak-hour only.

Freeway Off-Ramp Queues

Consistent with Existing traffic conditions, there are no movements that are anticipated to experience queueing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of project traffic for EAPC (2027) traffic conditions.

Horizon Year (2040) Conditions

Intersections

The following study area intersections are anticipated to operate at an unacceptable LOS under Horizon Year (2040) Without Project traffic conditions:

- Serfas Club Drive and Green River Road (No. 13)–LOS E AM peak-hour only.
- Paseo Grande and SR-91 EB On-Ramp/SR-91 EB Off-Ramp/6th Street (No. 18)–LOS E PM peak-hour only.
- Paseo Grande and Frontage Road (No. 19)–LOS F PM peak-hour only.
- Paseo Grande and Via Santiago (No. 20)–LOS F AM and PM peak-hours.
- Paseo Grande and Via Del Rio (No. 21)–LOS F AM peak-hour; LOS E PM peak-hour.
- Paseo Grande and Pine Crest Drive (No. 24)–LOS F AM peak-hour only.
- Paseo Grande and Ontario Avenue (No. 25)–LOS F AM peak-hour only.
- Avenida Del Vista and Ontario Avenue (No. 34)–LOS E AM peak-hour only.

There are no additional study area intersections anticipated to operate at an unacceptable LOS with the addition of project traffic.

Freeway Off-Ramp Queues

Consistent with Existing traffic conditions, there are no movements that are anticipated to experience queueing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of project traffic for Horizon Year (2040) traffic conditions.

City of Corona General Plan Buildout Conditions

Intersections

The following study area intersections are anticipated to operate at an unacceptable LOS under General Plan Buildout (GPBO) Without Project traffic conditions:

- Serfas Club Drive and Green River Road (No. 13)–LOS F AM and PM peak-hours.
- Paseo Grande and SR-91 EB On-Ramp/SR-91 EB Off-Ramp/6th Street (No. 18)–LOS F PM peak-hour only.
- Paseo Grande and Frontage Road (No. 19)–LOS F AM and PM peak-hours.
- Paseo Grande and Via Santiago (No. 20)–LOS F AM and PM peak-hours.
- Paseo Grande and Via Del Rio (No. 21)–LOS F AM peak-hours.
- Paseo Grande and Pine Crest Drive (No. 24)–LOS F AM peak-hour; LOS E PM peak-hour.
- Paseo Grande and Ontario Avenue (No. 25)–LOS F AM peak-hour only.
- Avenida Del Vista and Ontario Avenue (No. 34)–LOS E AM peak-hour only.

There are no additional study area intersections anticipated to operate at an unacceptable LOS with the addition of project traffic.

Freeway Off-Ramp Queues

Consistent with Existing traffic conditions, there are no movements that are anticipated to experience queueing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of Project traffic for GPBO traffic conditions.

Thus, as detailed in MM TRANS-1, in conjunction with adjacent project development activity, the proposed project would include several transportation improvements to ensure cumulative impacts related to design features are less than significant.

Additionally, all of the new development projects listed in Table 4-1 would generate new vehicle trips that may trigger or contribute to unacceptable intersection operations and freeway operations. All projects would be subject to Measure A and the payment of Transportation Uniform Mitigation Fee (TUMF) and DIF to mitigate for their fair share of impacts. Additionally, all cumulative projects would be required to comply with County and local ordinances and General Plan policies that address potential impacts related to transportation.

For these reasons, cumulative impacts with respect to transportation and traffic would be less than significant.

Moreover, the proposed project's incremental contribution to cumulative traffic impacts would not be significant. As discussed under Impact TRANS-1, the proposed project would not conflict with a program, plan, ordinance, or policy related to bicycle, pedestrian or transit facilities. As discussed under Impact TRANS-2, the proposed project would not conflict or be inconsistent with CEQA

Guidelines Section 15064.3 subdivision (b). For other transportation-related areas (roadway safety; emergency access; public transit, bicycles and pedestrians), the proposed project would have potentially significant impacts related to roadway hazards, but after the implementation of MM TRANS-1 and MM TRANS-2, these impacts would be reduced to a level of less than significant. As such, the proposed project would not create substantial impacts related to transportation. Therefore, impacts related to the proposed project's incremental contribution to cumulative impacts would be less than significant.

4.2.19 - Tribal Cultural Resources

Eligibility for California Register Listing

The geographic scope of the cumulative registered historical resources analysis is the project vicinity. Registered historical resource impacts tend to be localized because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as construction; therefore, in addition to the project site itself, the area near the project site would be the area most affected by project activities (generally within a 500-foot radius). Construction activities associated with development projects in the project vicinity may have the potential to remove or damage registered historical resources. Cumulative projects would be required to comply federal, State, and local policies that protect cultural and Tribal Cultural Resources (TCRs), including the provisions of SB 18 and AB 52, Section 15064.5 of the CEQA Guidelines, and Sections 5024.1 and 5097 of the Public Resources Code. Accordingly, because cumulative development would be required to comply with long-term planning documents, and regulatory agency guidance establishing policies (including, but not limited to., evaluation requirements and inadvertent discovery procedures) that reduce impacts to potential cultural resources, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be significant. The proposed project would comply with all statutory requirements Additionally, given that neither the project site nor any other project site in the vicinity is listed on any national, State, or local registers of historic places (including those for TCRs), the proposed project would not make a cumulatively considerable contribution to any potentially significant cumulative impact or registered historical resources. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to registered historical resources.

Eligibility as Determined by Lead Agency

The geographic scope of the cumulative TCR analysis is the project vicinity. Tribal cultural resource impacts tend to be localized because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as disruption of soils; therefore, in addition to the project site itself, the area near the project site would be the area most affected by project activities (generally within a 500-foot radius) as shown in Exhibit 4-1.

Construction activities associated with development projects in the project vicinity may have the potential to encounter undiscovered TCRs. These projects would be required to mitigate for impacts

through compliance with applicable federal and State laws governing TCRs. Even if a significant cumulative impact could be found, the proposed project would not make a cumulatively considerable impact with required compliance. The likelihood of any significant TCRs on the project site are very low given the developed nature of the site, previous disruptions to its ground, and the lack of any known resource within its boundaries. Although there is the possibility that previously undiscovered resources could be encountered by subsurface earthwork activities, the implementation of standard construction mitigation measures would ensure that undiscovered TCRs are not adversely affected by project-related construction activities, which would prevent the destruction or degradation of potentially significant TCRs in the project vicinity. Given the low potential for disruption, and compliance with construction BMPs that would apply to this project and those in the vicinity, the proposed project would not make a cumulatively considerable contribution to any potentially significant cumulative impact on TCRs. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to TCRs.

4.2.20 - Utilities and Service Systems

Water

The geographic scope of the cumulative potable water analysis is the City of Corona Utilities Department service area, which encompasses the City of Corona city limits and nearby unincorporated areas of Riverside County (Coronita). The City of Corona water service area has over 150,000 customer accounts. Water supply impacts are analyzed in Section 3.20, Utilities and Service Systems, of this Draft EIR, which concluded that the City of Corona has adequate potable water supplies to serve the proposed project, as well as other existing and future users. Cumulative development would be required to conform with federal, State, and local policies that would reduce water supply impacts to less than significant levels. When applicable, any additional new development within the City and County would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the General Plans, Municipal Code requirements, and SB 610 and SB 221, prior to approval. All of the City's sources of supply are sustainably managed and are projected to exceed demand through 2045. The City has three supply sources (groundwater, imported water, and reclaimed water for landscaping) and therefore does not rely on a single water source. Overall, cumulative water demands would neither exceed planned levels of supply nor require building new water treatment facilities or expanding existing facilities beyond what is currently planned. For these reasons, cumulative impacts with respect to water supply are less than significant.

Moreover, the proposed project's incremental contribution to cumulative impacts would be less than significant. The estimated water usage for Planning Areas 1 through 6 to be on average 183,000 gallon per day (gpd) or 206.25 AFY which is approximately 0.57 percent of Utilities Department total water supply and approximately 9.75 percent of the Utilities Department excess supply in 2020. As discussed in greater detail in Impacts USS-1a and 1b, the proposed project would not result in the need for expanded water facilities and there are sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Therefore, the City of Corona would have sufficient water supplies available in addition to the

proposed improvements that would adequately serve the proposed project. For these reasons, the proposed project's incremental contribution to cumulative impacts is less than significant.

It should be noted that not all of the projects listed in Table 4-1 are located within the City of Corona water service area. However, for those projects that are located with the City of Corona Utilities Department service area, the 2020 UWMP anticipates adequate water supplies for all water year scenarios through 2045. These projects also would be required to demonstrate that they would be served with potable water service as a standard requirement of the development review process, and these projects may be required to implement water conservation measures to the extent they are required. Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to water supply in normal or dry years.

Wastewater

The geographic scope of the cumulative wastewater analysis is the areas tributary to the City of Corona Wastewater Treatment Plant 1 (WWTP-1). WWTP-1 is designed to serve flows from the east, south, and western portion of the City. WWTP-1 is currently used to treat flows from a service area of 14,000 acres within the City boundary. The current treatment capacity of WWTP-1 is 11.5 mgd with an expected future reliable treatment capacity of 14.5 mgd with improvements. Part of the wastewater analysis included evaluation of future flows for portions of Coronita surrounding the project area that are not currently utilizing City sewer services. Coronita is not located within the City of Corona's jurisdictions; however, the 2005 City of Corona Sewer Master Plan notes that the developments in this area have exhibited poor septic tank performance and will eventually be converted to operate on a City-maintained gravity sewer system. Therefore, the City of Corona plans to ultimately convert Coronita from private septic tanks to City sewer services. All future projects would be required to demonstrate that sewer service is available to ensure that adequate sanitation can be provided. Additionally, all cumulative projects would be required to comply with City/County ordinances and General Plan policies, as well as other regulations related to wastewater collection and treatment. For these reasons, cumulative impacts are less than significant. Additionally, the proposed project's contribution to cumulative impacts would be less than significant. The proposed project is projected to have an Average Dry Weather Flow (ADWF) of approximately 0.09 mgd (0.14 cfs) and a Peak Dry Weather Flow (PDWF) of approximately 0.2 MDG (0.32 cfs). There is enough additional capacity to accommodate the wastewater flows from the proposed project. Additionally, the combined projected discharge from the proposed project and the projected connections in Coronita for ADWF is approximately 0.29 mgd and is approximately 0.82 mgd for PDWF. Even with the additional flows from Coronita, there would be additional capacity for the proposed project. Additionally, the sewer flow projections show that the existing downstream pipeline segments are deficient based on the City's criteria in the existing, post-project, and ultimate conditions and will eventually be required to be replaced with larger capacity pipelines. The proposed project would be required to pay fair share contributions to support the construction of new sewer lines to WWTP-1. All of the sewer facilities would be designed to the City of Corona Utilities Department current Design Policy and Standards. As such, the proposed project's incremental contribution to cumulative impacts would be less than significant. Therefore, the proposed project, in conjunction with other

planned and approved projects, would not have a cumulatively significant impact related to wastewater.

Storm Drainage

The geographic scope of the cumulative storm drainage analysis is an existing stormwater runoff 8 foot by 8 foot Reinforced Box Culvert (RCB) located west of the project underneath SR-91, which currently receives runoff from the project site and would continue to do so in the future. All future development projects in the project vicinity would be required to provide drainage facilities that collect and detain runoff such that off-site releases are controlled and do not create flooding. Therefore, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to cumulative impacts would be less than significant. As discussed in Section 3.20, the proposed project would install a network of storm drainage facilities within the project site consisting of inlets, underground piping, and basins. Each of the Planning Areas would contain different Best Management Practices (BMPs) for stormwater management for water capturing, cleansing and discharging into the stormwater system. All development containing water quality systems would comply with NPDES requirements in effect at the time of approval. In order to limit the discharge at the SR-91 Freeway culvert, a proposed detention basin in Planning Area 3 would mitigate the increase runoff from the proposed project. With these improvements, the flows to the RCB would be below its capacity. For these reasons, the proposed project would have a less than significant incremental contribution to storm drainage impacts.

