VOLUME I:

DRAFT ENVIRONMENTAL IMPACT REPORT



STATE CLEARINGHOUSE NO. 2019110154

TIRADOR RESIDENTIAL DEVELOPMENT PROJECT

CITY OF SAN JUAN CAPISTRANO

Submitted to:

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I: NATIVE AMERICAN CONSULTATION

ACRONYMS AND ABBREVIATIONS

°F	Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	ambient air quality standards
AARP	Agreement Affecting Real Property
AB	Assembly Bill
ADA	Americans with Disabilities Act (of 1990)
ADT	average daily trips
AGR	Agricultural Supply
AQMP	Air Quality Management Plan
APA	American Planning Association
APN	Assessor's Parcel Number
ARMC	Archaeological Resources Management Corporation
BAAQMD	Bay Area Air Quality Management District
Basin	South Coast Air Basin
BAU	business as usual
bgs	below ground surface
Bio-CO_2	Biologically Generated Carbon Dioxide
BMPs	best management practices
BTU	British Thermal Unit(s)
CAA	(Federal) 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
CALGreen Code	California Green Building Standards Code
California Register	California Register of Historical Resources

CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CAMWC	Capistrano Acres Mutual Water Company
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CBIA	California Building Industry Association
CBSC	California Building Standards Commission
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game, former name of CDFW
CDFW	California Department of Fish and Wildlife
CDMG	California Division of Mines and Geology
CDP	(Ortega Planned Community) Comprehensive Development Plan
CEC	California Energy Commission
Census Bureau	United States Census Bureau
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cf	cubic feet
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
City	City of San Juan Capistrano
CLOMR	Conditional Letter of Map Revision
CLOMR-F	Conditional Letter of Map Revision Based on Fill

CMP	(Orange County) Congestion Management Program
CNDDB	(CDFW) California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent
COLD	Cold Freshwater Habitat
County	County of Orange
CPUC	California Public Utilities Commission
CTR	California Toxics Rule
CUSD	Capistrano Unified School District
CWA	Clean Water Act
cy	cubic yards
DAMP	Drainage Area Management Plan
dB	decibel(s)
dBA	A-weighted decibel(s)
DDE	dichlorodiphenyldichloroethylene
DEIR	Draft Environmental Impact Report
DOC	(California) Department of Conservation
du	dwelling unit
du/ac	dwelling unit per acre
DWR	Department of Water Resources
EI	Expansion Index
EIA	United States Energy Information Administration
EIR	Environmental Impact Report
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
EO	Executive Order

ESA	Environmental Site Assessment, also Environmentally Sensitive Area
EV	electric vehicle
FAR	Floor Area Ratio
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
ft	foot/feet
FTA	Federal Transit Administration
GCC	global climate change
GHG	greenhouse gas
GPA	General Plan Amendment
GSAs	Groundwater Sustainability Agencies
GWh	gigawatt hours
GWP	Global Warming Potential
HA	Hydrologic Area
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons
HMP	Hydromodifcation Management Plan
HOA	Homeowner's Association
HRA	health risk assessment
HSA	Hydrologic Subarea
HSC	California Health and Safety Code
HU	Hydrologic Unit
HVAC	heating, ventilation, and air-conditioning

I-5	Interstate 5
I-215	Interstate 215
ICU	Intersection Capacity Utilization
in/sec	inches per second
IND	Industrial Service Supply
IPaC	(USFWS) Information for Planning and Consultation
IPCC	United Nations Intergovernmental Panel on Climate Change
IS	Initial Study
IS/NOP	Initial Study/Notice of Preparation
ISA	International Society of Arboriculture
ISHB	Invasive Shot Hole Borers
ITE	Institute of Transportation Engineers
JRMP	Jurisdictional Runoff Management Plan
kW	kilowatt
kWh	kilowatt-hours
LACM	Natural History Museum of Los Angeles County
lbs/day	pounds per day
L_{dn}	day-night average level
L_{eq}	equivalent continuous sound level
LID	Low Impact Development
L_{max}	maximum instantaneous noise level
LOMR	Letter of Map Revision
LOMR-F	Letter of Map Revision Based on Fill
LOS	level of service
LOSSAN	Los Angeles-San Diego-San Luis Obispo Rail Corridor
LSA	LSA Associates, Inc.
LST	Localized Significance Threshold
MBTA	Migratory Bird Treaty Act

mg/kg	milligrams per kilogram
mg/l	milligrams per liter
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MMT of CO_2e	million metric tons of CO_2e
MND	Mitigated Negative Declaration
Model WQMP	Model Water Quality Management Plan
MPAH	(Orange County) Master Plan of Arterial Highways
mph	miles per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MSAA	Master Streambed Alteration Agreement
MS4	Municipal Separate Storm Sewer System
MT	metric tons
MT of CO_2e	metric tons of CO_2e
MT of CO_2e/yr/SP	MT of CO_2e per year per service population
MUN	Municipal and Domestic Supply
MW	megawatt
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NBio-CO_2	non-biologically generated CO_2
NCCP	Natural Communities Conservation Plan
NCCP/MSAA/HCP	Natural Communities Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan

NDS	National Data & Surveying Services
NEHRP	National Earthquake Hazards Reduction Program
NF_3	nitrogen trifluoride
NFIP	National Flood Insurance Program
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NTU	nephelometric turbidity units
O_3	ozone
OCFA	Orange County Fire Authority
OCFCD	Orange County Flood Control District
OCPL	Orange County Public Library
OCPW	Orange County Public Works
OCSD	Orange County Sheriff's Department
OCSSHCP	Orange County Southern Subregion Habitat Conservation Plan
OCTA	Orange County Transportation Authority
OCTAM	Orange County Transportation Analysis Model
OSHA	Occupational Safety and Health Administration
Pb	lead
PBFs	physical and biological features
PCH	Pacific Coast Highway, also known as SR-1
PFCs	perfluorocarbons
PGA	peak ground acceleration
pH	percentage of hydrogen

$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1970
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PRDs	Permit Registration Documents
PRIMP	Paleontological Resources Impact Mitigation Program
PWQMP	Preliminary Water Quality Management Plan
RCM	Regulatory Compliance Measure
RCP	Regional Comprehensive Plan, also reinforced concrete pipe
REC1	Contact Water Recreation
REC2	Noncontact Water Recreation
RHNA	(SCAG) Regional Housing Needs Assessment
ROCs	reactive organic compounds
ROGs	reactive organic gases
RTP/SCS	(SCAG) Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SAFE Vehicles Rule	The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCH	State Clearinghouse
SDG&E	San Diego Gas & Electric Company
SE	sand equivalent
sf	square foot/feet

SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act of 2014
SHMA	Seismic Hazard Mapping Act
SIP	State Implementation Plan
SLF	Sacred Lands File
SMARTS	Stormwater Multiple Application and Report Tracking System
SMWD	Santa Margarita Water District
SO_2	sulfur dioxide
SO_4	sulfates
SO_X	sulfur oxides
SOS	Supplemental Open Space
sq mi	square mile(s)
SR-1	State Route 1, also known as Pacific Coast Highway
SR-73	State Route 73
SR-74	State Route 74, also known as Ortega Highway
SRA	Source Receptor Area
STC	Sound Transmission Class
SVP	Society of Vertebrate Paleontologists
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAZ	traffic analysis zone
TCA	Transportation Corridor Agencies
TCE	tetrachloroethene
TDS	total dissolved solids
TGD	Technical Guidance Document
TIA	Traffic Impact Analysis for the Tirador Residential Development Project
TMDL	Total Maximum Daily Load
UNFCCC	United Nations Framework Convention on Climate Change

USC	United States Code
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United State Fish and Wildlife Service
USGS	United States Geological Survey
v/c	volume to capacity
VdB	vibration velocity decibel
Ventanas EIR	Ventanas Business Center Environmental Impact Report
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compounds
WARM	Warm Freshwater Habitat
WDID	Waste Discharge Identification Number
WILD	Wildlife Habitat
WQMP	Water Quality Management Plan
ZNE	zero net energy

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that local government agencies, before taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report (EIR) is a public document designed to provide both the public and local and State governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This Executive Summary has been prepared according to *State CEQA Guidelines* Section 15123 for the Draft EIR for the proposed Tirador Residential Development Project (proposed project). This Draft EIR has been prepared for the City of San Juan Capistrano (City) to analyze the proposed project's potential impacts on the environment; to propose mitigation measures for identified potentially significant impacts that would minimize, offset, or otherwise reduce or avoid those environmental impacts; and to discuss alternatives that could reduce the potentially significant impacts of the proposed project.

1.2 SUMMARY OF PROJECT DESCRIPTION

1.2.1 Location and Setting

The proposed project is located on an approximately 16.1-acre site in the City of San Juan Capistrano (City), which itself is located in southern Orange County, California. The City encompasses approximately 14 square miles of land (approximately 8,960 acres) within the County. The City is bounded by the adjacent Cities of Mission Viejo and Laguna Niguel to the north, the Cities of Laguna Niguel and Dana Point to the west, and the City of San Clemente to the south, as well as unincorporated County land to the east.

Regional access to the project site is provided by Interstate 5 (I-5), State Route 73 (SR-73), State Route 74 (SR-74, also known as Ortega Highway), and Pacific Coast Highway (PCH, also known as State Route 1). The I-5 freeway bisects the central portion of the City in a north-south direction and is directly adjacent to the western boundary of the project site; SR-73 extends in an east-west direction in the northern portion of the City and is located approximately 3.2 miles northwest of the project site; Ortega Highway extends in an east-west direction approximately 0.2 mile north of the project site; and PCH extends in a north-south direction and is approximately 2.8 miles south of the project site.

The project site is comprised of the following Assessor's Parcel Numbers (APNs): 666-131-07, -08,[1] -09, -13, -14, -15, and -16. The project site is bordered on the north by Calle Arroyo, with commercial and institutional uses located beyond. El Horno Creek (a tributary of San Juan Creek) and San Juan Creek are adjacent to the south of the project site; a portion of the San Juan Creek Trail is located along the southern portion of the project site. The San Juan Hills Golf Club and multi-

[1] APN 666-131-08 is owned by the City of San Juan Capistrano.

family residential developments are located further south of the project site. Paseo Tirador is located along a portion of the eastern boundary of the project site with the Ortega Equestrian Center located further east. The I-5 freeway forms the western boundary of the project site with the Del Obispo Shopping Center located beyond. A detailed project vicinity map is shown on Figure 3.2, Project Vicinity.

1.2.2 Proposed Project

The proposed project includes the construction of a 132-unit residential development consisting of 43 two-story detached single-family units (ranging from 1,720 to 1,890 sf) and 89 three-story attached townhome units (ranging from 1,250 to 1,850 sf). Each unit would include a private driveway and a two-car garage.

As shown in Table 1.A, below, a total of 229,591 sf of residential building area is proposed on the project site.

Table 1.A: Proposed Residential Uses

Floor Plan	Description	Gross Area per Unit	Proposed Number of Units	Total Gross Area
Single-Family Units				
Floor Plan P1	3 bd/2.5 bath	1,720 sf per unit	7 units	12,040 sf
Floor Plan P1-CAL	3 bd/2.5 bath	1,745 sf per unit	8 units	13,960 sf
Floor Plan P2	4 bd/2.5 bath	1,751 sf per unit	7 units	12,257 sf
Floor Plan P2-CAL	4 bd/2.5 bath	1,757 sf per unit	7 units	12,299 sf
Floor Plan P3	4 bd/2.5 bath	1,890 sf per unit	7 units	13,230 sf
Floor Plan P3-CAL	4 bd/2.5 bath	1,850 sf per unit	7 units	12,950 sf
Total Single-Family Units			***43 units***	***76,736 sf***
Townhomes				
Floor Plan 1[1]	2 bd & den/2.5 bath	1,250 sf per unit	14 units	17,500 sf
Floor Plan 2	3 bd & den/3.5 bath	1,755 sf per unit	33 units	57,915 sf
Floor Plan 3	3 bd & den/3.5 bath	1,830 sf per unit	13 units	23,790 sf
Floor Plan 3E	3 bd & den/3.5 bath	1,850 sf per unit	29 units	53,650 sf
Total Townhomes			***89 units***	***152,855 sf***
		Total Proposed Residential	**132 units**	**229,591 sf**

Source: Project Information (Withee Malcolm Architects, LLP, November 13, 2018).
[1] Floor Plan 1 townhome units would be affordable units.
bd = bedrooms
sf = square footage, square feet

The project site would be divided by unit type, with single-family units and townhomes constructed on the eastern and western portions of the site, respectively. The residential density of the proposed project would total 8.2 du/ac and the proposed lot coverage would total 13 percent of the site.

In total, 14 of the townhomes, or approximately 10.6 percent of the total units, would be considered affordable. Affordable units would be 1,250 sf in size and would contain 2 bedrooms, a den, and 2.5 bathrooms.

Amenities provided throughout the residential development include a gathering area with barbeques, seating, and a shade structure, an open play turf area, a tot lot, play equipment, a dog waste station, and trash receptacles.

As part of the project, a 20-foot (ft)-wide multi-purpose pedestrian, bicycle, and equestrian trail would be constructed along the project site's southern boundary; the pedestrian/bicycle and equestrian portions of the trail would each be approximately 10 ft wide and separated by wooden fencing. Amenities proposed along the multi-purpose trail include a gathering area with barbeques, seating, a shade structure, a climbing boulder, a wishing well, an open play turf area with benches, an equestrian hitching post, exercise stations, bicycle racks, drinking fountains, and trash receptacles.

The majority of the project site has a General Plan land use designation of Planned Community. Additionally, portions of the southernmost and easternmost portions of the project site are designated as General Open Space and Community Park, respectively. The land uses proposed by the project within each designated area are consistent with the applicable land use designations, and the proposed project would not require a General Plan Amendment.

The project site is zoned as a Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP 78-01). Based on the provision of affordable housing units, and as allowed under the City's affordable housing incentive program, the Project Applicant would request waivers to the CDP 78-01 Development Standards. Upon approval of these waivers, the proposed project would be consistent with CDP 78-01. Therefore, the proposed project would not require a zone change or zone amendment.

See Chapter 3.0, Project Description, for a complete description of the project components.

1.2.3 Project Objectives

The City and the Project Applicant have established the following intended specific objectives, which would aid decision-makers in their review of the project and its associated environmental impacts:

1. Develop a residential development to increase the City's market-rate and affordable housing stock.

2. Develop a project that balances the development potential of the project site with environmental considerations.

3. Revitalize the vacant site with a well-designed and landscaped residential project that is compatible with the surrounding community.

4. Increase the City's tax base by generating revenue for the City through property taxes.

5. Provide non-traditional home ownership opportunities through the provision of townhomes and affordable units.

6. Provide recreational opportunities for the surrounding community with incorporation of a multi-purpose pedestrian, bicycle, and equestrian trail and associated amenities.

7. Dedicate approximately 5.6 acres of the project site adjacent to the San Juan Creek as a conservation area.

8. Locate housing adjacent to available infrastructure to serve the project.

9. Implement the City's General Plan.

1.3 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would not result in any impacts that are considered significant, adverse, and unavoidable. All environmental issues analyzed in this Draft EIR were determined to result in less than significant impacts, or can be reduced to less than significant levels with the incorporation of mitigation measures.

1.4 ALTERNATIVES

The following alternatives to the proposed project were selected for consideration, including the No Project Alternative as required by CEQA. Refer to Chapter 5.0, Alternatives, for a more detailed explanation regarding the project alternatives outlined below.

1.4.1 Alternative 1: No Project Alternative

Alternative 1, the No Project Alternative, would involve no changes to the existing land uses and conditions on the project site. No development would occur on the project site and the existing condition of the site as vacant and undeveloped would not change.

Under the No Project Alternative, the visual setting of the project site would not be altered. No new air pollutant emissions or greenhouse gas (GHG) emissions would be generated by short-term construction since no new construction is proposed, and no new residents or residential development would be present to result in operational emissions. There would be no impacts related to biological resources or geology and soils because the project site would remain undisturbed and undeveloped. Unknown potential archaeological, paleontological, and tribal cultural resources would remain undisturbed. No changes in energy usage would result because the site would remain undeveloped. There would be no change to the project site with regard to the percentage of the site that would remain pervious or the volume of runoff during a storm event and runoff treatment from best management practices (BMPs) that are included in the proposed project. The project site would remain designated for very-low income affordable housing units in the City's General Plan Housing Element, and the site's use would be consistent with the General Plan and zoning documents. No short-term construction noise impacts or long-term operational noise impacts would occur to the surrounding area. Further, no additional vehicle trips would be generated by construction or operations at the site.

The No Project Alternative would not result in any physical changes to the project site and there would not be a potential for new environmental impacts to occur. Overall, the No Project

Alternative would result in fewer environmental impacts than the proposed project because no construction or development would take place.

The No Project Alternative would not achieve any of the Project Objectives as discussed in Section 1.2.3, above.

1.4.2 Alternative 2: Reduced Project Alternative

Alternative 2, the Reduced Project Alternative, would include a reduced intensity residential development consisting of 100 dwelling units. The Reduced Project Alternative would include 32 two-story detached single-family units and 68 three-story attached townhome units, which is the same ratio of detached single-family and attached townhomes as the proposed project. This alternative would include 11 affordable units, which is just over 10 percent of the total units, and is a similar percentage as provided by the proposed project.

Alternative 2 would also include a 20-foot (ft)-wide multi-purpose pedestrian, bicycle, and equestrian trail along the project site's southern boundary. Fewer amenities would be proposed with Alternative 2, although a gathering area with barbeques, seating, a tot lot, an equestrian hitching post, bicycle racks, drinking fountains, and trash receptacles would be provided within the development. This alternative would dedicate approximately 4.2 acres of the project site adjacent to the San Juan Creek as a conservation area, which is a smaller acreage dedicated than under the proposed project.

Under the Reduced Project Alternative, the visual setting of the project site would be altered to a similar, although lesser, degree as compared to the proposed project. Fewer air pollutant emissions and GHG emissions would be generated by short-term construction since construction duration would be shorter as compared to the proposed project; fewer new residents and a reduced residential development would result in reduced operational emissions as compared to the proposed project. Impacts related to biological resources would be greater under Alternative 2 because a reduced amount of land would be preserved as conservation area (approximately 4.2 acres as compared to 5.6 acres under the proposed project). Similar impacts would occur to geology and soils under Alternative 2 because the project site boundaries would remain the same as under the proposed project. Similarly, impacts to potential archaeological, paleontological, and tribal cultural resources would be similar to the proposed project because the project site boundaries and disturbance area would remain the same as under the proposed project. Under Alternative 2, less energy usage would result because the project would accommodate fewer residents. Similar impacts to hydrology and water quality would occur under Alternative 2 with regard to the percentage of the site that would remain pervious, as well as the volume of runoff during a storm event and runoff treatment from BMPs because the project site boundaries would remain the same as under the proposed project. Under Alternative 2, greater impacts would occur with respect to land use and planning because fewer residential units would be constructed to meet the City's housing needs, including market-rate and affordable units. Incrementally fewer short-term construction noise impacts and long-term operational noise impacts would occur to the surrounding area due the reduced size of Alternative 2. Further, fewer additional vehicle trips would be generated by both construction and operations at the site due to the reduced size of Alternative 2.

Construction impacts would be incrementally reduced under Alternative 2 as fewer residential units would be constructed (approximately 25 percent fewer units). Similarly, fewer operational impacts would occur as fewer residents, traffic trips, emissions, and noise would result from a smaller development. However, greater impacts with respect to biological resources and land use and planning would occur due to a reduced amount of conservation area and fewer residential units proposed under this alternative. Overall, physical impacts under this alternative would be incrementally reduced due to fewer housing units being constructed and occupied. Alternative 2 would meet some of the Project Objectives as discussed in Section 1.2.3, above, but not to the same degree as the proposed project.

1.5 AREAS OF CONTROVERSY

Pursuant to *State CEQA Guidelines* Section 15123, this EIR acknowledges the areas of controversy and issues to be resolved that are known to the City or that were raised during the scoping process. Comments submitted in writing during the Notice of Preparation (NOP) process included: (1) recommendations that the air quality analysis follow South Coast Air Quality Management District (SCAQMD) guidance for air quality analysis, including specific mitigation measures, and preparing a Health Risk Assessment (HRA); (2) concerns related to impacts to biological resources on the project site and recommendation for mitigation measures to ensure the protection of those biological resources (3) recommendations that the hydrological studies comply with the *Orange County Hydrology Manual* and the *Orange County Flood Control Design Manual*, and that the City review and approve all hydrological analyses to confirm that the project is protected from erosion and flooding in a 100-year storm event and that structures conform to FEMA regulations in accordance with the City's floodplains ordinances; (4) raising concerns that the easements used for water wells and water transmission facilities held by the Capistrano Acres Mutual Water Company are not properly identified on the project's site plan; (5) recommendations to prepare a Traffic Impact Study to analyze potential short-term and long-term impacts to the State Highway System, including I-5 and State Route 74 (SR-74) and requesting that traffic analyses are prepared consistent with the latest Orange County Congestion Management Program (CMP) (OCTA November 2019); (6) providing information related to Native American consultation as required by Assembly Bill (AB) 52 and Senate Bill (SB) 18, including a request from the Juaneño Band of Mission Indians that a treatment plan be prepared that includes measures regarding monitoring and procedures regarding inadvertent discoveries of resources. Please note that these areas of controversy represent issues that were raised during the scoping process and Initial Study/Notice of Preparation (IS/NOP) review period and may not be exhaustive if other issues were unknown to the City during preparation of this Draft EIR.

This Draft EIR addresses each of these areas of concern or controversy in detail, examines project-related and cumulative environmental impacts, identifies significant adverse environmental impacts, and proposes mitigation measures designed to reduce or eliminate potentially significant impacts of the proposed project.

1.6 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 1.B identifies the potential environmental impacts, proposed mitigation measures, and level of significance after mitigation is incorporated into the proposed project. Table 1.B also identifies cumulative impacts resulting from the proposed project. Environmental topics addressed in this Draft EIR (Sections 4.1 through 4.12) include aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, noise, transportation, and tribal cultural resources.