Solid Waste

The geographic scope of the cumulative solid waste analysis is the Waste Management, Inc. (WMI) service area in the City of Corona. Other future projects within the cumulative geographic context would be required to comply with federal, State, and local laws and policies to address potential impacts related to solid waste. For these reasons, cumulative impacts to solid waste would be less than significant. Additionally, the proposed project's contribution to cumulative impacts would be less than significant. The project proposes to connect all Planning Area utilities, including solid waste disposal by the City of Corona and solid waste disposal would be provided by WMI. Solid waste would be generated by both short-term construction and long-term operational activities. WMI transports all solid waste from the City to the El Sobrante landfill. Although owned by WMI, the landfill was constructed as a partnership between Riverside County and WMI and is a Class III landfill that accepts regular municipal solid waste. The site is permitted to accept approximately 16,000 tons of solid waste per day from the Counties of Riverside, Los Angeles, Orange, San Diego, and San Bernardino with approximately 144 million cubic yards of remaining capacity. The proposed project is estimated to generate approximately 4,464 pounds per day (1.99 tons per day). Given that there is approximately 10,055 tons per day of capacity at the landfill, there is enough available capacity to accommodate the proposed project as well as other projects listed in Table 4-1. Therefore, the proposed project would have a less than significant contribution to cumulative impacts.

Existing landfills in Riverside County are required to comply with federal, State, and local statutes and regulations related to solid waste. Because the proposed project in addition to others would be

required to comply with such regulations, the cumulative impact would be less than significant. Moreover, as discussed in Section 3.20, Utilities and Service Systems, the proposed project's incremental contribution to existing landfills would be less than significant. Therefore, in conjunction with other projects, the proposed project would not have a cumulative impact in regard to solid waste or landfill capacity.

4.2.21 - Wildfire

The geographic scope of the cumulative wildfire analysis is the region surrounding the project site. The region in which the project site is located has experienced wildfires in 2017, 2008, and 1999. The City of Corona is located in the northwestern portion of Riverside County, near the convergence of Los Angeles, Orange, and Riverside counties, approximately 45 miles southeast of the City of Los Angeles. It is located in a valley, framed by mountains and the Prado Basin. All cumulative projects would be subject to similar fire protection development standards and be required to comply with County ordinances and General Plan policies to assist in protecting life and property in the event of a wildfire. In addition, all cumulative projects would be covered under existing emergency response plans by the County. For these reasons, cumulative impacts with respect to wildfire hazards would be less than significant.

The proposed project's incremental contribution to cumulative wildfire hazard impacts would not be significant. According to Figure 5-0-5: Western Riverside County Wildfire Susceptibility Risks Map within the County of Riverside Multi-Jurisdictional Hazard Mitigation Plan, the project site is not located within a "Fire Hazard Severity Zone" or a "Very High/High/Moderate Fire Hazard Severity Zone." The project area is not located in a Wildfire Hazard Severity Zone and has never experienced a wildfire between 1990 and 2021. Additionally, the proposed project's design would not exacerbate any existing wildfire hazard in the project's vicinity. Therefore, the proposed project, in conjunction with other future projects, would not have a cumulatively significant impact related to wildfires.

CHAPTER 5: ALTERNATIVES TO THE PROPOSED PROJECT

5.1 - Introduction

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6, this Draft Environmental Impact Report (Draft EIR) contains a comparative impact assessment of alternatives to the proposed project. The primary purpose of this chapter is to provide decision-makers and the general public with a reasonable number of feasible project alternatives that could attain most of the basic project objectives, while avoiding or reducing any of the project's significant adverse environmental effects. Important considerations for these alternatives analyses are noted below (as stated in CEQA Guidelines Section 15126.6).

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
  - Failure to meet most of the basic project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

Alternatives to a project must be considered even if they would impede, to some degree, the attainment of project objectives or be more costly (CEQA Guidelines § 15126.6(b)). However, the range of alternatives addressed in an EIR need not be exhaustive, and is governed by a "rule of reason," which requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. Of the alternatives considered, the EIR need examine in detail only those that the lead agency determines could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. An EIR need not consider an alternative whose effects cannot be reasonably ascertained, whose implementation is remote and speculative, or an alternative that would not substantially lessen or avoid the significant effects of the project. CEQA Guidelines Section 15126.6(d) states that 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 alternatives shall be discussed, but "in less detail than the significant effects of the project as proposed."

CEQA Guidelines Section 15364 defines "feasibility" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." The determination of the feasibility of project alternatives may include, but is not limited to, factors such as: site suitability, economic viability, infrastructure availability, general plan consistency, regulatory and jurisdictional limitations, and whether the project proponent can reasonably acquire, control, or otherwise have access to an alternative project site (CEQA Guidelines § 15126.6(f)(1)).

A comparison of impacts associated with the project and alternatives is provided within this chapter. In several cases, the description and severity of the impact may be the same under each scenario when compared with the CEQA Thresholds of Significance (i.e., both scenarios would result in a "less than significant" impact). However, the actual degree of impact may be slightly different under each scenario, and this relative difference is the basis for a conclusion of greater or lesser impacts. In addition, the alternatives analysis includes the assumption that all applicable mitigation measures associated with the project would be implemented with a given project alternative (e.g., Reduced Intensity Alternative).

An evaluation of a No Project Alternative is required by CEQA Guidelines Section 15126.6(e) and is included in this chapter. A No Project—No Project Alternative/No Build—Existing Land Use Activities Alternative, a No Project Alternative/Development within the Existing Land Use Designations Alternative, and a Reduced Intensity Alternative are evaluated herein.

An alternative would be considered environmentally superior to the project if it would result in fewer or less significant environmental impacts. As required by the CEQA Guidelines, an environmentally superior alternative has been identified among the alternatives evaluated in this Draft EIR, and is discussed in Section 5.6, Environmentally Superior Alternative.

5.1.1 - Significant Unavoidable Impacts

As analyzed in detail in Chapter 3 of this Draft EIR, all project-related impacts are either no impact, less than significant impact, or can be mitigated to below a level of significance. Therefore, the proposed project does not have any significant unavoidable impacts and as a result, an analysis of alternatives to the proposed project is not technically required under CEQA. CEQA Guidelines Section 15126.6(b) states: ". . . 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 . . ." The County therefore is not required to consider the feasibility of project alternatives or make any specific findings (Public Resources Code [PRC] § 21002; *Laurel Hills Homeowners Association v. City Council* (1978) 83 Cal. App. 3d 515, 521; see also Kings *County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692, 730–731; and *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Ca1. 3d 376, 400-403).

Accordingly, analysis of the following three alternatives to the proposed project is provided for informational purposes and to allow the decision-makers to consider the proposed project in light of hypothetical alternative development scenarios, thereby promoting CEQA's purpose as an information disclosure statute. A brief summary of the alternatives to the proposed project is included below.

5.1.2 - Alternatives to the Proposed Project

The three alternatives to the proposed project analyzed in this chapter are as follows:

- **Alternative 1—No Project Alternative/No Build-Existing Land Use Activities Alternative**: The No Project/No Build Alternative provides a comparison between the environmental impacts of the proposed project in contrast to the environmental impacts that could result from not

approving, or denying, the project, as well as not changing the land use designation(s) for the site. Under the No Project/No Build Alternative, the site would remain in its existing condition and no development would occur.

- **Alternative 2—Development within the Existing Land Use Designations Alternative**: Recreational uses would be developed on the proposed Planning Areas (PAs) within the jurisdiction of the County of Riverside (PAs 1, 2, 3, 4, and 5), approximately 79.9 acres. For purposes of analysis, the recreational activities would include a Topgolf ™ facility in PAs 1 and 2 with an associated parking lot. PAs 3 and 4 would consist of an off-road vehicle park, and PA 5 would be a lakeside area for camping and fishing activities with associated parking lots. PA 6 within the City of Corona with a General Plan Land Use Designation of Low Density Residential (LDR), is zoned as Agricultural (A) and would feature 16 large-lot, low density, single-family housing units.
- **Alternative 3—Reduced Intensity Alternative:** The Reduced Intensity Alternative proposes to develop a mixed-use project with development that consists of 240 units market-rate units on approximately 79.9 acres, with an average of approximately three units per acre, on the PAs within the County of Riverside (PAs 1 through 5). PA 6 would not be developed under this Alternative. The residential portion of this alternative, or the "240-Unit Alternative" was developed in response to comments from residents regarding the proposed project. This alternative would develop 125 fewer dwelling units without any age restriction on the project site. With the reduction in dwelling units proposed under this Alternative, the Homeowner's Association (HOA) would not be able to support the maintenance of the trail system. Therefore, this Alternative would not include the trail system and would reduce the amount of open space compared to that included under the proposed project. In addition, the Reduced Intensity Alternative would develop retail/commercial or light/industrial development within PA 1 (365,000 square feet in total).

These three alternatives to the proposed project are analyzed in detail in the following section. These analyses compare the proposed project and each individual project alternative. In several cases, the description of the impact may be the same under each alternative when compared with the CEQA Thresholds of Significance (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the proposed project and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

5.2 - Project Objectives

As stated in Chapter 2, Project Description, the objectives of the proposed project are to:

- Develop a specific plan to guide development in underutilized, currently vacant parcels in Riverside County and the City of Corona in alignment with City of Corona 2020-2040 General Plan Policy LU-5.4.

- Convert a vacant, underutilized property into a master-planned mixed-use community in alignment with County of Riverside 2020 General Plan Policy LU 33.1 and City of Corona 2020-2040 General Plan Policy LU-9.2.
- Generate new, additional property tax revenues for Riverside County and the City of Corona through the conversion of unused property.
- Provide a range of housing options, including single-family housing and two-family residences in alignment with County of Riverside 2020 General Plan Policy LU 28.4 and City of Corona 2020-2040 General Plan Policies 7.1 and 7.2.
- Provide active adult age-restricted housing within Riverside County and City of Corona in alignment with City of Corona 2020-2040 Policies LU-17.2, PR-2.4, and H-2.2.
- Help meet the respective Regional Housing Need Allocation (RHNA) of both Riverside County and the City of Corona, as set out in their respective Housing Elements.
- Create a walkable, mixed-use environment, by providing the opportunity for retail and commercial spaces within the community in alignment with County of Riverside 2020 General Plan Policies LU 29.3 and C 4.7 and City of Corona 2020-2040 General Plan Goal LU-13 and Policy LU-13.1.
- Develop an open space, parks, and trail system for public use, allowing both existing and new residents to take advantage of the development in alignment with County of Riverside 2020 General Plan Policy LU 3.1d and City of Corona 2020-2040 General Plan Policies PR-6.2 and PR-6.4.
- Provide stormwater, and residential water runoff, treatment through natural processes, using the open space, parks, and trail system in alignment with the County of Riverside 2020 General Plan Policies LU 5.2. and LU 5.3 and City of Corona 2020-2040 General Plan Policies IU-2.9, IU-5.5, and IU-5.6.
- Promote land use compatibility with neighboring residential uses by creating landscaped setbacks as buffers, and the development of a compatible housing density (units per acre) to the adjoining uses in alignment with County of Riverside 2020 General Plan Policy LU 7.1 and City of Corona 2020-2040 General Plan Policy LU-9.9.
- Provide a circulation system that is complementary to local residential neighborhoods and encourages pedestrian and bicycle circulation in alignment with County of Riverside 2020 General Plan Policies LU 13.6 and C 16.4a and City of Corona 2020-2040 General Plan Goal CE-5.
- Provide an infrastructure system, including sewer, water, and storm drain systems that will adequately serve full buildout of the proposed project in alignment with County of Riverside 2020 General Plan Policies LU 5.1 and LU 5.2 and City of Corona 2020-2040 General Plan Policy IU-7.1.
- Provide adequate off-street parking for all on-site uses, so as to not impact the development's neighbors in alignment with County of Riverside 2020 General Plan Policy C 3.26 and City of Corona 2020-2040 General Plan Policy CE-7.1.
- Complete General Plan Initiating Proceedings adopted on April 18, 2017.

5.3 - Alternative 1–No Project Alternative/No Build-Existing Land Use Activities Alternative

CEQA Guidelines Section 15126.6(e) requires the discussion and evaluation of a No Project Alternative. The No Project/No Build-Existing Land Use Alternative (Alternative 1) provides a comparison between the environmental impacts of the proposed project in contrast to the environmental impacts that could result from not approving, or denying, the project, as well as not changing the land use designation(s) for the site. Under Alternative 1, the site would remain in its existing condition and no development would occur. This means that under Alternative 1, the existing vacant former Mountain View Golf Course on-site and the current proposal would not occur. Impacts from the proposed project are compared with the Alternative 1 for each of the 21 topical issue areas discussed in the Draft EIR in the sections that follow.

5.3.1 - Impact Analysis

Aesthetics, Light, and Glare

The Draft EIR concluded that impacts to scenic vista, scenic highway, visual character and quality, and light and glare would be less than significant. Alternative 1 would allow the site to remain in its current undeveloped condition with continued visual change on-site due to the existing and ongoing degradation of the former golf course, facilities, and open space with homeless encampments, trash dumping, weed overgrowth, and graffiti, and no new development would occur. Therefore, because it is not located in or near a scenic highway corridor, Alternative 1 would have no impacts associated with scenic highways, similar to the proposed project. Additionally, impacts related to Mount Palomar would be the same as the proposed project. Alternative 1 would have greater impacts with respect to visual character than the proposed project due to current trash dumping, weed overgrowth, graffiti, and occasional homeless encampments occurring on the site. However, because it would not result in any lighting changes, Alternative 1 would have less impacts related to light and glare compared to the proposed project.

Agriculture Resources and Forest Resources

Under Alternative 1, the site would remain in its existing condition and no development would occur, therefore resulting in no impacts related to agricultural or forestry resources. The Draft EIR determined that the proposed project would have less than significant impacts on agricultural resources, and no impacts to forestry resources. Therefore, impacts related to agricultural resources under Alternative 1 would be less than the proposed project and equivalent to impacts related to forestry resources compared to the proposed project. Although, impacts under the project would be less than significant and would not require mitigation.

Air Quality

Alternative 1 would result in no new development on the site, so there would be no air quality impacts from construction or operational emissions. The project as proposed would result in air quality impacts requiring mitigation. Analysis of the proposed project would that total daily vehicle trips to and from the proposed project would be approximately 1,624; however, under Alternative 1, the project site would remain a vacant, former golf course and would generate no vehicle trips.

Therefore, impacts to air quality would be avoided under Alternative 1, and impacts would be less than the proposed project.

Biological Resources

Alternative 1 would leave the site in its largely undeveloped condition, which would allow plant and animal species to continue utilizing the site. There would be no new development that could affect special-status species, riparian habitats, sensitive natural communities, wetlands, or migratory wildlife corridors. Impacts under this alternative, including potential impacts to burrowing owl, migratory birds, and western pond turtle as well as to jurisdictional features would be avoided entirely. Therefore, impacts from the proposed project to biological resources would be greater than Alternative 1. Because of the continued degradation on the former Mountain View Golf Course, adverse impacts to biological resources could still occur due to the continued presence of trash and homeless encampments. Therefore, both Alternative 1 and the proposed project could have adverse impacts to the proposed project. However, Alternative 1 would have reduced impacts on biological resources as compared with the proposed project, which would be mitigated to a less than significant impact.

Cultural Resources

Alternative 1 would leave the site in its present condition with the ongoing degradation of the vacant former Mountain View Golf Course without disturbing the ground for new development, and there would be no impacts on cultural resources. The Draft EIR concluded that the proposed project would not have significant impacts to cultural resources with mitigation. Therefore, Alternative 1 would have reduced impacts on cultural resources compared with the proposed project, although impacts under the project would also be less than significant with mitigation.

Energy

Alternative 1 would not develop the project site. Therefore, it would remain in its present condition with ongoing degradation of the vacant former Mountain View Golf Course. Under the proposed project, fuel and power would be used during both the construction and operation of the proposed project. However, under Alternative 1, no construction or operation would occur. As such, Alternative 1 would have no impact on energy. Although, impacts under the project would also be less than significant.

Geology and Soils

Under Alternative 1, the site would remain in its present state with continued degradation of the vacant former Mountain View Golf Course, and there would be no potential impacts to future structures from geotechnical hazards. The Draft EIR determined that implementation of the proposed project would have less than significant impacts with mitigation incorporated. Alternative 1 would have reduced impacts on geology and soils compared with the proposed project because it would not add residential and other uses to the site.

Greenhouse Gas Emissions

Under Alternative 1, no new development on the site would occur, and there would be no changes to existing conditions that would result in greenhouse gas (GHG) emissions from construction or operations on the site. Therefore, Alternative 1 would result in no GHG emissions. Compared to the proposed project, which would result in less than significant impacts after mitigation, Alternative 1 would result less impact than the proposed project.

Hazards and Hazardous Material

Under Alternative 1, the site would remain in its present condition, and there would be no increased impacts from hazards or hazardous materials associated with new uses. There would be no development on the site that would involve the transport, use, or disposal of hazardous materials, interfere with an emergency response plan or evacuation plan, or expose people or structures to significant risk of loss, injury, or death involving fires. Implementation of the proposed project would have less than significant impacts with mitigation incorporated. Therefore, Alternative 1 would have reduced impacts related to hazards and hazardous materials compared with the proposed project, although impacts under the project would be mitigated to less than significant.

Hydrology and Water Quality

Under Alternative 1, the site would remain in its present condition with the continued degradation of the vacant former Mountain View Golf Course. Therefore, less impacts would occur under this Alternative because no additional impervious surfaces would be developed. However, the Preliminary Hydrologic Analysis performed for the project site found that the drainage at the site currently exceeds the capacity This alternative would not result in improvements to the site using Best Management Practices (BMPs), and the addition of storm drains and detention basin to the site, which would leave the project site vulnerable to hydrological impacts. As determined in the Preliminary Hydrological Analysis, the capacity of the existing stormwater culvert that serves the project site is exceeded and would be exceeded further under Alternative 1. If the impacts to capacity of the culvert continue to worsen, backups and overflows could occur near the culvert. Additionally, the sewer lines that currently serve the surrounding area and would serve the proposed project were found to be deficient by the Preliminary Wastewater Report. Deficient sewer lines could lead to sewage backups, stoppages, and odor. The proposed project would implement stormwater capture features at the site that would reduce to flow to existing culvert to below capacity as well as pay fair share contributions that would support the repair of the deficient sewer lines. The proposed project is not expected to result in any significant impacts to hydrology or water quality with implementation of the planned hydrological improvements. Compared to the proposed project, Alternative 1 would result in less impacts related to groundwater, water supply, and flood flows, but the proposed project would have less impacts related runoff and drainage patterns at the project site.

Land Use and Planning

Alternative 1 consists of the continued degradation of the vacant former Mountain View Golf Course use on approximately 104.8 acres. This Alternative would maintain the existing County of Riverside 2020 General Plan and City of Corona 2020-2040- General Plan designations and zoning for the

project site, whereas the proposed project includes a General Plan Amendment that would change the land use designation from Open Space Recreation (OS-R) to Medium Density Residential (MDR) as well as a zoning change from One-Family Dwellings (R-1) to Specific Plan (S-P) for PA 1 through 5. The proposed specific plan would require County of Riverside approval to ensure compatibility with the County of Riverside 2020 General Plan and the City of Corona 2020-2040 General Plan, Municipal Code, and surrounding land uses; whereas, Alternative 1 would avoid the need to do so. Therefore, Alternative 1 would have less impacts than the proposed project, which would have less than significant impacts regarding land use and planning.

Mineral Resources

Mineral resources impacts would be related to the loss of mineral resources, incompatible land uses, and hazards related to quarries/mines. Under Alternative 1, the site would remain undisturbed and in its present condition, and no impacts to mineral resources would occur. The Draft EIR for the proposed project found that development of the site would not result in the loss of availability of a known mineral resource of value to the region or residents of the State, and the project would have a less than significant impact regarding mineral resources. Therefore, Alternative 1 would cause no impacts to mineral resources, while the proposed project would result in less than significant impacts. Impacts would be less than the proposed project.

Noise

Under Alternative 1, the project site would remain in its present undeveloped condition, and no construction noise or operational noise related to new development would occur. The Draft EIR concluded that the proposed project would include new stationary noise sources such as parking lot activities and mechanical ventilation system equipment that would be potential point sources of noise that could affect noise-sensitive receptors in the proposed project vicinity. However, with implementation of mitigation measures, the proposed project would have less than significant impacts regarding noise. Compared to the proposed project, impacts would be less under Alternative 1. However, significant impacts under the project would be mitigated to less than significant impact.

Paleontological Resources

Alternative 1 would leave the site in its present condition with the ongoing degradation of the vacant former Mountain View Golf Course without disturbing the ground for new development, and there would be no impacts on paleontological resources. The Draft EIR concluded that the proposed project would not have significant impacts to cultural resources with mitigation. Therefore, Alternative 1 would have reduced impacts on cultural resources compared with the proposed project, although impacts under the project would also be less than significant with mitigation.

Population and Housing

Alternative 1 would leave the site in its present condition, and therefore would not result in increased population, housing, or employment. There would be no construction of new residential or commercial uses on the project site, and no displacement of existing residents or business owners would occur. Alternative 1 would not result in any impacts related to population growth, while the

proposed project would result in less than significant impacts. However, both Alternative 1 and the project have no impacts with regard to housing and the displacement of housing. Impacts would be less than the proposed project.

Public Services

Alternative 1 would not involve any new development but would still require the ongoing abatement of homeless encampments, illegal dumping, and trespassing activities, which necessitates the need for police, fire, and other public services. Therefore, Alternative 1 would have less than significant impacts related to public services. Similarly, the Draft EIR determined that impacts related to public services for the proposed project would be less than significant. However, calls for service would likely be greater for the proposed project's fully built out development than the current abatement activities. Therefore, Alternative 1, similar to the proposed project, would result in less than significant impacts on public services. Impacts would be less than the proposed project.

Recreation

Recreation impacts relate to potential impacts to recreational facilities, usage of existing neighborhood/regional parks, and recreational trails. Alternative 1 would not involve any new residential development and would therefore not result in an increased need for recreation/park services. Existing conditions on the project site would not change, so there would be no increase in the demand for recreational facilities or accelerate the deterioration of current facilities. The Draft EIR determined that the proposed project would not increase demand for additional parks or facilities and impacts would be less than significant due in part, to the proposed project' s inclusion of 33 acres of new parkland. Further, the proposed project would include open space as well as a trail system that would be accessible by the surrounding community. Therefore, Alternative 1 would have no impact on recreation facilities, while impacts under the proposed project would be less than significant. Impacts would be less than the proposed project.

Transportation

Alternative 1 would leave the site in its present condition, resulting in fewer traffic impacts to local roads. The Draft EIR determined that implementation of the proposed project would result in less than significant impacts with mitigation incorporated and includes the development of traffic improvements for the site itself. These improvements would not occur under Alternative 1. Alternative 1 would avoid the traffic impacts that would occur under the proposed project and would cause no impact compared to the proposed project.