Refer to Chapter 2.0, Introduction, of this Draft EIR for a discussion of additional effects found not to be significant through the IS/NOP process (e.g., agriculture and forestry resources, hazards and hazardous materials, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfires).

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
4.1: AESTHETICS		
Threshold 4.1.3: In non-urbanized areas, would the project 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? **Less Than Significant Impact.** The proposed project would enhance the existing visual setting of the project site by converting the existing underutilized property to a developed residential use featuring high-quality building materials and new landscaping. Additionally, the project would be consistent with other regulations governing scenic quality, including those outlined in the General Plan Community Design, Conservation and Open Space, and Land Use Elements and the City's Zoning Code. Further, the visual analysis determined that the project would not degrade the existing visual character or quality of public views of the site and its surroundings. Therefore, the proposed project would not substantially degrade the visual character of the project site nor conflict with applicable zoning and other regulations governing scenic quality, and no mitigation is required.	No mitigation is required.	Less Than Significant Impact.
Cumulative Aesthetic Impacts. **Less Than Significant Impact.** The cumulative impact area for aesthetics related to the proposed project is the City of San Juan Capistrano. Several residential and commercial development projects are approved and/or pending within the City. Each of these projects, as well as all proposed development in the City, would be subject to its own consistency analysis for policies and regulations governing scenic quality and would be reviewed for consistency with	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
General Plan goals and policies and Zoning Code development standards applicable to each site. The proposed project and all related projects are required to adhere to City and State regulations designed to reduce and/or avoid impacts related to aesthetics. With compliance with these regulations, impacts related to aesthetics would be less than cumulatively significant. Therefore, implementation of the proposed project would not result in a significant cumulative impact related to aesthetics. No mitigation is required.		
4.2: AIR QUALITY		
Threshold 4.2.1: Would the project conflict with or obstruct implementation of the applicable air quality plan? **Less Than Significant Impact.** The proposed project would not conflict with or obstruct implementation of the 2016 Air Quality Management Plan (AQMP) because (1) the project's construction and operational emissions would not exceed the SCAQMD regional significance thresholds, and (2) the proposed project is consistent with the current General Plan land use designations on the project site and would not exceed the growth assumptions in the AQMP, is consistent with land use planning strategies set forth by SCAQMD, and includes implementation of all feasible air quality rules to reduce emissions. Therefore, impacts related to the conflict with or obstruction of implementation of the applicable air quality plan would be less than significant, and no mitigation is required.	No mitigation is required. The project will comply with Regulatory Compliance Measures AQ-1 through AQ-3. **Regulatory Compliance Measure AQ-1: South Coast Air Quality Management District (SCAQMD) Rule 402, Nuisance.** Prohibits the discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or 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. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals. **Regulatory Compliance Measure AQ-2: South Coast Air Quality Management District (SCAQMD) Rule 403, Fugitive Dust.** The Project Applicant shall ensure	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	the construction contractor implements fugitive dust control measures in compliance with SCAQMD Rule 403. The Project Applicant shall include the following fugitive dust control measures for SCAQMD Rule 403 compliance in the project plans and specifications: All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions. The construction contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project site are watered, with complete coverage of disturbed areas, at least three (3) times daily during dry weather and preferably mid-morning, afternoon, and after work is done for the day. The contractor shall ensure that traffic speeds on unpaved roads and project site areas are reduced to 15 mph or less. **Regulatory Compliance Measure AQ-3: SCAQMD Rule 1113.** The Project Applicant shall ensure the construction contractor implements measures to control volatile organic compound (VOC) emissions from architectural coatings in compliance with SCAQMD Rule 1113. The Project Applicant shall include the following control measures for SCAQMD Rule 1113 compliance in the project plans and specifications: Only "Low-Volatile Organic Compounds" paints (no more than 50 grams/liter of VOC) shall be used.	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Threshold 4.2.2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? **Less Than Significant Impact.** **Construction.** The proposed project would not exceed the SCAQMD construction emissions thresholds and short-term (construction) air quality impacts would be less than significant. **Operation.** The proposed project would not exceed the SCAQMD operational emissions thresholds and long-term air quality impacts would be less than significant.	No mitigation is required. The project will comply with Regulatory Compliance Measures AQ-1 through AQ-3, above.	Less Than Significant Impact.
Threshold 4.2.3: Would the project expose sensitive receptors to substantial pollutant concentrations? **Less Than Significant Impact.** **Construction.** The proposed project would not exceed the Localized Significance Thresholds **(**LSTs) for construction emissions. Therefore, impacts from localized construction-related emissions would be less than significant. **Operation.** The proposed project would not exceed the LSTs for operational emissions. Therefore, impacts from localized operation-related emissions would be less than significant.	No mitigation is required. The project will comply with Regulatory Compliance Measures AQ-1 through AQ-3, above.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Cumulative Air Quality Impacts. ***Less Than Significant Impact.*** The incremental effects of projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively considerable per SCAQMD guidelines. The proposed project's construction- and operation-related regional daily emissions are less than the SCAQMD significance thresholds for all criteria pollutants. In addition, adherence to SCAQMD rules and regulations on a project-by-project basis would substantially reduce potential impacts associated with the related projects and basin-wide air pollutant emissions. Therefore, the proposed project would not have a cumulatively considerable increase in emissions, and the proposed project's air quality impacts would be less than cumulatively significant.	No mitigation is required. The project will comply with Regulatory Compliance Measures AQ-1 through AQ-3, above.	Less Than Significant Impact.
4.3: BIOLOGICAL RESOURCES		
Threshold 4.3.1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? **Less Than Significant with Mitigation Incorporated.** The project is located in close proximity to San Juan Creek, which contains habitat for several regional special-status species. Although no special-status species are known to occur on the project site, and while there is very low potential for any of these special-status species to be directly affected by the project due to the lack of suitable habitat on the project site, the project could indirectly affect special-status wildlife species through the attraction of	**Mitigation Measure BIO-1: Springtime Botanical Survey.** Prior to any project-related ground disturbance, the Project Applicant shall retain a qualified biologist/botanist to conduct a botanical survey during the typical springtime blooming season (April through May 2020) to confirm the absence of annual special-status plant species that bloom during this period. The results of the survey shall be documented and submitted to the Director of the City of San Juan Capistrano (City) Development Services Department, or designee. Should special-status plant species be found within the project disturbance limits, a compensatory mitigation plan must be prepared and approved by the City Development Services Department, or designee, prior to project-related ground disturbance. If listed special-status plant species are found, the compensatory mitigation plan	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
predators and increased levels of noise, vibration, lighting, and dust during construction activities. There is also the potential for temporary indirect effects to water quality during construction, which could lead to habitat degradation. Implementation of Regulatory Compliance Measure BIO-1 and Mitigation Measures BIO-1 through BIO-7 would effectively mitigate potential impacts on special-status wildlife plant and animal species to less than significant levels. Therefore, with implementation of Regulatory Compliance Measure BIO-1 and Mitigation Measures BIO-1 through BIO-7, potential impacts to candidate, sensitive, or special status species would be less than significant.	must also be approved by the United States Fish and Wildlife Service or California Department of Fish and Wildlife, as applicable. **Mitigation Measure BIO-2: Worker Environmental Awareness Training.** Prior to initial groundbreaking, the Director of the City of San Juan Capistrano (City) Development Services Department, or designee, shall confirm that a Worker Environmental Awareness Training shall be conducted by a qualified biologist to educate all construction personnel on the relevant federal, state, and local laws related to regional special-status species known to occur in adjacent habitat types, particularly habitat associated with San Juan Creek. The training session shall include training on identification of species that may be found on or adjacent to the project site, the status of those species, and any legal protection afforded to those species. Measures that are being implemented to protect those species shall also be explained. Personnel shall be advised to report any special-status species promptly to the construction manager. The training session shall also include information regarding invasive shot hole borers (ISHB), how to recognize signs of infestation, and where to report observations. A fact sheet conveying this information shall be prepared for display or for distribution to anyone who may enter the project site. **Mitigation Measure BIO-3: Construction Site Housekeeping.** Impacts to habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities shall be minimized by adhering	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	to the following measures for the duration of construction activities: • The project disturbance limits shall be clearly marked with construction fencing (or other highly visible material), and construction/ materials staging and vehicle/equipment maintenance and fueling areas shall be located at least 200 feet away from riparian habitat associated with San Juan Creek and El Horno Creek, where feasible. • To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, and other designated areas. • Project-related vehicles shall observe a daytime speed limit of 20 miles per hour (mph) throughout the site in all project sites, except on county roads and State and federal highways. Night-time construction shall be minimized to the extent possible. However if it does occur, then the speed limit shall be reduced to 10 mph. Off-road traffic outside of designated project sites shall be prohibited. • To prevent inadvertent entrapment of animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. In the case of trapped animals, escape ramps or	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	structures shall be installed immediately to allow the animal(s) to escape. • For the duration of construction activities, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least daily from the construction site. • Pets, such as dogs or cats, shall not be permitted on the project site during construction to prevent harassment, injury, or death of wildlife in the project vicinity. • Use of rodenticides and herbicides in project sites shall be restricted to prevent primary or secondary poisoning of predators and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, the California Department of Food and Agriculture, and other State and federal legislation. **Mitigation Measure BIO-4: Erosion Control and Amphibian Exclusionary Fencing.** Grading and construction resulting in ground disturbance shall occur within the typical dry season (April 15 through October 15), as feasible, to avoid erosion and sedimentation impacts to nearby creeks and water quality. The Director of the City of San Juan Capistrano (City) Development Services Department, or designee, shall verify that project plans require the Project Contractor to install adequate erosion and sedimentation barriers (e.g., silt fencing, as described below) prior to ground disturbance to prevent any sediment-laden runoff or debris from entering	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	adjacent waterways or the Pacific Ocean during the wet season or periods of rain. This silt fencing shall also serve as a temporary barrier to further minimize the potential for special status amphibians and other wildlife from entering work areas during construction. The barriers shall consist of 3-foot-tall silt fencing buried to a depth of at least 6 inches below the soil surface along the outer limits of all work areas (or as otherwise required by the storm water pollution and prevention plan). These barriers shall be inspected daily by construction personnel and maintained and repaired as necessary for the duration of construction to ensure that they are functional and are not a hazard to wildlife on the outer side of the fence. A qualified biologist shall monitor all fence installation. All barriers shall be removed following completion of construction. **Mitigation Measure BIO-5: Nesting Bird Surveys.** If vegetation removal, construction, or grading activities are planned to occur within the active nesting bird season (January 1 through September 15), the Director of the City of San Juan Capistrano (City) Development Services Department, or designee, shall confirm that the Project Applicant has retained a qualified biologist who shall conduct a preconstruction nesting bird survey no more than 3 days prior to the start of such activities. If construction activities using heavy equipment (i.e., graders, bulldozers, and excavators, etc.) continue through the nesting season, weekly nesting bird surveys shall be conducted. Each nesting bird survey shall include the work area and areas adjacent to the site (within 500 feet, as feasible) that could potentially	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	be affected by project-related activities such as noise, vibration, increased human activity, and dust, etc. For any active nest(s) identified, the qualified biologist shall establish an appropriate buffer zone around the active nest(s). The appropriate buffer shall be determined by the qualified biologist based on species, location, and the nature of the proposed activities. Project activities shall be avoided within the buffer zone until the nest is deemed no longer active, as determined by the qualified biologist. **Mitigation Measure BIO-6: Delineation of Environmentally Sensitive Areas.** During the construction period, the Director of the City of San Juan Capistrano (City) Development Services Department, or designee, shall confirm that construction plans require that temporary fencing be installed along San Juan Creek that restricts access into the creek and adjacent habitats. Prior to issuance of occupancy permits, the Director of the City's Development Services Department, or designee, shall confirm that permanent signage has been installed that includes references to the environmentally sensitive nature of the creek and adjacent habitats. The Homeowner's Association (HOA) shall fund annual signage monitoring and repairs, as needed. **Mitigation Measure BIO-7: Invasive Shot Hole Borers.** To prevent the spread of Invasive Shot Hole Borers (ISHB), the Project Applicant shall not install any ISHB-infected trees for landscaping, and installed trees shall be monitored once every 3 years for up to 9 years by an International Society of Arboriculture (ISA) certified arborist. The Worker Environmental	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	Awareness Training, described in Mitigation Measure BIO-2, shall include a component to educate crews about ISHB and how to recognize signs of this species. A designated biologist familiar with the signs of ISHBs shall survey trees on the Project site that are designated for removal or trimming. Surveys shall be conducted at least 30 days prior to removal or trimming activities. If any tree is determined to be infested/infected by ISHB, a control plan shall be prepared and submitted to CDFW for review and approval. At a minimum, the control plan shall include methods of control, removal, and appropriate disposal techniques to prevent the spread of ISHB. The results of the tree survey, and if warranted, a copy of the CDFW-approved control plan shall be submitted to the City's Community Development Director, or designee, prior to issuance of grading permits. The project will also comply with Regulatory Compliance Measure BIO-1. **Regulatory Compliance Measures BIO-1: Trail Maintenance.** As required by Section 9-4.505, Bicycle and Equestrian Trails, of the City of San Juan Capistrano's (City) Municipal Code, the Homeowner's Association (HOA) (or equivalent body) associated with the proposed development on the site would be required to provide regular maintenance of the proposed trail, including the removal of horse manure, pet waste, and debris.	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Threshold 4.3.2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? **Less Than Significant with Mitigation Incorporated.** While mature riparian woodland associated with San Juan Creek is located to the south of the project site, the proposed project does not include the removal of any special-status natural communities and therefore there would be no direct impacts to special-status natural communities. However, the proposed project has the potential to result in indirect impacts on San Juan Creek and El Horno Creek as a result of construction and operation activities. Mitigation Measures BIO-1 through BIO-4 and BIO-6 would ensure that the proposed project avoids impacts to sensitive riparian habitat. Therefore, impacts would be less than significant with the implementation of mitigation.	Refer to Mitigation Measures BIO-1 through BIO-4 and BIO-6, above.	Less Than Significant Impact.