Tribal Cultural Resources

Alternative 1 consists of the continued degradation of the vacant former Mountain View Golf Course use on the project site. While the vacant former golf course activities and degradation of the site have already disturbed the project site, Alternative 1 would have no Tribal Cultural Resources (TCR) impacts when compared to the proposed project. The Draft EIR determined the proposed project would have potentially significant impacts; however, impacts related to the proposed project would be mitigated to a less than significant level. Therefore, impacts under Alternative 1 would less than the proposed project.

Utilities and Service Systems

Under Alternative 1, the site would remain in its present condition, would not include new uses or new residents and there would be no new demand for additional utilities and service systems. However, as determined in the Preliminary Hydrological Analysis, the capacity of the existing stormwater culvert that serves the project site is exceeded and would be exceeded further under Alternative 1. If the impacts to capacity of the culvert continue to worsen, backups and overflows could occur near the culvert. Additionally, the sewer lines that currently serve the surrounding area and would serve the proposed project were found to be deficient by the Preliminary Wastewater Report. The proposed project would implement stormwater capture features at the site that would reduce to flow to existing culvert to below capacity as well as pay fair share contributions that would support the repair of the deficient sewer lines. The Draft EIR found that with construction of planned improvements, impacts would be less than significant. Compared to the proposed project, which would result in less than significant impacts, Alternative 1 would result in significant impacts related to stormwater and wastewater utilities.

Wildfire

Under Alternative 1, the site would remain in its present condition and no development would occur, therefore resulting in no impacts related to wildfire. The project site is not located in a State Responsibility Area (SRA), lands classified as a Very High Fire Hazard Severity Zone (VHFHSZ), or within any other hazardous fire areas that may be designated by a Fire Chief. Therefore, the Draft EIR determined that the proposed project would have less than significant impacts related to wildfire or any applicable emergency response plans. Compared to the proposed project, which would have less than significant impacts, Alternative 1 would result in less impacts.

5.3.2 - Conclusion for No Project Alternative/Existing Land Use Activities Alternative

Alternative 1 would not advance any of the project objectives because (1) no dwelling units would be developed; (2) the vacant former golf course use would continue to degrade; (3) no open space would be provided for public use; and (4) continued degradation of the project site including homeless encampments, trash dumping, weed overgrowth, and graffiti. Additionally, this Alternative would not advance the objectives that concern facilitating the redevelopment of an underused and degraded vacant site; guiding the transition of an infill site with a Specific Plan; decreasing abatement of illegal activity; protecting open space and establishing trails; development of affordable, age-restricted residential units; development of market-rate housing and developing a logical internal circulation system for pedestrians, bicyclists, equestrians, and motorists.

Furthermore, this Alternative would not address the significant impacts to stormwater drainage and the sewer lines under the existing conditions at the project site. As discussed above, the proposed project would include stormwater drainage features that would reduce stormwater flows to the culvert that serves the project site to below its maximum capacity. If the impacts to capacity of the culvert continue to worsen, backups and overflows could occur near the culvert. Additionally, the proposed project would include fair share contributions that would go toward an existing capital improvements project in to replace deficient sewer lines that currently serve the community around

the project site and would serve the proposed project. Therefore, this Alternative would have significant impacts related to Hydrology and Water Quality as well as Utilities and Service Systems.

5.4 - Alternative 2–Development within the Existing Land Use Designations Alternative

In this case, the Development within the Existing Land Use Designations Alternative (Alternative 2) consists of new development and land use activities on the site that would occur pursuant to the existing County of Riverside General Plan land use designation in PAs 1, 2, 3, 4, and 5 of the project site, which have a County of Riverside 2020 General Plan Land Use Designation of Open Space Recreation (OS-REC) and One-Family Dwellings (R-1). PA 6 of the project site is within the City of Corona and has a City of Corona 2020-2040 General Plan Land Use Designation of Low Density Residential (LDR) and is zoned as Agricultural (A). Alternative 2 is different from Alternative 1 in that it proposes to develop the site consistent with existing land use designations, whereas Alternative 1 does not consider any development.

Recreational uses would be developed on the proposed PAs within the jurisdiction of the County of Riverside (PAs 1, 2, 3, 4, and 5), approximately 79.9 acres. The recreational activities include a fee area for a Topgolf ™ facility in PAs 1 and 2 with an associated parking lot. PAs 3 and 4 would consist of an off-road vehicle park, and PA 5 would be a lakeside area for camping and fishing activities with associated parking lots. This is consistent with the County of Riverside 2020 General Plan OS-REC land use designation, which allows for active and passive recreational uses such as parks, trails, campgrounds, athletic fields, golf courses, and off-road vehicle parks. In addition, ancillary structures may be permitted for recreational opportunities. PA 6 within the City of Corona with a General Plan Land Use Designation of Low Density Residential (LDR) and is zoned as Agricultural (A) would feature 16 large-lot, low density, single-family housing units, a reduction by 40 single-family housing units compared to the same PA as proposed in the NOP. This represents a reduction of 349 housing units on the site in total compared to the proposed project as identified in the NOP and 309 housing units reduction as currently proposed. The recreational features proposed under the project would not be implemented under Alternative 2. Impacts from the proposed project are compared with Alternative 2 for each of the 21 topical issue areas discussed in the Administrative Draft EIR in the sections that follow.

5.4.1 - Impact Analysis—Alternative 2–Development within the Existing Land Use Designations Alternative

Aesthetics, Light, and Glare

Aesthetic impacts under the project were all determined within the Draft EIR to be less than significant, without the need for mitigation. Alternative 2 proposes to develop the site with recreational activities including a fee area for a Topgolf ™ facility in PAs 1 and 2 with an associated parking lot. PAs 3 and 4 would consist of an off-road vehicle park, and PA 5 would be a lakeside area for camping and fishing activities with associated parking lots. PA 6 within the City of Corona with a General Plan Land Use Designation of Low Density Residential (LDR) and is zoned as Agricultural (A) would feature 16 large-lot, low density, single-family housing units.

Under Alternative 2, a fee area for a Topgolf ™ facility would be located on PAs 1 and 2, which would include climate-controlled hitting bays where players hit golf balls with embedded microchips into an outdoor outfield enclosed by perimeter netting. The Topgolf ™ facility would likely be several stories tall with perimeter netting that extends taller than the facility, which would likely be much taller than the surrounding residential uses. Operation of the Topgolf ™ facility would likely occur both during the day and at night, and therefore would require extensive nighttime lighting for both the building containing the hitting bays and the outdoor outfield, which I would be required to comply with the County's lighting ordinance. The fee area for the Topgolf ™ facility would be located in PAs 1 and 2 and zoned as R-1, which has a maximum structural height limit of 40 feet. Therefore, a zone change would likely be required to accommodate the height of the facility's fencing.

Under the proposed project, PAs 3 and 4 would be developed with 162 single-family residences and 50 two-family residences. Under Alternative 2, these PAs would be developed with a parking lot. This represents much less development than the proposed project, however, the parking lot would likely require nighttime lighting that would more intense than the nighttime lighting for the residential uses proposed under the project. Alternative 2 would also develop a campground in PA 5 and 16 single-family residences in PA 6. This would represent a decrease by 71 single-family residences on these two PAs than proposed by the project. For these PAs, Alternative 2 would have lesser impacts on aesthetics, light, and glare when compared to the proposed project as it would develop less structures requiring nighttime lighting or causing glare on the project site and adjacent properties. Overall, given the development of the Topgolf ™ facility, impacts related to aesthetics, light, and glare from Alternative 2 would be similar to the proposed project. However, given Alternative 2's reduction in development intensity impacts would be less than the proposed project.

Agriculture Resources and Forest Resources

The Draft EIR determined that the proposed project would have less than significant impacts on agricultural resources, and no impacts to forestry resources. Alternative 2 would develop the site in the same locations and within the same acreages as the proposed project, but with less site coverage. Alternative 2 would have impacts equivalent to the proposed project, therefore both the proposed project and Alternative 2 would have less than significant impacts to agriculture and no impacts to forest resources. Given that this Alternative has less site coverage, impacts would be less than the proposed project.

Air Quality

The project as proposed would result in air quality impacts requiring mitigation. Alternative 2 would disturb less ground surface compared to the proposed project and would involve a lesser amount of grading and building construction activity compared to the proposed project as Alterative 2 would leave more land in a natural or minimally disturbed state as outdoor recreation facilities. The building floor area in Alternative 2 would be reduced substantially, and the construction emissions would be less, due to the lesser use of similar construction equipment and construction duration. However, inclusion of the Topgolf ™ facility under Alternative 2 would include more vehicle trips to and from the project site than the proposed project. Additionally, active adult housing generates less trips than non age-restricted housing. The Alternative Trip Generation Summary prepared for the project found that Alternative 2 would generate approximately 2,023 daily vehicle trips whereas the

proposed project would generate approximately 1,624 daily vehicle trips, resulting in an increase of 399 vehicle trips under Alternative 2 (Appendix J). While impacts to air quality during construction would be less than the proposed project under Alternative 2, impacts during operation would be more than the proposed project. Similar to the proposed project, Alternative 2 would likely need mitigation to reduce impacts to a less than significant level.

Biological Resources

The development footprint for Alternative 2 would be less dense than the proposed project, resulting in a smaller development footprint and corresponding reduction in potential impacts to biological resources. PA 5 would remaining largely undeveloped because it would be repurposed into a campground under Alternative 2, Additionally, development of Alternative 2 would not include the trail system that is included in the proposed project. Therefore, the woody riparian vegetation located within the natural drainage ravine located in PA 6 would remain undeveloped. Because of the reduce development footprint, especially in areas with existing natural vegetation, Alternative 2 would result in fewer impacts than the proposed project. Further, Alternative 2 would need to incorporate the same mitigation for biological resources as the proposed project, since it would also involve the disturbance of land and new construction on an undeveloped site, albeit with less intensity than the proposed project. Impacts would be lesser than the proposed project and would be less than significant with mitigation for both the proposed project and Alternative 2.

Cultural Resources

The Draft EIR concluded that the proposed project would not have significant impacts to cultural resources with mitigation. Alternative 2 would disturb less ground surface compared to the proposed project and would involve a lesser amount of grading and building construction activity compared to the proposed project as Alterative 2 would leave more land in a natural or minimally disturbed state as outdoor recreation facilities. Accordingly, while the potential impacts to cultural resources from Alternative 2 would occur in generally the same locations as the proposed project, because there would be reduced disturbance, the potential for unexpected discovery would be reduced compared to the proposed project. However, similar to the proposed project, in the event that unexpected discovery of new resources occurs during grading activities within the development footprint. This would occur to a lesser extent as Alterative 2 would leave more land in a natural or minimally disturbed state for outdoor recreation facilities. Alternative 2 would incorporate the same mitigation for cultural resources as the proposed project. Impacts would be roughly similar to, but lesser than the proposed project, and would be less than significant with mitigation for both the proposed project and Alternative 2.

Energy

The Draft EIR concluded that under the proposed project, fuel and power would be used during both construction and operation and would result in less than significant impacts. Alternative 2 would involve a lesser amount of grading and building construction activity compared to the proposed project as Alterative 2 would leave more land in a natural or minimally disturbed state as outdoor recreation facilities. Under Alternative 2, PAs 1 and 2 would require more energy to operate the Topgolf ™ facility, which would include climate-controlled bays, a technology platform gaming

system, food service, and extensive lighting than the 66 two-family and 10,000 square quick service food retail uses included in the proposed project. However, PAs 3, 4, 5, and 6 would involve less intense development than proposed under the proposed project and would require less energy to operate. Therefore, both Alternative 2 and the proposed project would result in less than significant impacts related to energy. However, given the reduction is development intensity, impacts would be less than the proposed project.

Geology and Soils

The Draft EIR determined that implementation of the proposed project would less than significant impact with mitigation incorporated and that the site is considered developable from a geotechnical perspective; however, mitigation would be required to reduce impacts. Implementation of mitigation measures and compliance with County and Uniform Building Code construction standards would reduce geology and soils impacts to less than significant levels. Alternative 2 would disturb less ground surface compared to the proposed project and would involve a lesser amount of grading and building construction activity compared to the proposed project as Alterative 2 would leave more land in a natural or minimally disturbed state as outdoor recreation facilities. The smaller density of development on the site for Alternative 2 would minimally reduce potential exposure of building occupants to strong seismic ground shaking and other geologic hazards. Therefore, impacts related to geology and soils would remain similar to the proposed project. With mandatory compliance with the requirements noted in the proposed project's Storm Water Pollution Prevention Plan (SWPPP), as well as mandatory compliance with applicable regulatory requirements including but not limited to South Coast Air Quality Management District (SCAQMD) Rule 403, and the project's Water Quality Management Plan (WQMP), as well as Standard Uniform Building Code requirements, impacts would be less than significant with mitigation incorporated, similar to the proposed project.

Greenhouse Gas Emissions

The County of Riverside's Climate Action Plan (CAP) is a geographically specific plan that was adopted by the County of Riverside for the purpose of reducing GHG emissions under the control or influence of the County consistent with Assembly Bill (AB) 32 and subsequent State legislation and State agency action to address climate change. The CAP has adopted a target of reducing GHG emissions down to 15 percent below 2008 levels within the County of Riverside by 2020. Pursuant to the CAP, projects that achieve at least 100 points based on the County's screening tables are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report. As such, further project specific GHG quantification is not required. Consistent with CEQA Guidelines, such projects are determined to have a less than significant individual and cumulative impact for GHG emissions. The Draft EIR determined that the project would be less than significant after incorporating at least 100 points from the Riverside County Greenhouse Gas Emissions Screening Tables as mitigation.

The Alternative Trip Generation Summary prepared for the project and Alternative 2 found that Alternative 2 would generate approximately 399 additional daily vehicle trips compared to the proposed project (Appendix J). In order to evaluate a new development's consistency with the County of Riverside CAP, the County developed Screening Tables to aid in measuring the reduction of GHG emissions through design features or mitigation measures, which are assigned point values. The

CAP has provided a threshold of 3,000 metric tons (MT) of carbon dioxide equivalent (CO_2e) per year used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions. Proposed projects that achieve at least 100 points (equivalent to an approximate 15 percent reduction in GHG emissions) are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report, and consequently would be consistent with the CAP. As such, proposed projects that achieve a total of 100 points or more do not require quantification of project-specific GHG emissions and, consistent with CEQA Guidelines, such projects are considered to have a less than significant individual and cumulative impact on GHG emissions. Under the proposed project, GHG emissions are estimated to be approximately 3,818 MT CO_2e per year starting in 2025, which makes the proposed project subject to the Screening Tables. Therefore, the proposed project would include MM GHG-1, which requires that the proposed project demonstrate that project would generate 100 points or greater prior to the issuance of grading permits. Given that Alternative 2 would include more vehicle trips than the proposed project, it is logical to assume that it would have greater GHG emissions than the proposed project and be subject to the CAP Screening Tables. Therefore, Alternative 2 would also be required to implement MM GHG-1 as well. The impacts of Alternative 2 with respect to GHG emissions would be more than those of the proposed project but would result in less than significant impacts with the implementation of mitigation, similar to the proposed project. Impacts would be greater under Alternative 2.

Hazards and Hazardous Material

The Draft EIR for the proposed project found that hazards and hazardous materials impacts would be less than significant with mitigation incorporated. The development footprint for Alternative 2 would be less dense than the proposed project and result in a smaller development footprint and corresponding reduction in potential exposure to unknown hazards on the site but would be located within the same project boundary and within the same acreages as the proposed project. Therefore, Alternative 2 would have reduced impacts related to hazards and hazardous materials compared with the project. However, impacts under the proposed project and Alternative 2 would both require mitigation in order to be less than significant.

Hydrology and Water Quality

The Draft EIR found that the proposed project would reduce the existing significant impacts to water quality by implementing improvements to the site using BMPs, storm drains, and detention basins to the site. Under the proposed project, impacts would be less than significant. While overall the reduction in development density on-site under Alternative 2 would lessen the amount of impervious surfaces on the site, Alternative 2 would also be required to address the existing potentially significant impacts on the project site. As determined in the Preliminary Hydrological Analysis, the capacity of the existing stormwater culvert that serves the project site is currently exceeded. Alternative 2 would implement improvements to reduce the flows to the existing culvert to below capacity. Additionally, the sewer lines that currently serve the surrounding area and would serve the proposed project were found to be deficient by the Preliminary Wastewater Report. Both the proposed project and development under Alternative 2 would be required to pay fair share contributions that would support the repair of the deficient sewer lines. Compared to the proposed project, which would result in less than significant impacts, Alternative 2 would result in less than

significant impacts related hydrology and water quality. Both the proposed project and Alternative 2 would reduce the existing significant impacts to a less than significant level.

Land Use and Planning

The Draft EIR for the project found that Land Use and Planning impacts would result in less than significant impacts. Similar to the proposed project, Alternative 2 would also require discretionary permits, such as a conditional use permit or plot plan. However, Alternative 2 would have less land use and planning impacts than the project as it would not conflict with any applicable land use plan and it would not require the General Plan Amendments required for the proposed project. Further, it would not divide an existing community, nor would it result in a conflict with any applicable land policy or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate environmental effects. Therefore, there would be no impacts related to Land Use and Planning under Alternative 2. Impacts would be less than the proposed project.

Mineral Resources

Mineral resources impacts relate to loss of mineral resources and incompatible land uses. The Draft EIR for the proposed project found that the development of the site would not result in the loss of availability of a known mineral resource of value to the region or residents of the State, and the proposed project would have a less than significant impact regarding mineral resources. The development footprint for Alternative 2 would be less dense than the proposed project and result in a smaller development footprint and corresponding reduction in ground disturbance that could impact mineral resources. However, Alternative 2 would have similar impacts to mineral resources as the proposed project. Therefore, both the proposed project and Alternative 2 would result in less than significant impacts to mineral resources.

Noise

The Draft EIR concluded that with implementation of mitigation measures, the proposed project would have less than significant impacts regarding noise. The site preparation phase, which includes excavation and grading activities, generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. As previously discussed, Alternative 2 would require less excavation and grading activities than the proposed project and therefore would produce less construction-related noise. Therefore, short-term noise levels during construction would be less than significant with the implementation of mitigation measures. The Alternative Trip Generation Summary prepared for the project and Alternative 2 found that Alternative 2 would generate 399 additional daily vehicle trips compared to the proposed project (Appendix J). Therefore, Alternative 2 would generate more long-term traffic noise since it would generate more vehicle trips than the project site during operation. In addition, it is not likely that Alternative 2 would exceed the 3 decibel (dB) threshold over ambient levels, and isolated noise levels at project ingress/egress points would increase noise levels during peak-hours for sensitive receptors given that implementation of the proposed project would be a less than 1 dB increase compared to the noise levels that would exist without the proposed project. Therefore, similar to the proposed project, Alternative 2 would not create a substantial permanent increase in ambient noise levels. Therefore, potential short and long-

term noise impacts from Alternative 2 would be less than significant with mitigation, similar to the proposed project.

Paleontological Resources

The Draft EIR concluded that the proposed project would not have significant impacts to paleontological resources with mitigation. Alternative 2 would disturb less ground surface compared to the proposed project and would involve a lesser amount of grading and building construction activity compared to the proposed project as Alterative 2 would leave more land in a natural or minimally disturbed state as outdoor recreation facilities. Although, the potential impacts to paleontological resources due to an unexpected discovery of new resources during grading activities within the development footprint would occur in the same locations as the proposed project and Alternative 2. This would occur to a lesser extent as Alterative 2 would leave more land in a natural or minimally disturbed state for outdoor recreation facilities. Alternative 2 would incorporate the same mitigation for paleontological resources as the proposed project. Impacts for both the proposed project and Alternative 2 would be less than significant with mitigation.

Population and Housing

Population and housing impacts relate to housing and the displacement of persons or housing and population. The Draft EIR determined that the jobs necessitated by construction of the proposed project and operation of the commercial development in PA 2 under the proposed project are not anticipated to require hiring outside of the project region. Therefore, the Draft EIR found that the proposed project would neither directly nor indirectly increase population growth in the area, and impacts would be less than significant. Alternative 2 would develop 349 units fewer than the proposed project. Given the smaller scale of Alternative 2, fewer construction and operation related jobs would be created. However, similar to the proposed project, those employees are anticipated to come from the local labor pool. As a result, potential population and housing impacts would be less than significant, similar to the proposed project.

Public Services

The Draft EIR determined that impacts with regard to public services would be less than significant under the proposed project. Alternative 2 would develop 349 fewer dwelling units on the site than the proposed project, thereby reducing the public services the construction and operation of these units would require. Therefore, this Alternative would generate less demand on public services and would have fewer impacts compared with the proposed project. However, it is anticipated that Alternative 2, like the proposed project, would result in similar but lesser impacts on public services, which would be less than significant.

Recreation

Recreation impacts relate to potential impacts to recreational facilities, usage of existing neighborhood/regional parks, and recreational trails. The Draft EIR determined that the proposed project would not increase demand for additional parks or facilities and impacts would be less than significant. Under the proposed project, several open spaces would be retained, and a trail system would be developed in PA 6 that would open to the surrounding community. Alternative 2 would

develop the site with a lesser density with open space recreation amenities, including the campground in PA 5, and a Topgolf ™ facility in PA 6. Additionally, Alternative 2 would develop 349 fewer dwelling units than the proposed project. Compared with the proposed project, Alternative 2 would create more recreation facilities than the proposed and would create less demand for recreation facilities. Therefore, impacts of Alternative 2 would be less than the proposed project.

Transportation

The Draft EIR determined that implementation of the proposed project would result in significant impacts and would require the development of traffic improvements for the site itself as mitigation, resulting in less than significant impacts. While Alternative 2 would disturb less ground surface compared to the proposed project, it involves a similar amount of grading and building construction activity. The Alternative Trip Generation Summary prepared for the project and Alternative 2 found that it would generate 399 more daily vehicle trips than the proposed project (Appendix J). However, Alternative 2 would adopt and implement the same mitigation measures as those of the proposed project for the promotion of traffic safety in the vicinity of the site. Therefore, both the proposed project and Alternative 2 would result in less than significant impacts with mitigation incorporated; however, impacts would be greater under Alternative 2.

Tribal Cultural Resources

Potential impacts to TCRs could occur from the unexpected discovery of new resources found during grading activities within the development footprint. Therefore, the Draft EIR concluded that the proposed project would not have significant impacts with mitigation. Alternative 2 would disturb less ground surface compared to the proposed project and would involve a lesser amount of grading and building construction activity compared to the proposed project as Alterative 2 would leave more land in a natural or minimally disturbed state as outdoor recreation facilities. However, Alternative 2 and the proposed project would disturb similar locations through grading and other ground-disturbing activities, but Alternative 2 would impact the land to a lesser extent due to the reduced ground-disturbing activity. Additionally, Alternative 2 would be required to comply with local, State, and federal regulations regarding unanticipated discoveries and human remains, similar to the proposed project, which would further reduce potential impacts. Impacts to TCRs for both the proposed project and Alternative 2 would be less than significant with mitigation. However, impacts would be less than the proposed project.

Utilities and Service Systems

The Draft EIR found that with impacts would be less than significant under the proposed project. Additionally, as discussed above, the proposed project would implement stormwater capture features at the site that would reduce the flow to existing culvert, which currently exceeds capacity, to below capacity as well as pay fair share contributions that would support the repair of deficient sewer lines that would serve the project site as well as the surrounding area. Demand for utilities and services would be proportionately reduced under Alternative 2 due the reduction of approximately 349 residential dwelling units. Alternative 2 would also include the improvements discussed above to address the existing significant impacts to stormwater drainage and sewer lines. Therefore, both the proposed project and Alternative would result in less than significant impacts.