Threshold 4.3.3: Would the project 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? **Less Than Significant with Mitigation Incorporated.** The project site does not contain federally protected wetlands. However, the San Juan Creek Channel, located immediately south of the project site, contains wetlands classified as Freshwater Forested/Shrub Wetland and Riverine. Due to the proximity of the San Juan Creek Channel, project construction and operation could have potential impacts on federally protected wetlands and waters of the United States as defined by Section 404 of the Clean Water Act	Refer to Mitigation Measure BIO-4, above.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
(CWA). Implementation of Mitigation Measure BIO-4 would reduce potential impacts to wetlands to a less than significant level. Therefore, impacts would be less than significant with the implementation of mitigation.		
Threshold 4.3.4: Would the project 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? **Less Than Significant with Mitigation Incorporated.** There are no wildlife corridors or wildlife nurseries on the project site where development is proposed. Although there is potential for increased long-term indirect effects to wildlife movement within San Juan Creek as a result of the proposed project, such affects are not expected to substantially change the level of wildlife movement within San Juan Creek. Although the project site contains suitable nesting habitat for ground-nesting birds and for other birds that are protected while nesting under the California Fish and Game Code, implementation of Mitigation Measure BIO-5 would reduce potential impacts to nesting birds to a less than significant level. Therefore, impacts would be less than significant with the implementation of mitigation.	Refer to Mitigation Measure BIO-5, above.	Less Than Significant Impact.
Threshold 4.3.6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? **Less Than Significant Impact.** A portion of the project site is located on land designated as Supplemental Open Space under the Southern Sub Regional Natural Communities Conservation Plan/Master Streambed Alteration	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP; herein referred to as the MSAA/HCP), which is not considered permanently protected and does not receive regulatory coverage under the MSAA/HCP. Portions of San Juan Creek and El Horno Creek (5.55 acres) within the MSAA/HCP Planning Area that are not currently protected under the MSAA/HCP would be dedicated as conservation lands as part of the project. This would contribute to the conservation of resources covered under the MSAA/HCP and permanently conserve important portions of the MSAA/HCP Planning Area that are currently subject to impacts based on decisions by local jurisdictions. Therefore, the proposed project would not conflict with local ordinances or the adopted MSAA, HCP, or other approved local, regional or State HCP. Therefore, impacts would be less than significant and no mitigation is required.		
Cumulative Biological Resources Impacts. **Less Than Significant Impact.** The project site is undeveloped and is located in the City of San Juan Capistrano; therefore, the cumulative area for biological impacts is the City. The project site is located within lands covered by the MSAA/HCP, which designates a preservation area totaling 32,818 acres. The project site is has designations of Developed and Supplemental Open Space, which are land use categories not considered permanently protected and which do not receive regulatory coverage under the MSAA/HCP. Additionally, the project site is not located within a designated habitat reserve, and therefore, the proposed project would not contribute to the loss of natural habitat in the City. The development of the proposed project would not result in the removal of any sensitive habitat species identified in the MSAA/HCP. Additionally, as part of the proposed project, portions of	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
San Juan Creek and El Horno Creek (5.55 acres) within the MSAA/HCP Planning Area that are not currently protected under the MSAA/HCP would be dedicated as conservation lands as part of the project. This would contribute to the conservation of resources covered under the MSAA/HCP and permanently conserve important portions of the MSAA/HCP Planning Area that are currently subject to impacts based on decisions by local jurisdictions. Therefore, the proposed project would not contribute to the cumulative loss of biological resources, and impacts on biological resources would be less than cumulatively significant. No mitigation would be required.		
4.4: CULTURAL RESOURCES		
Threshold 4.4.2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of CEQA? **Less Than Significant with Mitigation Incorporated.** The project site is located in an area of the City of San Juan Capistrano that is archaeologically sensitive for cultural resources. Implementation of the proposed project will necessitate project site disturbance that would result in the destruction of one known, prehistoric archaeological site (CA-ORA-1672) that was identified during the 2007 cultural resources assessment. Thorough analysis of cultural resource site CA-ORA-1672 developed through archaeological testing determined that the site neither possesses significant cultural materials nor represents a significant archaeological resource. The previous recordation and collection of the artifacts and ecofacts contained within CA-ORA-1672 adequately removed the potential impacts posed by implementation of the current project. Therefore, the project would not cause a substantial adverse change in the significance of an	**Mitigation Measure CUL-1: Cultural Resources Monitoring and Accidental Discovery.** Prior to the issuance of grading permits, the Project Applicant shall retain, with approval of the City of San Juan Capistrano (City) Development Services Director, or designee, a qualified archaeological monitor. A monitoring plan should be prepared by the archaeologist and implemented upon approval by the City. Prior to issuance of grading permits, the Project Applicant, with City approval, shall also retain a Native American monitor after consultation with interested tribal and Native American representatives. Both monitors shall be present on the project site during ground-disturbing activities to monitor rough and finish grading, excavation, and other ground-disturbing activities in the native soils. Because cultural resources were previously identified on the project site, both monitors are required to be present on a full-time basis during initial site preparation and initial ground-disturbing activities. Further, each monitor shall spot check any ground-disturbing	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
archaeological resources pursuant to §15064.5 of the *State CEQA Guidelines*. However, it is possible that potentially significant prehistoric deposits and/or cultural artifacts could be encountered during construction because the area in which the project site is located is archaeologically sensitive. As a result, it remains possible that buried, previously unrecorded cultural resources could be present in native soils on the project site and disturbed during project construction. Implementation of Mitigation Measure CUL-1 would reduce these potential impacts to a less than significant level.	activities (e.g., finish grading) to ensure that no cultural resources are impacted during construction activities. If cultural materials are discovered during site preparation, grading, or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing on the California Register of Historical Resources. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to: excavation of the deposit in accordance with a data recovery plan (see California Code of Regulations [CCR] Title 14(3) Section 15126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	and significance of the site and recovered archaeological materials. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.	
Threshold 4.4.3: Would the project disturb any human remains, including those interred outside of formal cemeteries? **Less Than Significant with Mitigation Incorporated.** Although no human remains are known to be on the project site or are anticipated to be discovered during project construction, the project site is archaeologically sensitive. Unanticipated cultural resources, including human remains, may be encountered. Precautionary mitigation as outlined in Mitigation Measure CUL-2 is required to ensure that the proposed project does not impact or disturb any human remains. Implementation of Mitigation Measure CUL-2 would reduce these potential impacts to a less than significant level.	**Mitigation Measure CUL-2: Human Remains.** Consistent with the requirements of CCR Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the project site, the construction contractor shall halt work within 25 feet of the discovery; all work within 25 feet of the discovery shall be redirected and the Orange County (County) Coroner notified immediately. No further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the City, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City shall consult with the MLD identified by the NAHC to develop an agreement for the treatment and disposition of the remains.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report shall be submitted to the City Development Services Director, or designee, and the South Central Coastal Information Center. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.	
Cumulative Cultural Resources Impacts. **Less Than Significant with Mitigation Incorporated.** Potential impacts of the proposed project to unknown cultural resources, when combined with the impacts of past, present, and reasonably foreseeable projects in the City of San Juan Capistrano, could contribute to a cumulatively significant impact due to the overall loss of archaeological artifacts and cultural remains unique to the region. However, each development proposal received by the City is required to undergo environmental review pursuant to CEQA. If there were any potential for significant impacts to archaeological resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. When resources are assessed and/or protected as they are discovered, impacts to these resources are less than significant. Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce potential cumulative impacts to a less than significant level.	Refer to Mitigation Measures CUL-1 and CUL-2, above.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
4.5: ENERGY		
Threshold 4.5.1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? **Less Than Significant Impact.** **Construction.** The project would consume approximately 70,705 gallons of diesel fuel and approximately 50,760 gallons of gasoline during construction, which would increase the annual construction generated diesel fuel use in Orange County by approximately 0.04 percent and would increase the annual construction generated gasoline use in Orange County by less than 0.01 percent. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Orange County's overall use of the State's available energy sources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. Therefore, construction of the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be less than significant. **Operation.** Energy use consumed by operation of the proposed project would be associated with natural gas use, electricity consumption, and fuel used for vehicle trips associated with the project. Operation of the proposed project would increase the annual consumption in Orange County by approximately 0.03 percent for natural gas	No mitigation is required. The project will comply with Regulatory Compliance Measure ENG-1. **Regulatory Compliance Measure ENG-1: California Code of Regulations (CCR), Title 24.** Prior to issuance of building permits, the City of San Juan Capistrano (City) Director of Development Services, or designee, shall confirm that the project design complies with the 2019 Building Energy Efficiency Standards (CCR Title 24) energy conservation and green building standards, as well as those listed in Part 11 (California Green Building Standards Code [CALGreen Code]). The City Director of Development Services, or designee, shall confirm that the project complies with the mandatory measures listed in the CALGreen Code for residential building construction.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
consumption and approximately 0.01 percent for electricity, gasoline, and diesel fuel consumption. With implementation of Regulatory Compliance Measure ENG-1, requiring compliance with Title 24 standards, the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of fuel or energy and would incorporate renewable energy or energy efficiency measures into building design, equipment use, and transportation. Therefore, impacts related to consumption of energy resources during operation would be less than significant, and no mitigation is required.		
Threshold 4.5.2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? **Less Than Significant Impact.** Energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in Orange County, and the State's available energy sources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the California Energy Commission's (CEC) *Integrated Energy Policy Report*. Additionally, as demonstrated above under Threshold 4.5.1, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy. Potential impacts related to conflict with or obstruction of a State or local plan for renewable	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
energy or energy efficiency would be less than significant, and no mitigation is required.		
Cumulative Energy Impacts. **Less Than Significant Impact.** The proposed project would result in an increased services demand in electricity and natural gas. Although the proposed project would result in a net increase in electricity and natural gas, this increase would not require San Diego Gas and Electric (SDG&E) to expand or construct infrastructure that could cause substantial environmental impacts. The proposed project, in combination with cumulative development, is well within SDG&E's system-wide net annual increase in electricity supplies over the 2018 to 2030 period, and there are sufficient planned electricity supplies in the region for estimated net increases in energy demands. Additionally, it is anticipated that SDG&E would be able to meet the natural gas demand of the related projects without additional facilities. Further, compliance with Regulatory Compliance Measure ENG-1 would ensure that the proposed project does not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, the proposed project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable, and no mitigation is required.	No mitigation is required. The project will comply with Regulatory Compliance Measure ENG-1, above.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
4.6: GEOLOGY AND SOILS		
Threshold 4.6.1.ii: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving *strong seismic ground shaking*? **Less Than Significant with Mitigation Incorporated.** As with all of Southern California, the project site is subject to strong ground motion resulting from earthquakes on nearby faults. There are several faults near the project site that are capable of producing strong ground motion, including the Dana Point section Newport-Inglewood-Rose Canyon Fault, the San Joaquin Hills Fault, the Wildomar Fault, and the Mount Soledad Fault. During an earthquake along any of these faults, seismically induced ground shaking would be expected to occur. Therefore, Mitigation Measures GEO-1, GEO-2, and GEO-3 require the Project Applicant to comply with the recommendations of the project Geotechnical Investigation and the most current California Building Code (CBC), which stipulates appropriate seismic design provisions that shall be implemented with project design and construction. Mitigation Measure GEO-2 would require the review of the grading plan and on-site inspection during grading to ensure that recommendation developed during the geotechnical evaluation are appropriately incorporated into project plans and design. With implementation of Mitigation Measures GEO-1, GEO-2, and GEO-3, potential project impacts related to seismic ground shaking would be reduced to a less than significant level.	**Mitigation Measure GEO-1: Incorporation of and Compliance with the Recommendations in the Geotechnical Investigation.** All grading operations and construction shall be conducted in conformance with the recommendations included in the geotechnical report on the proposed project site that has been prepared by GeoSoils Consultants Inc. Design, grading, and construction shall be performed in accordance with the requirements of the City of San Juan Capistrano (City) Building Code and the California Building Code (CBC) applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the Director of the City of San Juan Capistrano Development Services Department, or designee, prior to commencement of grading activities. Recommendations in the Geotechnical Investigation are summarized below. ● **Site Grading/Earthwork.** Prior to grading activities on the site, organics and debris shall be removed and hauled off-site. Undocumented fill within the project limits shall be over-excavated to a minimum depth of 12 feet (ft). The bottom of the excavated area shall be underlain by a layer of filter fabric (which will prevent contamination of crushed aggregate from underlying fine soils) and overlain by a minimum of 2 ft of crushed rock and a geogrid layer(which will minimize the manifestation of vertical settlements to the surface). The excavated layer shall be backfilled	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	with engineered fill, which shall be compacted to at least 90 percent. Compaction shall be verified by observation, probing, and testing by a Geotechnical Consultant. ● **Fill Material.** On-site soils with an Expansion Index (EI) less than 35 and free of organic materials, debris, and cobbles larger than 3 inches may be used for backfilling. Imported granular soils may be used in compacted fills within the project limits. All imported soil shall contain binder material. Imported materials shall also be non-expansive and free of organic materials, debris, and cobbles larger than 3 inches, with no more than 25 percent passing No. 200 Sieve. All fill materials within the upper 2 ft shall be free of particles greater than 2 inches in size. A bulk sample of import material, weighing at least 30 pounds, shall be submitted to the Geotechnical Consultant for approval at least 48 hours prior to fill operations. ● **Utility Trenching.** Bedding materials consisting of sand, gravel, or crushed aggregate shall be used to backfill around utility pipes. On-site soils having a Sand Equivalent (SE) of 30 or greater can also be used as bedding material. Prior to placing pipes, the pipe trench subgrade shall be observed by the Geotechnical Consultant. If exposed subgrade is loose or unstable, unsuitable subgrade shall be excavated and replaced with bedding material. Trenches in pavement areas shall be capped with at least 1 ft of compacted, on-site soil and shall be compacted to at least 95 percent relative compaction.	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	● **Temporary Excavations**. All temporary excavations shall be properly sloped or shored. Excavation of 3.5 ft or less in depth may be performed with vertical sidewalls. Deeper excavations up to a depth of 10 ft can be accomplished with Occupational Safety and Health Administration (OSHA) requirements for Type C soils and may be laid back 1H:1.5V gradient, or 1H:1V upon review by the Geotechnical Consultant. ● **Shoring**. Shoring systems feasible for the site are expected to include cantilever shoring, such as soldier piles. All shoring shall be designed in accordance with the latest edition of the Trenching and Shoring Manual (Caltrans 2011), and shall be approved by the Geotechnical Consultant. A licensed surveyor shall be retained to establish monuments on the shoring and surrounding area. These monuments shall be monitored for movement during construction. ● **Spread/Strip Footing Foundations**. Upon completion of the grading (cutting) required to establish the proposed building pad elevations, the proposed structures may be supported by a spread/strip footing foundation system. Spread/ strip footings shall be at least 24 and 18 inches wide, respectively, and embedded at least 18 inches below the lowest adjacent grade in the engineered fill. The slab-on-grade should be at least 5 inches thick and reinforced with rebar. Footings shall be deepened as necessary in order to maintain adequate support for the foundations adjacent to utility trenches.	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	● **Matt Foundations**: Upon completion of the grading (cutting) required to establish the proposed building pad elevations, the proposed structures may be supported by a matt foundation system in areas where settlements cannot be tolerated by spread/strip footings. The mat should be at least 10 inches thick and embedded at least 18 inches below the lowest adjacent grade in the engineered fill. ● **Concrete Flatworks.** Frequent construction or control joints shall be provided in all concrete slabs where cracking is objectionable. Contraction or weakened plane joints shall extend deeper than one-quarter of the slab thickness. Control joints shall be spaced a minimum of 10 ft intervals. Exterior concrete slab-on-grade may be subjected to drying due to the fluctuation of moisture content in subgrade soils. Deepened edge sections will aid in reducing the potential for the shrinkage and swelling of underlying soils. ● **Retaining Walls.** The proposed development is expected to require various types of earth-retaining structures: freestanding cantilever retaining wall, temporary shoring, and below grade walls for several of the proposed structures. In general, retaining structures planned at the site shall be backfilled with compacted soil and be constructed with a backdrain. ● **Corrosive Soils.** A representative bulk sample of soils in contact with concrete and pipes shall be collected and tested or pH, minimum resistivity, soluble chloride content, and soluble sulfate	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	content. The test results shall be used to determine the chemical properties of on-site soils and appropriate recommendations. Recommendations for corrosion protection may include, but are not limited to, sacrificial metal, the use of protective coatings, and/or cathodic protection. ● **Geotechnical Review and Future Testing.** Additional site testing and final design evaluation shall be conducted by the project Geotechnical Consultant to refine and enhance these recommendations. Final design shall be based on testing and analyses of the near-surface soils following the completion of grading. Design, grading, and construction shall be conducted in accordance with the specifications of the Geotechnical Consultant as summarized in a final report based on the CBC applicable at the time of grading and building and the City of San Juan Capistrano Building Code. **Mitigation Measure GEO-2: Grading Plan Review and On-Site Inspection.** Grading plan review shall also be conducted by the Geotechnical Consultant and the Director of the City of San Juan Capistrano Development Services Department, or designee, prior to the start of grading to verify that the recommendations developed during the geotechnical design evaluation have been appropriately incorporated into the project plans. On-site inspection during grading shall be conducted by the Geotechnical Consultant and the City Building Official, or designee, to ensure compliance with geotechnical specifications as incorporated into project plans.	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	Mitigation Measure GEO-3: California Building Code Compliance and Seismic Standards. Structures and retaining walls shall be designed in accordance with the seismic parameters presented in the Geotechnical Engineering Investigation and applicable sections of Section 1613 of the 2007 California Building Code (CBC). Prior to issuance of building permits for planned structures, the project soils engineer and the Director of the San Juan Capistrano Development Services Department, or designee, shall review building plans to verify that structural design conforms to the recommendations of the Geotechnical Investigation and the City of San Juan Capistrano Building Code.	
Threshold 4.6.1.iii: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving *seismic-related ground failure, including liquefaction*? **Less Than Significant with Mitigation Incorporated.** The project site is located with a State-designated Liquefaction Hazard Zone for the Dana Point Quadrangle. In addition, testing performed as part of the Geotechnical Engineering Investigation found that sand and sandy silt layers within alluvial deposits on the site could liquefy during earthquake. Mitigation Measures GEO-1, GEO-2, and GEO-3 require the City to comply with the recommendations of the project Geotechnical Investigation and the most current CBC, which stipulates appropriate design provisions (including provisions related to foundation design) that shall be implemented with project design and construction. Mitigation Measure GEO-2 would require the review of the grading plan and on-site inspection during grading to ensure that recommendation developed during the geotechnical	Refer to Mitigation Measures GEO-1 through GEO-3, above.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
evaluation are appropriately incorporated into project plans and design. With implementation of Mitigation Measures GEO-1, GEO-2, and GEO-3, potential project impacts related to seismically induced ground failure, including liquefaction, would be reduced to a less than significant level.		
Threshold 4.6.2: Would the project result in substantial soil erosion or the loss of topsoil? **Less Than Significant Impact.** During construction activities, soil would be exposed and there would be an increased potential for soil erosion compared to existing conditions due to soil disturbance and the exposure of substantial amounts of soil to weather conditions (e.g., wind, rain). During a storm event, soil erosion could occur at an accelerated rate. During construction, the Project Applicant is required to adhere to the requirements of the General Construction Permit and utilize typical best management practices (BMPs) specifically identified in the Storm Water Pollution Prevention Plan (SWPPP) for the project in order to prevent construction pollutants from contacting stormwater and to keep all products of erosion from moving off site into receiving waters. Erosion-related impacts during construction would be less than significant through implementation of construction site BMPs. The proposed project would result in a net increase in stormwater runoff; however, the proposed project would also install a stormwater runoff system. Additionally, a Final Hydrology and Hydraulic Analysis would be required to be prepared and submitted to the City for approval, which would confirm that the final design of the project meets the City and County requirements, that peak flow of stormwater runoff in the proposed condition would not exceed the outfall capacity, and that the on-site stormdrain and	No mitigation is required. The project will comply with Regulatory Compliance Measures GEO-1 through GEO-3. **Regulatory Compliance Measure GEO-1: Construction General Permit.** Prior to commencement of construction activities, the Project Applicant shall obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), NPDES No. CAS000002, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ, or any other subsequent permit. This shall include submission of Permit Registration Documents (PRDs), including permit application fees, a Notice of Intent (NOI), a risk assessment, a site plan, a Stormwater Pollution Prevention Plan (SWPPP), a signed certification statement, and any other compliance-related documents required by the permit, to the State Water Resources Control Board via the Stormwater Multiple Application and Report Tracking System (SMARTS). As required by the Section 8-14.107 of the City of San Juan Capistrano's (City) Municipal Code, construction activities shall not commence until a Waste Discharge Identification Number (WDID) is obtained for the project from the	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
detention facilities are appropriately sized to accommodate stormwater runoff. As a result, any increase in peak discharge would be negligible. Therefore, the proposed project would not result in substantial on-site or downstream erosion, siltation, or flooding, and no mitigation is required.	SMARTS and provided to the City of San Juan Capistrano Building Official, or designee, to demonstrate that coverage under the Construction General Permit has been obtained. Project construction shall comply with all applicable requirements specified in the Construction General Permit, including but not limited to, preparation of a SWPPP and implementation of construction site Best Management Practices (BMPs) to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate risk level identified for the project. The SWPPP shall identify the sources of pollutants that may affect the quality of stormwater and shall include BMPs (e.g., Sediment Control, Erosion Control, and Good Housekeeping BMPs) to control the pollutants in stormwater runoff. Construction Site BMPs shall also conform to the requirements specified in the latest edition of the Orange County Stormwater Program Construction Runoff Guidance Manual for Contractors, Project Owners, and Developers to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. Upon completion of construction activities and stabilization of the project site, a Notice of Termination shall be submitted via SMARTS. **Regulatory Compliance Measure GEO-2: Erosion and Sediment Control Plans.** In compliance with the requirements of Sections 8-2.15, 8-2.16, and 8-14.107 of the San Juan Capistrano Municipal Code, the Project Applicant shall submit a pollution control plan, construction BMP plan, and/or erosion and sediment	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	control plan to the City of San Juan Capistrano Building Official, or designee, for review and approval prior to issuance of a grading permit. The Project Applicant shall also install and maintain erosion control devices year round in compliance with the City-approved pollution control plan, construction BMP plan, and/or erosion and sediment control plan. The Project Applicant shall ensure that the construction BMPs are inspected and maintained prior to, during, and after rain events. **Regulatory Compliance Measure GEO-3: Final Hydrology and Hydraulics Analysis.** Prior to issuance of building permits, the Project Applicant shall submit a Final Hydrology and Hydraulics Analysis to the City of San Juan Capistrano Building Official, or designee, for review and approval. The Final Hydrology and Hydraulics Analysis shall be prepared consistent with the requirements of the Orange County Hydrology Manual (Orange County Public Works 1986) and Orange County Hydrology Manual Addendum No. 1 (Orange County Public Works 1996), or subsequent guidance manuals. The Final Hydrology and Hydraulics Analysis shall confirm that the on-site storm drains, on-site detention systems, and any other drainage structures are appropriately sized to accommodate stormwater runoff from the design storm so that the capacity of downstream storm drain facilities is not exceeded. The City of San Juan Capistrano Building Official, or designee, shall ensure that the drainage facilities specified in the Final Hydrology and Hydraulics Analysis are incorporated into the final project design.	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Threshold 4.6.3: Would the project 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-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse? **Slope Stability.** **Less Than Significant with Mitigation Incorporated.** As previously stated, no existing landslides are present on or adjacent to the property. Geologic mapping for the site does not indicate that the site is susceptible to landslide. In addition, the project site is in a generally flat area with no evidence of historic landslides. Therefore, the potential for seismically induced landslides on site is considered low. No mitigation is required. Due to the topography of the project site and the design of the proposed project, grading would entail cut-and-fill slopes, and construction of retaining walls would be necessary in some areas. In addition, shoring would be required during excavation. Unstable cut-and-fill slopes and could create significant short-term and long-term hazards. Mitigation Measure GEO-1 requires planned grading and shoring to conform to the recommendations of the Geotechnical Investigation, which contains specific recommendations for addressing potential slope instability. With implementation of these recommendations as required by Mitigation Measures GEO-1 and GEO-2, potential impacts related to slope instability would be reduced to a less than significant level.	Refer to Mitigation Measures GEO-1 and GEO-2, above.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Unsuitable Soils. **Corrosive Soils and Soluble Sulfate Content.** **Less Than Significant with Mitigation Incorporated.** Corrosive soils could potentially create a significant hazard to the project by weakening the structural integrity of the concrete and metal used to construct the building and could potentially lead to structural instability. As required by Mitigation Measure GEO-1, soils anticipated to come into contact with pipes or concrete on the site shall be tested for pH, minimum resistivity, soluble chloride content, and soluble sulfate content. Where corrosive soils are identified, corrosion protection measures shall be implemented. Corrosion protection may include, but is not limited to, sacrificial metal, the use of protective coatings, and/or cathodic protection. With implementation of Mitigation Measure GEO-1, potential impacts related to corrosive soils would be reduced to a less than significant level. **Settlement Potential.** **Less Than Significant with Mitigation Incorporated.** The site is underlain by clayey, silty, and sandy layers containing rock fragments within alluvial deposits and fill, which could liquefy during an earthquake. As such, these layers will likely experience a loss of shear strength resulting in ground deformation and settlement. Compliance with the recommendations contained in the Geotechnical Investigation for the proposed project, including those related to earthwork activities and foundation design, would be required to reduce potential impacts related to ground settlement. Implementation of Mitigation Measure GEO-1 would reduce potential impacts with		