Impacts would be less than the proposed project related to water supply, and wastewater and solid waste generation as it would develop fewer residential units. However, impacts would be equivalent to the proposed project related to stormwater and sewer line as it would also be required to address the existing potentially significant impacts on the site.

Wildfire

The project site is not located in an SRA, lands classified as a VHFHSZ, or within any other hazardous fire areas that may be designated by a Fire Chief. Therefore, the Draft EIR determined that the proposed project would have less than significant impacts related to wildfire or any applicable emergency response plans. Alternative 2 would be developed within the same footprint as the proposed project, therefore it would also result in less than significant impacts related to wildlife. Impacts would be equivalent to the proposed project.

5.4.2 - Conclusions for Development Within the Existing Land Use Designations Alternative

Alternative 2 would advance most, but not all of the project objectives. This Alternative meets the project objectives related to the development of underutilized, vacant parcels in Riverside County and the City of Corona; new residential dwelling units, which would create additional property tax revenue and help meet the RHNA; open space for new and existing residents; infrastructure for stormwater treatment and the utilities systems that would serve the new development; and off-street parking. However, Alternative 2 does not advance the project objectives related to the development of affordable, age-restricted residential units; provide a range of housing options, including two-family residences; or develop a logical internal circulation system for pedestrians, bicyclists, equestrians, and motorists. Because of the reduced density of building area on the project site, the impacts under the Alternative 2 would be similar to, or less than, the proposed project for the non-traffic related topical areas. However, according to the Alternative Trip Generation Summary prepared for the proposed project and Alternative 2, there would be greater potential impacts to traffic related topical areas, including transportation, air quality, GHG emissions, and noise than the proposed project; however, all impacts would be less than significant with mitigation incorporated.

5.5 - Alternative 3–Reduced Intensity Alternative

The project site consists of approximately 104.8 acres, of which approximately 79.9 acres are within the County of Riverside's jurisdiction. The Reduced Intensity Alternative (Alternative 3) proposes to develop a mixed-use project with development that consists of 240 units on 79.9 acres, with an average of approximately three units per acre, on the PAs within the County of Riverside (PAs 1 through 5). The residential portion of this alternative, or the "240-Unit Alternative" was developed in response to comments from residents regarding the proposed project. This Alternative would develop 125 fewer dwelling units on the project site.

In addition, Alternative 3 would develop retail/commercial or light/industrial development within PA 1 (365,000 square feet in total). No development would occur in PA 6. The development of the site in this way would be consistent with the existing surrounding land uses adjacent to the project site. Alternative 3 would seek the same discretionary and ministerial actions as the proposed project and

would offer some open space. With the reduction in dwelling units proposed under this Alternative, the HOA would not be able to support the maintenance of the trail system. Therefore, this Alternative would not include the trail system and would reduce the amount of open space than included under the proposed project. It would not include age-restricted units included as part of the proposed project. Impacts upon development and operation of Alternative 3 compared with the proposed project are discussed below.

5.5.1 - Impact Analysis—Alternative 3—Reduced Intensity Alternative

Aesthetics, Light, and Glare

Aesthetic impacts under the proposed project were all determined within the Draft EIR to be less than significant, without the need for mitigation. Alternative 3 consists of development consistent with the existing developed surrounding land uses of the project site. Alternative 3 proposes to develop a mixed-use project with development that consists of 240 units on 79.9 acres, with an average of approximately three units per acre, on the PAs within the County of Riverside (PAs 1 through 5). This represents a 125 decrease in residential dwelling units from the proposed project. PA 1 would also include approximately 365,000 square feet of office/light industrial or retail/commercial development. Alternative 3 would have lesser impacts on aesthetics, light, and glare when compared to the proposed project, as it would develop less structures requiring nighttime lighting or causing glare on the site. Impacts would be less than significant, similar to the proposed project.

Agriculture Resources and Forest Resources

The Draft EIR determined that the proposed project would have less than significant impacts on agricultural resources, and no impacts to forestry resources. The portion of the proposed project site located in the City of Corona (PA 6) is zoned as Agricultural. The City of Corona 2020-2040 General Plan Environmental Impact Report (General Plan EIR) outlines that some of the areas zoned as Agricultural are designated as uses other than Agriculture (A) by the current land use plan, including Estate Residential (ER), Low Density Residential (LDR), Office Professional (OP), and Light Industrial (LI). The General Plan EIR states that agricultural uses would continue to be permitted on these land use designations; however, the buildout of the General Plan would convert farmland which has nonagricultural land use designations to nonagricultural use, and the associated loss of agricultural production would constitute a significant and unavoidable impact with no feasible mitigation measures to reduce the impact. Since impacts to land zoned Agricultural were wholly discussed within the General Plan EIR and the proposed project site is included in the areas analyzed by the General Plan EIR, development of the proposed residential project on land designated as LDR but zoned Agricultural would be consistent with the General Plan. The project site has not been used historically, nor is it currently used for agricultural production. As such, the Draft EIR determined that the proposed project would have a less than significant impact on existing land use designations. However, because Alternative 3 would be located on the same locations and within the same acreages on PAs 1 through 5 but no development would occur on PA 6, Alternative 3 would have no impacts to agriculture resources. Additionally, Alternative 3 would have no impacts to forest resources, similar to the proposed project. Therefore, impacts would be less than the proposed project.

Air Quality

The Draft EIR concluded that the project as proposed would result in air quality impacts requiring mitigation. Alternative 3 would only develop PAs 1 through 5, and therefore, it would disturb less ground surface and involve less grading and building construction activity compared to the proposed project. Although the building floor area would be reduced, the emissions would be roughly the same, due to the use of similar construction equipment for a similar duration. Additionally, the Alternative Trip Generation Summary prepared for the proposed project and Alternative 3 found that Alternative 3 would generate 3,752 greater daily vehicle trips than the proposed project (Appendix J). This is largely due to the fact that active adult housing generates less trips than non age-restricted housing. Additionally, the increase of commercial/retail and/or industrial/office development under this Alternative would increase the number of project trips generated by the proposed project as well as internal trips within the project site. It is likely that the same mitigation would be incorporated. Therefore, emissions from daily vehicle trips would be greater than the proposed project, however Alternative 3 and the proposed project would result in less than significant impacts with mitigation incorporated.

Biological Resources

The Draft EIR determined the proposed project would result in less than significant impacts with mitigation related to biological resources. The development footprint for Alternative 3 would be less dense than the proposed project, resulting in a smaller development footprint and corresponding reduction in potential impacts to biological resources. This Alternative would be located on the same locations and within the same acreages as the proposed project for the portions within Riverside County (PA 1 through 5) and would not include development on PA 6. Therefore, Alternative 3 would need to incorporate the same mitigation for biological resources as the proposed project, since it would also involve the disturbance of land and new construction on an undeveloped site, albeit with less density than the proposed project. Impacts would be less than the proposed project, which would be less than significant with mitigation for both the proposed project and Alternative 3.

Cultural Resources

The Draft EIR concluded that the proposed project would not have significant impacts to cultural resources with mitigation. The potential impacts to cultural resources from Alternative 3 would occur in the same manner as the proposed project. There would be potential for the unexpected discovery of new resources to occur during grading activities within the development footprint. Alternative 3 and the proposed project would disturb similar areas through grading and other surface area disturbance, except for PA 6. Therefore, Alternative 3 would incorporate the same mitigation for cultural resources as the proposed project. Impacts to cultural resources for both the project and Alternative 3 would be less than significant with mitigation incorporated.

Energy

The Draft EIR concluded that under the proposed project, fuel and power would be used during both construction and operation and would result in less than significant impacts. Alternative 3 would involve a lesser amount of grading and building construction activity compared to the proposed project as Alterative 3 would not develop PA 6. Alternative 3 would develop 125 fewer units than the

proposed project and involve less intense development than proposed under the proposed project and would require less energy to operate. Therefore, both Alternative 3 and the proposed project would result in less than significant impacts related to energy. Impacts would be less than the proposed project.

Geology and Soils

The Draft EIR determined that implementation of the proposed project would be less than significant with mitigation incorporated. The Draft EIR found that the site is considered developable from a geotechnical perspective; however, mitigation would be required to reduce impacts. Implementation of mitigation measures and compliance with County and Uniform Building Code construction standards would reduce geology and soils impacts to less than significant levels. The smaller density of development on the site for Alternative 3 would reduce the number of building occupants exposed to strong seismic ground shaking and other geologic hazards. Therefore, impacts related to geology and soils would be less than the proposed project. With mandatory compliance with the requirements noted in the proposed project's SWPPP, as well as mandatory compliance with applicable regulatory requirements including, but not limited to, SCAQMD Rule 403, and the project's WQMP, as well as Standard Uniform Building Code requirements, and mitigation measures, impacts would be less than significant, similar to the proposed project.

Greenhouse Gas Emissions

The CAP is a geographically specific plan that was adopted by the County of Riverside for the purpose of reducing GHG emissions under the control or influence of the County consistent with AB 32 and subsequent State legislation and State agency action to address climate change. The CAP has adopted a target of reducing GHG emissions down to 15 percent below 2008 levels within the County of Riverside by 2020. Pursuant to the CAP, projects that achieve at least 100 points based on the County's screening tables are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report. As such, further project specific GHG quantification is not required. Consistent with CEQA Guidelines, such projects are determined to have a less than significant individual and cumulative impact for GHG emissions. The Draft EIR determined that the project would be less than significant after incorporating at least 100 points from the Riverside County Greenhouse Gas Emissions Screening Tables as mitigation.

The Alternative Trip Generation Summary prepared for the project and Alternative 3 found that Alternative would generate 3,752 greater daily vehicle trips than the project (Appendix J). This is largely due to the fact that nonage restricted housing anticipated in Alternative 3 generates more trips than active adult housing. Additionally, the increase of commercial/retail and/or light industrial/office development under this Alternative would increase the number of project trips generated by the proposed project. Thus, Alternative 3 would be required to implement the same mitigation of the proposed project, MM GHG-1,to achieve the necessary 100 points from the screening tables. The impacts of Alternative 3 with respect to GHG emissions would be greater than those of the proposed project but considered less than significant with the implementation of mitigation, similar to the proposed project. Impacts would be greater than the proposed project.

Hazards and Hazardous Material

The Draft EIR for the proposed project found that hazards and hazardous materials impacts would be less than significant with mitigation incorporated. The development footprint for Alternative 3 would be less dense than the proposed project and result in a smaller development footprint. Alternative 3 would result in a corresponding reduction in potential exposure to hazards, but it would be located on the same locations and within the same acreages as the proposed project, with the exception of PA 6. Although building area on-site would be reduced, safety risk impacts would remain equivalent to the proposed project, due to the similar design and uses on-site. Therefore, the Alternative 3 would have reduced impacts related to hazards and hazardous materials compared with the proposed project, although impacts under the proposed project would both require to mitigation to be less than significant.

Hydrology and Water Quality

The Draft EIR found that the proposed project would result in less than significant impacts. The proposed project would include drainage features that would result in a net decrease in discharge to the culvert that serves the project site, resolving the existing deficient condition. Additionally, the proposed project would implement improvements to the site using BMPs to capture and treat stormwater. These improvements would also server to lessen significant impacts to hydrology and water quality on the project site. Further, the proposed project would pay fair share contributions to address the deficient sewer lines that would serve the project site as well as the surrounding community. Alternative 3 would implement the same improvements on the project site, where applicable. However, while overall the reduction in development density on-site would lessen the amount of impervious surfaces on the site, it would also constitute a reduction in the stormwater improvements that would be added to the site. And lastly, like the proposed project, the site would transition from vacant to developed, serving to reduce impacts caused by the continued degradation of the vacant former Mountain View Golf Course, and there would be fewer potential impacts to existing and adjacent drainages. Compared to the proposed project, which would result in less than significant impacts, Alternative 3 would result in less than significant impacts related hydrology and water quality.