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
respect to ground settlement to a less than significant level. **Subsidence.** **Less Than Significant with Mitigation Incorporated.** The phenomenon of widespread land sinking, or subsidence, is generally related to substantial over-pumping of groundwater or petroleum reserves from deep underground reservoirs. Over-pumping and excessive groundwater withdrawal have not occurred in the project area. In addition, the project site does not have an oil or gas pump, and has not been used for the extraction of either resource. In addition, the project site is not located in an area with documented subsidence. Compliance with recommendations of the Geotechnical Engineering Investigation, including those related to shoring and retaining walls, and future geotechnical evaluation and testing, would be required to reduce potential impacts related to subsidence. Implementation of Mitigation Measure GEO-1 would reduce potential impacts with respect to subsidence to a less than significant level. **Lateral Spreading.** **Less Than Significant Impact.** Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "unconfined" face such as an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane and may often		

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Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
be associated with liquefaction. According to the Geotechnical Investigation, soils on the project site are not subject to lateral spreading. Therefore, lateral spreading is not considered a potential constraint or a potentially significant impact of the project, and no mitigation is required.		
Threshold 4.6.6: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? **Less Than Significant with Mitigation Incorporated.** There are no known fossil localities on the project site, but based on the locality search conducted for the proposed project, sensitive sediments that may contain fossil remains do exist within the project area. As such, there is the potential to encounter unknown paleontological resources during all ground-disturbing activities for the proposed project. Mitigation Measure GEO-4 requires the Project Applicant to comply with the City's Historical, Archaeological, and Paleontological Resource Management Guidelines and prepare a Paleontological Resources Assessment to evaluate the potential for project implementation to impact unknown paleontological resources. If the Paleontological Resources Assessment determines that paleontological resources may be impacted by project development, a Paleontological Resources Impact Mitigation Program (PRIMP) shall be prepared, and paleontological monitoring, fossil collection and treatment (if necessary), and preparation of a final monitoring report shall occur as described in Mitigation Measure GEO-5. With implementation of Mitigation Measures GEO-4 and GEO-5, impacts to unknown paleontological resources would be less than significant.	**Mitigation Measure GEO-4: Paleontological Resources Assessment.** In accordance with City of San Juan Capistrano Council Policy 601, a paleontologist certified by the County of Orange shall prepare a Paleontological Assessment that includes the following information: a clear map delineating the project boundaries, the results of a field survey of the project area, the results of background research and sources for that background information, criteria for evaluation of paleontological sensitivity of the property, and a determination of whether development of the project has the potential to impact paleontological resources. If the Paleontological Resources Assessment determines that project activities will not impact paleontological resources, no further paleontological resource impact mitigation is required. If the Paleontological Resources Assessment determines that there is a low possibility for project activities to impact paleontological resources, the Project Applicant shall retain a paleontologist on an on-call basis to address any unanticipated discoveries. If the Paleontological Resources Assessment determines that paleontological resources may be impacted by project development, a Paleontological Resources Impact Mitigation Program shall be prepared, and paleontological monitoring, fossil collection and	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	treatment (if necessary), and preparation of a final monitoring report shall occur as described in Mitigation Measure GEO-4. **Mitigation Measure GEO-5: Paleontological Resources Impact Mitigation Program.** In the event the project specific Paleontological Resources Assessment determines that paleontological resources may be impacted by project development, a Paleontological Resources Impact Mitigation Program (PRIMP) shall be prepared prior to commencement of any grading activity on site, and approved by the Director of Planning, or designee. The PRIMP shall be prepared by a paleontologist who is listed on the County of Orange list of certified paleontologists, and shall include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP) (2010). The paleontologist or paleontological monitor shall attend one pre-construction meeting in order to explain the mitigation measures associated with the project, the potential for encountering paleontological resources, and the types of resources that may be found. Ground-disturbing activities in deposits with high paleontological sensitivity shall be monitored by a paleontological monitor following the PRIMP. Spot	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	check monitoring is required for ground disturbance in deposits with low paleontological sensitivity, and no paleontological monitoring is required for ground disturbance in deposits with no paleontological sensitivity. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment in the area of the find in order to allow removal of abundant or large specimens. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and a paleontologist shall be contacted to assess the find for significance. Sediments shall be occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a scientific institution. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program. When submitted to the City of San Juan Capistrano Director of Development Services, or designee, the report and inventory would	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	signify completion of the program to mitigate impacts to paleontological resources.	
Cumulative Geology and Soils Impacts. **Less Than Significant Impact.** There are no rare or special geological features or soil types on the project site that would be affected by project activities and no other known activities or projects with activities that affect the geology and soils of this site. In addition, the proposed project, as with all foreseeable projects, would also be required to comply with the applicable state and local requirements, including the City of San Juan Capistrano Building Code. Therefore, the project's contribution to cumulative geotechnical and soil impacts is less than cumulatively significant. The proposed project, in conjunction with other development in the City, has the potential to cumulatively impact paleontological resources; however, it should be noted that each development proposal received by the City that requires discretionary approval would be required to undergo environmental review pursuant to CEQA. If there is a potential for significant impacts to paleontological resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. If subsurface cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, the City's General Plan policies would be implemented as appropriate to reduce the effects of additional development within the City. Therefore, the project's contribution to the cumulative destruction of known and unknown paleontological resources throughout the City would be less than cumulatively significant.	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
4.7: GREENHOUSE GAS EMISSIONS		
Threshold 4.7.1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? **Less Than Significant Impact.** **Construction.** The proposed project would generate approximately 1,797.24 metric tons of carbon dioxide equivalent (MT of CO_2e) over the course of construction. Because construction would be temporary (approximately 20 months), would cease upon project completion, and would not result in a permanent increase in emissions, impacts would be less than significant, and no mitigation is required. **Operation.** The proposed project would generate 1,661 MT CO_2e per year. This level of project-related GHG emissions would fall below the SCAQMD bright-line screening threshold of 3,500 MT CO_2e per year for residential development. Therefore, GHG emissions generated by the project are not considered to be cumulatively contributable to statewide GHG emissions, and impacts would be less than significant. No mitigation is required.	No mitigation is required.	Less Than Significant Impact.
Threshold 4.7.2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases? **Less Than Significant Impact.** The City of San Juan Capistrano does not currently have an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Applicable plans adopted for the purpose of reducing GHG emissions include the California Air Resources Board's (CARB) Scoping Plan and Southern California Association of Governments' (SCAG) 2016–2040 RTP/SCS.	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Although measures in the Scoping Plan apply to state agencies and not the proposed project, the project's GHG emissions would be reduced by compliance with statewide measures that have been adopted since Assembly Bill (AB) 32 and Senate Bill (SB) 32 were adopted. Therefore, the proposed project would not conflict with the CARB Scoping Plan, and impacts are considered less than significant. The project would not conflict with the 2016–2040 RTP/SCS targets since those targets were established and are applicable on a regional level. Therefore, impacts related to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions would be less than significant, and no mitigation is required.		
Cumulative Greenhouse Gas Emissions Impacts. **Less Than Significant Impact.** GHG emissions are global pollutants, and therefore, result in cumulative impacts by nature. Project impacts identified in this analysis are not project-specific impacts to global climate change (GCC), but are the proposed project's cumulative contribution to this impact. The impact of project-related GHG emissions would not result in a reasonably foreseeable cumulatively considerable contribution to GCC. Additionally, the proposed project, in conjunction with other cumulative projects, would be subject to all applicable regulatory requirements which would further reduce GHG emissions. Lastly, the project would not conflict with an applicable plan, policy or regulation adopted to reduce GHG emissions. Therefore, the project's cumulative contribution of GHG emissions would be less than significant and the project's cumulative GHG impacts would also be less than cumulatively considerable.	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
4.8: HYDROLOGY AND WATER QUALITY		
Threshold 4.8.3.iv: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would *impede or redirect flood flows*? **Less Than Significant Impact.** Because the project site would place improvements and structures within a 100-year flood zone on the southern portion of the project site, there is potential for the project to impede or redirect flood flows. However, the proposed project would comply with existing National Flood Insurance Program (NFIP), the Federal Emergency Management Agency (FEMA), and City regulations governing development within a 100-year floodplain. An elevation certification would be obtained from a certified engineer or surveyor and a Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision Based (LOMR), or a Conditional Letter of Map Revision Based on Fill (CLOMR-F) and Letter of Map Revision Based on Fill (LOMR-F) would be obtained from FEMA through adherence to the Regulatory Compliance Measures WQ-1 and WQ-2. No mitigation is required.	No mitigation is required. The project will comply with Regulatory Compliance Measures WQ-1 and WQ-2. **Regulatory Compliance Measure WQ-1: Flood Hazard Certification.** Prior to issuance of any Certificates of Occupancy, the Project Applicant shall obtain certification from a registered professional engineer or surveyor that the constructed structures on comply with the requirements of Section 8-11.115 of the City's Municipal Code. The certification shall be a Federal Emergency Management Agency (FEMA) Elevation Certificate, and shall verify that all new residential construction and substantial improvement of any structure in Zone AE of the project site shall have the lowest floor, including basement, elevated at least 1 foot above the base flood elevation. The certification shall be submitted to and verified by the City Floodplain Administrator. **Regulatory Compliance Measure WQ-2: Letter of Map Revision.** Flood Insurance Rate Map Revisions. Prior to the issuance of any grading or construction permits, the Project Applicant shall process a Conditional Letter of Map Revision (CLOMR) or Conditional Letter of Map Revision based on Fill (CLOMR-F) through the City of San Juan Capistrano, Orange County Flood Control District (OCFCD), and the Federal Emergency Management Agency (FEMA). Project construction shall not commence until the CLOMR or CLOMR-F is approved by FEMA. Upon completion of construction, the Project Applicant shall	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
	process a Letter of Map Revision (LOMR) or Letter of Map Revision based on Fill (LOMR-F) through the City of San Juan Capistrano, OCFCD, and FEMA. The City of San Juan Capistrano shall not issue the first Certificate of Occupancy until the LOMR or LOMR-F is approved by FEMA.	
Cumulative Hydrology and Water Quality Impacts. **Less Than Significant Impact.** The proposed project and other related projects would comply with existing National Pollutant Discharge Elimination System (NPDES) and City regulations and would implement construction and operational BMPs and drainage facilities to reduce impacts related to hydrology and water quality. In addition, the cumulative projects do not encroach in the 100-year floodplain of the project, so there is no cumulative impact from placement of developments within the floodplain. Because the proposed project and other related projects would comply with applicable NPDES requirements and would include BMPs to reduce the volume of stormwater runoff and pollutants of concern in stormwater runoff, the cumulative hydrology and water quality impacts of the proposed project and the related projects would be less than significant. Therefore, the proposed project's incremental hydrology and water quality impacts would not be cumulatively considerable.	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
4.9: LAND USE AND PLANNING		
Threshold 4.9.2: 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? **Less Than Significant Impact.** **General Plan and Zoning Code Consistency.** Uses proposed as part of the project would be consistent with the existing General Plan land use designations of Planned Community, General Open Space and Community Park for the site. The project's proposed uses would be consistent with the existing zoning of Planned Community District. The Project Applicant would request waivers to development standards as part of an affordable housing incentive. Following approval of the requested waivers, the project would be consistent with the City's Zoning Ordinance. No General Plan Amendment or Zoning Amendment would be required. Therefore, land use impacts with respect to consistency with local land use plans would be considered less than significant, and no mitigation is required. **SCAG RCP.** SCAG Regional Comprehensive Plan (RCP) policies encourage job and housing opportunities to be balanced at the County or subregional level. SCAG policies also encourage growth to be concentrated near transit services, transit nodes, existing freeways, high-occupancy vehicle (HOV) lanes, and toll roads. The proposed project would be accessed by Calle Arroyo, a Commuter Arterial in the City's General Plan Circulation Element. Calle Arroyo provides a connection to Rancho Viejo Road and Ortega Highway/State Route 74 (SR-74). Additionally, the project would be located immediately adjacent to Interstate 5 (I-5). Therefore, the proposed project would be consistent with	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
SCAG policies to encourage growth near existing freeways and established roadways. Furthermore, the proposed project would provide housing near employment and retail centers. Therefore, the proposed project would be consistent with SCAG policies aimed at encouraging job opportunities, and no mitigation is required. **SCAG RTP/SCS.** The 2016–2040 RTP/SCS aims to improve the regional transportation network by improving regional economic development and competitiveness, maximizing mobility in the region, ensuring travel safety and reliability, preserving a sustainable regional transportation system, maximizing the productivity of the transportation system, protecting the environment and health of our residents, encouraging energy efficiency, encouraging land use and growth patterns that facilitate transit and active transportation, and maximizing the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies. The proposed project would result in the conversion of the currently vacant and underutilized project site to residential uses. The project would provide access to the site off Calle Arroyo, which would serve to connect the site with the local and regional transportation systems. All access improvements included as part of the proposed project would comply with City and Orange County Fire Authority (OCFA) standards to ensure the safety and reliability of transportation improvements included as part of the project. In addition, development of the project would also provide affordable housing opportunities that would contribute to City and regional housing goals. The proposed project would also promote energy efficiency through compliance with the California Green Building Standards		

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Code (CalGreen Code). Due to the proximity of bus stops to the site, residents and visitors traveling to and from the project site may use alternative transportation to access the site. Therefore, the proposed project would be consistent with applicable goals outlined in the 2016–2040 RTP/SCS.		
Cumulative Land Use and Planning Impacts. **Less Than Significant Impact.** As previously stated, uses proposed as part of the project would be consistent with the existing General Plan land use designations. As such, no General Plan Amendment is required. While the proposed project does not require a Zone Change, the Project Applicant would request waivers to development standards as part of an affordable housing incentive. Following approval of the requested waivers, the project would be consistent with the City's Zoning Ordinance. Therefore, land use impacts with respect to consistency with local land use plans would be considered less than significant, and no mitigation is required. The proposed project would include land uses that are consistent with the surrounding neighborhoods and therefore would not contribute to a pattern of development that adversely impacts adjacent land uses or conflicts with existing or planned development. Proposed on-site improvements would be consistent with the long-range planning goals of the governing plans and policies for the surrounding area. There are no incompatibilities between the proposed project and planned future projects in the City, which primarily include residential and commercial developments. Therefore, the proposed project would not contribute to a cumulatively significant land use compatibility impact in the study area, and no mitigation is required.	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
4.10: NOISE		
Threshold 4.10.1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? **Less Than Significant with Mitigation Incorporated.** **Construction Noise Impacts.** Two types of short-term noise impacts could occur during construction of the project site. First, construction crew commutes and the transport of construction equipment and materials to the site would incrementally increase noise levels on roads leading to the site. Construction-related traffic would increase noise by up to 1.1 A-weighted decibel (dBA). A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term, construction-related impacts associated with worker commute 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, building construction, paving, and architectural coating on the project site. The closest residence is located approximately 220 ft from the project construction boundary and may be subject to short-term construction noise reaching 75 dBA maximum noise level (L_{max}) (71 dBA equivalent continuous sound level [Leq]) generated by construction activities in the project area. Ambient noise levels at the closest residences are approximately 63.5 dBA L_{eq}. Although noise levels generated by project construction would be higher than ambient noise levels, increases in ambient noise levels would be minimal and would no longer occur once project construction is completed. The implementation of	**Mitigation Measure NOI-1.** The project contractor shall implement the following measures during construction of the proposed project: • Limit construction activities to between the hours of 7:00 a.m. and 6:00 p.m. Mondays through Fridays and between the hours of 8:30 a.m. and 4:30 p.m. on Saturdays. Construction noise is prohibited on Sundays and national holidays. • Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. • Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site. • Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities. • Designate a "disturbance coordinator" at the City of San Juan Capistrano (City) who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early or a bad muffler) and would determine and implement reasonable measures warranted to correct the problem.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Mitigation Measure NOI-1 would be required to minimize construction noise impacts at the nearest sensitive receptors to a less than significant level. **Less Than Significant Impact** **Long-Term Noise Impacts.** Noise-generating uses associated with residential uses typically include vehicle traffic and operational noise, such as heating, ventilation, and air conditioning (HVAC) equipment and typical motor vehicle/parking area activities. The project-related traffic noise increase would reach up to 2.2 dBA. Noise level increases below 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from project-related traffic on off-site sensitive receptors would be less than significant. No mitigation measures are required. The closest sensitive receptors to the project site are multifamily residences located approximately 220 ft northeast of the project site, across Calle Arroyo. At a distance of 220 ft, noise would be attenuated by 13 dBA compared to the noise level measured at 50 ft from the source. Noise levels from HVAC at the closest residence would be 30 dBA L_{eq}, which would be lower than existing noise levels at the project site. In addition, this noise level would not exceed the City's day (7:00 a.m. to 7:00 p.m.), evening (7:00 p.m. to 10:00 p.m.), and nighttime (10:00 p.m. to 7:00 a.m.) exterior noise level standards of 65, 55, and 45 dBA, respectively. In addition, this noise level would not exceed the City's interior noise standard of 45 dBA for residences. Therefore, noise generated from on-site HVAC equipment would be less than significant. No mitigation measures are required.		