Land Use and Planning

The Draft EIR found that the proposed project would result in less than significant impacts related to Land Use and Planning. Alternative 3 includes development similar to the proposed project, although the density of development would be reduced. Like the proposed project, Alternative 3 would require discretionary permits, a General Plan Amendment, and rezone. Therefore, Alternative 3 would have land use and planning impacts similar to the proposed project. Furthermore, Alternative 3 would not divide an existing community, nor would it result in a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate environmental effects. Therefore, similar to the proposed project, impacts related to Land Use and Planning would be less than significant.

Mineral Resources

Mineral resources impacts relate to loss of mineral resources, incompatible land uses, and hazards related to quarries/mines. The Draft EIR for the proposed project found that the development of the site would not result in the loss of availability of a known mineral resource of value to the region or residents of the State, and the proposed project would have a less than significant have impact regarding mineral resources. The development footprint for Alternative 3 would be within the same general location as the proposed project and would therefore not result in the loss of availability of a known mineral resource. Additionally, development under Alternative 3 would be less dense than the proposed project and result in a smaller development footprint and corresponding reduction in ground disturbance that could impact mineral resources. Alternative 3 would have similar impacts to mineral resources as the proposed project. Therefore, both the proposed project and Alternative 3 would result in less than significant impacts to mineral resources.

Noise

The Draft EIR concluded that with implementation of mitigation measures, the proposed project would have less than significant impacts regarding noise. The site preparation phase, which includes excavation and grading activities, generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. As previously discussed, Alternative 3 would require slightly less excavation and grading activities than the proposed project, as it does not include PA 6, and therefore would produce less construction-related noise. Therefore, short-term noise levels during construction would be less than significant with the implementation of mitigation measures.

The Alternative Trip Generation Summary prepared for the proposed project and Alternative 3 found that Alternative 3 would generate 3,752 greater daily vehicle trips than the project (Appendix K). Therefore, Alternative 3 would generate more long-term traffic noise since it would generate more vehicle trips than the proposed project. This is largely due to the fact that active adult housing generates less trips than non age-restricted housing. Additionally, the increase of commercial/retail and/or light industrial/office development under this Alternative would increase the number of project trips generated compared to the proposed project. In addition, Alternative 3 would likely exceed the 3 decibel (dB) threshold over ambient levels, and isolated noise levels at project ingress/egress points would increase noise levels during peak-hours for sensitive receptors. However, operational noise impacts from loading/unloading activities would be reduced to less than significant with implementation of the stated mitigation measures. Therefore, potential short and long-term noise impacts from the Alternative 3 would be less than significant with mitigation incorporated, similar to the proposed project. Impacts would be greater than the proposed project.

Paleontological Resources

The Draft EIR concluded that the proposed project would not have significant impacts to paleontological resources with mitigation. Overall, Alternative 3 would disturb less ground surface compared to the proposed project and would involve a lesser amount of grading and building construction activity compared to the proposed project as Alterative 3 would leave more land in a natural or minimally disturbed state compared to the proposed project. Alternative 3 would not develop PA 6. The potential impacts to paleontological resources due to an unexpected discovery of

new resources during grading activities within the development footprint would occur in the same locations under Alternative 3 as the portion of the proposed project in Riverside County (PAs 1 through 5). Potential impacts would be expected to occur to a lesser extent as Alterative 3 would leave more land in a natural or minimally disturbed state as it would not develop PA 6. Alternative 3 would incorporate the same mitigation for paleontological resources as the proposed project. Impacts for both the proposed project and Alternative 3 would be less than significant with mitigation.

Population and Housing

Population and housing impacts relate to housing and the displacement of persons or housing and population. The Draft EIR determined that the jobs necessitated by construction of the proposed project and operation of the commercial development in PA 2 under the proposed project are not anticipated to require hiring outside of the project region. Therefore, the Draft EIR found that the proposed project would neither directly nor indirectly increase population growth in the area, and impacts would be less than significant. Alternative 3 would develop 125 units fewer than the proposed project. Given the smaller scale of Alternative 3, fewer construction and operation related jobs would be created. Similarly, As a result, potential population and housing impacts would be less than significant, similar to the proposed project.

Public Services

The Draft EIR determined that impacts with regard to public services would be less than significant. Alternative 3 would develop 125 fewer dwelling units on the residential portions of the site than the proposed project, thereby reducing the public services the construction and operation of these units would require. Therefore, this alternative would have fewer impacts compared with the proposed project, which will necessarily result in the need for certain public services. Therefore, Alternative 3, like the proposed project, would result in similar but lesser impacts on public services, which would be less than significant. Impacts would be lesser than the proposed project.

Recreation

Recreation impacts relate to potential impacts to recreational facilities, usage of existing neighborhood/regional parks, and recreational trails. The Draft EIR determined that the proposed project would not increase demand for additional parks or facilities because it would provide open space and a trail system, and impacts would be less than significant. Alternative 3 would develop the site with a lesser density and 125 fewer residential units, and therefore, would create less demand for additional parks and recreational facilities. However, Alternative 3 would retain some of the same open space as the proposed project but would not include the trail system proposed in PA 6 under the proposed project. Therefore, both the proposed project and Alternative 3 would result in less than significant impacts.

Transportation and Traffic

The Draft EIR determined that implementation of the proposed project would result in significant impacts and would require the development of traffic improvements for the site itself as mitigation, resulting in less than significant impacts. Alternative 3 would disturb less ground surface compared

to the proposed project. However, the Alternative Trip Generation Summary prepared for the proposed project and Alternative 3 found that it would generate 3,752 greater daily vehicle trips than the proposed project during operation (Appendix J). This is largely due to the fact that the non age-restricted housing contemplated in Alternative 3 generates more trips than the active adult housing in the proposed project. Additionally, the increase of commercial/retail and/or light industrial/office development under this Alternative would increase the number of project trips generated by the proposed project. Therefore, emissions from daily vehicle trips under Alternative 3 would be greater than the proposed project, and an applicant under Alternative 3 would be required to incorporate the same mitigation as the proposed project. Alternative 3 would thereby have greater traffic impacts than the proposed project; however, these impacts would be less than significant with the incorporation of mitigation. Impacts would be greater than the proposed project.

Tribal Cultural Resources

Potential impacts to TCRs could occur from the unexpected discovery of new resources during grading activities within the development footprint; however, these impacts could be reduced to below a level of significance with adherence to local, State, and federal regulations regarding the disposition and treatment of TCRs. Therefore, the Draft EIR concluded that the proposed project would not have significant impacts with mitigation incorporated. Alternative 3 and the proposed project would disturb similar areas through grading and other ground disturbance, but Alternative 3 would impact the land to a lesser extent because it would not include PA 6. Impacts to TCRs for both the proposed project and Alternative 3 would be less than significant with mitigation incorporated. However, impacts would be less than the proposed project due to the decrease in grading and site disturbance.

Utilities and Service Systems

The Draft EIR found that with impacts would be less than significant under the proposed project. Additionally, as discussed above, the proposed project would implement stormwater capture features at the site that would reduce to flow to existing culvert, which currently exceeds capacity, to below capacity as well as pay fair share contributions that would support the repair of deficient sewer lines that would serve the project site as well as the surrounding area. Demand for utilities and services would be proportionately reduced under Alternative 3 due the reduction of approximately 125 residential dwelling units and the overall reduction in development footprint. Alternative 3 would also include the improvements discussed above to address the existing significant impacts to stormwater drainage and sewer lines. Therefore, both the proposed project and Alternative would result in less than significant impacts. Impacts would be less than the proposed project.

Wildfire

Alternative 3 is not located in an SRA, lands classified as a VHFHSZ, or within any other hazardous fire areas that may be designated by a Fire Chief. Therefore, it would result in less than significant impacts related to wildlife similar to the proposed project. Impacts would be equivalent to the proposed project.

5.5.2 - Conclusion for Reduced Intensity Alternative

Alternative 3 would advance most, but not all of the project objectives. This Alternative meets the project objectives related to the development of underutilized, vacant parcels in Riverside County; new residential dwelling units, which would create additional property tax revenue and help meet the RHNA; open space for new and existing residents; infrastructure for stormwater treatment and the utilities systems that would serve the new development; off-street parking; and develop a logical internal circulation system for pedestrians, bicyclists, equestrians, and motorists. However, Alternative 3 does not advance the project objectives related to the development of affordable, age-restricted residential units or provide a range of housing options, including two-family residences. Additionally, Alternative 3 would not advance any of these objectives in the City of Corona because no development would occur in PA 6 under this Alternative. Because of the reduced density of building area on the project site, the impacts under the Alternative 3 would be similar to, or less than, the proposed project for the non-traffic related topical areas

However, according to the Alternative Trip Generation Summary prepared for the proposed project and Alternative 3, potential impacts to transportation and traffic, air quality, GHG emissions, and noise would be marginally greater than the proposed project; however, all impacts would be mitigated to a less than significant level.

5.6 - Environmentally Superior Alternative

The qualitative environmental effects of each alternative in relation to the proposed project are summarized in Table 5-1. CEQA Guidelines Section 15126(e)(2) requires an EIR to identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. As explained in detail above, because there are no significant and unavoidable impacts associated with the proposed project, the comparison contained in Table 5-1, and the subsequent discussion are provided for informational purposes only.

Table 5-1 provides a summary of each alternative related to the environmental issues evaluated in this document and includes the level of significance associated with the project in order to facilitate a thorough comparison of the alternatives. For some impacts, while the alternative may have a reduced level of impact, the impact would still be considered potentially significant, thus requiring mitigation. With the exception of Alternative 1 (No Project Alternative/Existing Land Use Activities Alternative), the other alternatives do not completely eliminate the need for mitigation in several impact areas.

Table 5-1: Alternatives Comparison to the Proposed Project

Environmental Topic Area	Alternative 1—No Project Alternative/Existing Land Use Activities Alternative	Alternative 2—Development within the Existing Land Use Designations Alternative	Alternative 3—Reduced Intensity Alternative
Aesthetics, Light, and Glare	**Greater impacts (related to visual character)** Less impacts (related to light and glare)	Lesser impacts	Lesser impacts

Environmental Topic Area	Alternative 1—No Project Alternative/Existing Land Use Activities Alternative	Alternative 2—Development within the Existing Land Use Designations Alternative	Alternative 3—Reduced Intensity Alternative
Agriculture Resources and Forest Resources	Lesser impacts (related to agricultural resources) Equivalent impacts (related to forestry resources)	Lesser impacts	Lesser impacts
Air Quality	Lesser impacts	**Greater impacts**	**Greater impacts**
Biological Resources	Lesser impacts	Lesser impacts	Lesser impacts
Cultural Resources	Lesser impacts	Lesser impacts	Lesser impacts
Energy	Lesser impacts	Lesser impacts	Lesser impacts
Geology and Soils	Lesser impacts	Lesser impacts	Lesser impacts
Greenhouse Gas Emissions	Lesser impacts	**Greater impacts**	**Greater impacts**
Hazards and Hazardous Materials	Lesser impacts	Lesser impacts	Lesser impacts
Hydrology and Water Quality	**Greater impacts (related to runoff and drainage patterns)** Lesser impacts (related to groundwater, water supply, and flood flows)	Lesser impacts (related to runoff) Equivalent impacts (related to stormwater and drainage)	Lesser impacts (related to runoff) Equivalent impacts (related to stormwater and drainage)
Land Use and Planning	Lesser impacts	Lesser impacts	Equivalent impacts
Mineral Resources	Lesser impacts	Lesser impacts	Lesser impacts
Noise	Lesser impacts	**Greater impacts**	**Greater impacts**
Paleontological Resources	Lesser impacts	Lesser impacts	Lesser impacts
Population and Housing	Lesser impacts	Lesser impacts	Lesser impacts
Public Services	Lesser impacts	Lesser impacts	Lesser impacts
Recreation	Lesser impacts	Lesser impacts	Equivalent impacts
Transportation and Traffic	Lesser impacts	**Greater impacts**	**Greater impacts**
Tribal Cultural Resources	Lesser impacts	Lesser impacts	Lesser impacts
Utilities and Service Systems	**Greater impacts (related to stormwater and wastewater)** Lesser impacts (related to solid waste and water)	Lesser impacts (water and solid water) Equivalent impacts (related to stormwater and wastewater)	Lesser impacts (water and solid water) Equivalent impacts (related to stormwater and wastewater)
Wildfire	Lesser impacts	Equivalent impacts	Equivalent impacts

Environmental Topic Area	Alternative 1—No Project Alternative/Existing Land Use Activities Alternative	Alternative 2—Development within the Existing Land Use Designations Alternative	Alternative 3—Reduced Intensity Alternative
Notes: **Bold** indicates topical areas with greater impacts than the proposed project. Source: FirstCarbon Solutions (FCS) 2021.			

Alternative 1 would not develop the proposed project and the site would remain in its existing conditions. Alternative 1 would have lesser impacts than the proposed project in all 21 topical areas analyzed with the exception of impacts from Aesthetics, Light, and Glare; Hydrology and Water Quality; and Utilities and Service Systems. Impacts to Aesthetics would be greater than the proposed project because severe degradation would continue to occur at the project site if no development were to occur. Impacts to Hydrology and Water Quality and Utilities and Service Systems would be greater because the improvements included in the proposed project to address the deficient drainage system and sewer lines that serve the project site as well as the surrounding community. While this Alternative would have lesser impacts compared to the proposed project and the other Alternatives, none of the project objectives would be advanced given that no development would occur.

Alternative 2 would implement development within the existing land use designations at the project site (PAs 1 through 6), including a Topgolf ™ facility in PAs 1 and 2 with an associated parking lot, an off-road vehicle park in PAs 3 and 4, a lakeside area for camping and fishing activities with associated parking lots in PA 5, and 16 large-lot, low density, single-family housing units. Alternative 2 would have lesser impacts than the proposed project in most topical areas analyzed because this Alternative would develop less structures on the project site, although these impact areas were considered to have less than significant impacts under the proposed project. Impacts to topical areas related to transportation impacts (Air Quality, GHG, Noise, Transportation) would be greater than the proposed project because the Alternative Trip Generation Summary found that Alternative 2 would have 399 greater vehicle trips than the proposed project. Impacts related to Hydrology and Water Quality, Utilities and Service Systems, and Wildfire would have equivalent impacts to the proposed project. Alternative 2 would advance some but not all of the project objectives because it would not develop affordable, age-restricted residential units; provide a range of housing options, including two-family residences; and develop a logical internal circulation system for pedestrians, bicyclists, equestrians, and motorists. Further, Alternative 2 would develop significantly fewer dwelling units that the proposed project (approximately 365 fewer units) and Alternative 3, so while it would advance objectives related to increasing residential dwelling units, it would not be to the same degree.

Alternative 3 would develop a mixed-use project that consists of 240 units market-rate units on the PAs within the County of Riverside (PAs 1 through 5) and approximately 365,000 square feet of retail/commercial or light/industrial development within PA 1. No development would occur in the City of Corona (PA 6). Alternative 3 would have lesser impacts than the proposed project in most topical areas analyzed because this Alternative would develop less structures on a reduced project site, although these impact areas were considered to have less than significant impacts under the

proposed project. Impacts to topical areas related to transportation impacts (Air Quality, GHG, Noise, Transportation) would be greater than the proposed project because the Alternative Trip Generation Summary found that Alternative 3 would have 3,752 greater vehicle trips than the proposed project. Impacts related to Hydrology and Water Quality, Land Use and Planning, Recreation, and Utilities and Service Systems would have equivalent impacts to the proposed project. Alternative 3 would advance most of the project objectives but not all of them because it would not develop affordable, age-restricted residential units or provide a range of housing options. While Alternative 3 would develop fewer dwelling units than the proposed project, it would develop substantially more than Alternative 2. However, because the no development would occur in PA 6, none of the project objectives would be advanced in the City of Corona.

Given the analysis in this chapter, Alternative 1 would have overall lesser impacts than the proposed project across more of the 21 topical areas than either of the other Alternatives. However, it would not advance any of the project objectives because no development would occur. Therefore, Alternative 2 is the Environmentally Superior Alternative as it advances some of the project objectives, and it would have lesser or equivalent impacts to the proposed project across more topical areas than Alternative 3. Therefore, Alternative 2 is the Environmentally Superior Alternative.

CHAPTER 6: OTHER CEQA CONSIDERATIONS

6.1 - Introduction

This chapter addresses other considerations of the California Environmental Quality Act (CEQA). More specifically, this chapter includes a description of growth-inducing impacts of the proposed project, which pertains to the ways in which the proposed project could promote economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Additionally, this chapter addresses the significant irreversible changes to the environment that would result from project implementation. This chapter also discusses the significant and unavoidable impacts of the proposed project, which are significant impacts that would result from the proposed project that cannot be mitigated to a less than significant level, if any.

6.2 - Growth-Inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines § 15126.2(e)).

Direct growth-inducing impacts occur when a project proposes to construct new housing or would lead to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities or would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support these employment demands.

The environmental effects of a proposed project's induced growth are secondary or indirect impacts. Secondary effects of growth can result in significant increased demand on community and public service infrastructure; increased traffic and noise; degradation of air and water quality; and conversion of agricultural land to urban uses.

Because development would be limited to Planning Areas 1, 3, 4, and 5, the proposed project would have the potential to increase Unincorporated Riverside County's population by 652, which would represent a less than 1 percent increase relative to Unincorporated Riverside County's 2021 population estimate of 389,905. This would not be considered a significant population increase. As such, the proposed project's residential component would have a less than significant impact to

direct and indirect population growth to Riverside County. The project will not increase access to potentially developable properties. Water and wastewater infrastructure upgrades are intended to meet Project-related demand. The water and wastewater improvements have been designed to provide for the proposed project and would not generate substantial capacity that would induce additional growth within the area. Development of the proposed project will not provide other infrastructure improvements (public roadways, water and sewer services, etc.) that would accommodate future growth. The project represents projected future growth in the County. The project is designed to accommodate this growth but is not in itself a growth-inducing project.

6.3 - Significant Irreversible Changes

As mandated by the State CEQA Guidelines, the Environmental Impact Report (EIR) must address any significant irreversible environmental change that would result from implementation of the project. Pursuant to State CEQA Guidelines (§ 15126.2(d)), such a change would occur if one of the following scenarios is involved:

- The project would involve a large commitment of nonrenewable resources;
- Irreversible damage can result from environmental accidents associated with the project; and
- The proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy.)

The environmental effects of the proposed project are discussed in Chapter 3, Environmental Impact Analysis, of this Draft EIR. Implementation of the proposed project would require the long-term commitment of natural resources and land, as discussed in the following paragraphs.

Approval and implementation of actions related to the proposed project would result in an irretrievable commitment of non-renewable resources such as energy supplies and other construction-related materials. The energy resource demands would be used for construction, heating, and cooling of buildings; transportation of people and goods; heating and refrigeration; lighting; and other associated energy needs.

Environmental changes with implementation of the proposed project would occur as the physical environment is altered through continued commitments of land and construction materials to urban development. There would be an irretrievable commitment of materials used in construction. Nonrenewable resources would be committed primarily in the form of fossil fuels and would include fuel, oil, natural gas, and gasoline used by vehicles and equipment associated with implementation of the proposed project.

Day-to-day activities would involve the use of non-renewable resources such as petroleum and natural gas during operations. The consumption of other nonrenewable or slowly renewable resources would result from the development of the proposed project. These resources would include but would not be limited to lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, and water. The new buildings would be required to adhere to the latest adopted edition of the California Building Standards Code, which includes a number of standards that would

reduce energy demand, water consumption, wastewater generation, and solid waste generation that would collectively reduce the demand for resources. This would result in the emission and generation of less pollution and effluent, and would lessen the severity of corresponding environmental effects. Although the proposed project would result in an irretrievable commitment of non-renewable resources, the commitment of these resources would not be significantly inefficient, unnecessary, or wasteful.

The proposed project is not anticipated to result in significant irreversible environmental damage because, pursuant to State CEQA Guidelines (§ 15126.2(d)), the proposed project does not meet any of the three scenarios listed above. Irreversible damage is not anticipated from environmental accidents associated with the proposed project, as it would comply with all applicable local and State regulations regarding handling and storage of hazardous materials. While a large commitment to nonrenewable resources would be required, the proposed project would use the energy efficiently and would not result in the wasteful use of energy. Electric trailer movers would be used on-site to move trailers throughout the project site, and to minimize the amount of emissions generated. Other on-site support equipment required to serve the proposed project would also be electrically powered.

Lastly, the proposed project is intended to meet regional market demand for housing. Thus, the project is justified in that there is market demand for it.

6.4 - Significant and Unavoidable Impacts

Potential environmental effects of the proposed project and proposed mitigation measures are discussed in detail in Chapter 3, Environmental Impact Analysis, of this Draft EIR. Section 15126.2(c) of the State CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less than significant levels. There are no significant and unavoidable impacts from the project. The following environmental issues addressed in the Draft EIR were determined to be less than significant, or could be reduced to less than significant levels with mitigation measures:

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

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CHAPTER 7: PERSONS AND ORGANIZATIONS CONSULTED/LIST OF PREPARERS

7.1 - Persons and Organizations Consulted

7.1.1 - Lead Agency

Riverside County Planning Department

Principal Planner..... Russell Brady

Fire Department

Battalion Chief, Riverside County Fire Department ..... Tracy Hobday
Deputy Fire Chief, Corona Fire Department ..... Chris Cox

Police Department

Lieutenant, Riverside County Sherriff's Department.....Robert Rose
Sergeant, Corona Police Department ..... Chad Fountain

School District

Administration Director of Facilities, Corona-Norco Unified School District.....John C. Vondriska

Parks

Senior Park Planner, Riverside County Parks ..... Analicia Gomez

Library

Library and Recreation Services Director, Corona Library .....David Montgomery-Scott
Assistant Director of Library and Recreation Services, Corona Library .....Abigail Schellberg

7.1.2 - Private Parties and Organizations

Oxbow Partners

Principal..... Thomas Grabiel

7.2 - List of Preparers

7.2.1 - Lead Agency

Riverside County Planning Department

Principal Planner..... Russell Brady

7.2.2 - Lead Consultant

FirstCarbon Solutions

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Senior Project Manager ..... Cecilia So
Assistant Project Manager ..... Hannah Carney
Legal Counsel ..... Megan Starr, JD
Director of Cultural Resources ..... Dana DePietro, PhD, RPA
Archaeologist ..... Stefanie Griffin
Director of Noise and Air Quality ..... Phil Ault, LEED® AP
Air Quality Scientist ..... Kimberly Johnson
Biologist ..... Alec Villanueva
Biologist ..... Kym Gibson
Environmental Analyst ..... Alex Ortiz
Publications Manager ..... Susie Harris
Publications Coordinator ..... Alec Harris
Document Specialist ..... Melissa Ramirez
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Biologist ..... Jeff Ahrens

KWC Engineers

Senior Project Engineer ..... Brandon Barnett, PE, PLS

G3SoilWorks, Inc.

Director of Environmental Services ..... Stanley White
Staff Geologist ..... Doug Stout

Associated Soils Engineering, Inc.

Engineering Geologist ..... Edward Riddell, PG, CEG
Geotechnical Engineer ..... Lawrence Chang, PE, GE
Project Engineer ..... Gary L. Martin

Urban Crossroads

Professional Transportation Engineer. ..... Aric Evatt, PTP
Professional Transportation Engineer ..... Charlene So, PE