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Threshold 4.10.2: Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels? **Less Than Significant Impact.** **Construction Vibration Impacts.** Construction of the proposed project could result in the generation of ground-borne vibration. The closest buildings to the project site are commercial uses located northwest and north of the project site, which are located approximately 55 ft and 100 ft, respectively, from the project construction boundary. At 55 ft and 100 ft, the closest commercial buildings would experience vibration levels of up to 77 vibration velocity levels (VdB) (0.027 peak particle velocity [PPV] [in/sec]) and 69 VdB (0.011 PPV [in/sec]), respectively. Other buildings surrounding the project site are located farther away and would experience lower vibration levels. Vibration levels at the closest commercial buildings would not exceed the United States Federal Transit Administration (FTA) community annoyance threshold of 84 VdB for land uses similar to office uses. In addition, this vibration level would not exceed the FTA damage threshold of 94 VdB (0.2 in/sec PPV) for buildings constructed of non-engineered timber and masonry. Therefore, ground-borne vibration generated from construction activities associated with the proposed project would be less than significant. No mitigation measures are required. **Operational Vibration Impacts.** The proposed residential project would not generate vibration during operation. In addition, vibration levels generated from project-related traffic on the adjacent roadways (Calle Arroyo and Rancho Viejo Road) are unusual for on-road vehicles because the	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
rubber tires and suspension systems of on-road vehicles provide vibration isolation. Therefore, vibration generated from project-related traffic on the adjacent roadways would be less than significant. No mitigation measures are required.		
Threshold 4.10.3: Would the project expose persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? **Less Than Significant with Mitigation Incorporated.** The City's exterior and interior noise standards are 65 A-weighted decibel Community Noise Equivalent Level (dBA CNEL), and 45 dBA CNEL, respectively, for single-family and multifamily residences. **Exterior Noise Assessment.** For the purposes of this analysis, the noise-sensitive areas which are required to meet the City's exterior standard of 65 dBA CNEL include the private rear yards of the single-family homes and the common use areas such as the tot lot and gathering areas. Due to the orientation of the rear-yards associated with the single-family homes on the eastern portion of the project site, the noise reduction associated with distance propagation, the 6 ft high property line wall, and the noise reduction provided by intervening buildings, exterior noise levels would range from 57.1 dBA CNEL to 59.2 dBA CNEL. With noise levels below 65 dBA CNEL at these single- family home rear-yards, no further noise reduction measures are necessary. Noise levels at the proposed tot lot and gathering areas are projected to result in noise levels ranging from 56.9 dBA	**Mitigation Measure NOI-2.** Prior to the approval of final building plans for the project, the City shall confirm that the project plans include a 14-foot high sound wall along the western boundary of the project site adjacent to the tot lot. The Project Applicant shall prepare an acoustic study for approval by the Director of Development Services, or designee, that demonstrates that the exterior noise level at the common outdoor areas (tot lot and gathering areas) shall not exceed the 65 A-weighted decibel Community Noise Equivalent Level (dBA CNEL) and that interior noise levels in habitable rooms shall not exceed 45 dBA CNEL, as defined by the California Building Code. Acoustical design features shall be incorporated into the proposed project design, which may include a combination of exterior features to reduce noise, such as berms/walls and/or architectural features such as Sound Transmission Class (STC) rated windows and doors. All STC ratings shall be shown on the building plans and incorporated into the construction of the proposed project. Once final architectural plans with the exterior-wall details and window types are available, a Final Acoustic Report shall be prepared by a qualified consultant to confirm that the interior living spaces of residential dwelling units would meet the City interior noise standard of 45 dBA CNEL with windows and doors closed. If interior noise level thresholds are still exceeded after the Final Acoustic Report is completed,	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
CNEL to 73.5 dBA CNEL with the incorporation of the 6 ft high property line wall along the western property line and perimeter of the fitness center parking lot. Noise levels at the tot lot will exceed the 65 dBA CNEL exterior noise standard; therefore, an increased height of the perimeter wall is necessary. With the incorporation of a minimum 14 ft high wall near the proposed tot lot, as required in Mitigation Measure NOI-2, noise levels would be reduced to 64.7 dBA CNEL, and all noise-sensitive receptors would be below the City's exterior noise level standard for playground and park uses. **Interior Noise Assessment.** In order to assess the interior noise levels throughout the proposed project, noise levels at both first and third floor heights for various façade locations were calculated to determine which buildings would need upgraded building components. Based on the United States Environmental Protection Agency (EPA) Protective Noise Levels, with a combination of exterior walls, doors, and windows, standard construction for Southern California (warm climate) buildings would provide approximately 24 dBA in exterior-to-interior noise reduction with windows and doors closed. The results of the analysis show that some of the buildings on the western portion of the project site would need to upgrade the exterior façades in order to achieve adequate noise reduction. This can be accomplished by installing upgraded windows, improving wall construction, or a combo of both. Once final architectural plans are available with the exterior wall details and window types, a Final Acoustic Report shall be prepared to confirm that the interior living spaces of residential dwelling units will meet the City's interior noise standard of 45 dBA CNEL with windows and doors closed. Mechanical ventilation such as air conditioning would be required for all residential	additional acoustical design features, including façade and window upgrades, shall be incorporated in the building plans in order to meet the interior noise standard.	

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
dwelling units so that windows and doors can remain closed for a prolonged period of time. With implementation of Mitigation Measure NOI-2, on-site interior noise levels would be consistent with the City's Noise Element standards for residential interior areas.		
4.11: TRANSPORTATION		
Threshold 4.11.1: Would the project conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? **Less Than Significant Impact.** **Construction.** Project construction would take approximately 20 months. Because traffic associated with the proposed project (64 a.m. peak-hour trips and 82 p.m. peak-hour trips [discussed in further detail below]) would generate more trips than construction (10 a.m. peak-hour trips and 47 p.m. peak-hour trips), and the Level of Service (LOS) analyses have determined that operation of the project would not result in any significant traffic impacts, it can be concluded that construction traffic impacts would also be less than significant. No mitigation is required. **Operation.** The proposed project would be required to comply with General Plan policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The project would also be required to comply with City Council Policy No. 310, which establishes metrics for determining traffic impacts, consistent transportation-related goals and policies in the City's General Plan, and the Orange County Congestion Management Program (CMP) (2019). The project has the potential to generate approximately 890 average daily trips (ADT), including 64 trips (16 inbound and 48 outbound) in the a.m. peak hour	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
and 82 trips (51 inbound and 31 outbound) in the p.m. peak hour. All study area intersections, including the hot-spot intersections, are anticipated to operate at satisfactory LOS based on the Intersection Capacity Utilization (ICU) and Highway Capacity Manual (HCM) methodologies. Therefore, impacts would be less than significant, and no mitigation is required.		
Threshold 4.11.2: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 or will conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? **Less Than Significant Impact.** Implementation of the proposed project would not result in any significant project-related impacts to the surrounding roadway system. The existing regional (City) VMT was determined to be 24.2 per capita, while the project-related VMT was determined to be 11.7 per capita. As such, the VMT per capita for the project is 51 percent less than the regional VMT per capita under existing conditions (2019). Based on the Governor's Office of Planning and Research (OPR) Technical Advisory (TA) guidance, the project will not have a significant transportation impact. At this time, the City has not adopted a methodology to analyze VMT impacts within its jurisdiction. In addition, the City does not currently have thresholds or standards in place for assessing potential VMT impacts. Therefore, this information is provided for disclosure purposes only, and the analysis of traffic impacts in this Draft EIR for CEQA purposes is based on the City's LOS thresholds. No mitigation would be required.	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Cumulative Transportation Impacts. **Less Than Significant Impact.** To develop a Year 2021 condition (the year of project opening), an ambient growth rate of 0.5 percent per year was applied to the existing 2018 traffic counts. This condition also included the proposed project trips and manually assigned trips generated by approved/pending (cumulative) projects. Under ICU and HCM methodologies, all study area intersections, including the hot spot intersections, are either (1) forecast to operate at satisfactory LOS, or (2) the delay does not increase by 1.0 second or greater. Therefore, consistent with City Administrative Policy No. 310, a significant project or cumulative impact would not occur at any study area intersection based on the ICU and HCM methodologies under cumulative and General Plan buildout conditions.	No mitigation is required.	Less Than Significant Impact.
4.12: TRIBAL CULTURAL RESOURCES		
Threshold 4.12.1. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). **Less Than Significant Impact.** The project site is not listed or eligible for listing in the California Register of Historical Resources (California Register), or in a local register of historical resources. However, one prehistoric site, CA-ORA-1672, is located within the project site. Despite this positive finding, subsequent subsurface testing was completed and the resources were not recommended as significant due to	No mitigation is required.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
their lack of integrity and the absence of data to answer important research questions in prehistory. Therefore, because there is no resource listed or eligible for listing on the California Register or local register, impacts under this threshold are considered less than significant. No mitigation is required.		
Threshold 4.12.1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. **Less Than Significant with Mitigation Incorporated.** A Sacred Lands File through the Native American Heritage Commission (NAHC) and Assembly Bill (AB) 52 Native American consultation were conducted for the proposed project. The recent request for a search of the Sacred Lands File with the NAHC resulted in positive findings (December 2018). One prehistoric site, CA-ORA-1672, is located within the project site. Identified during a cultural resources assessment conducted in 2007, a subsequent testing program at the prehistoric site established that it does not appear to qualify as a significant cultural resource because it lacks integrity and lacks the data to answer important research questions in prehistory. No responses were	Refer to Mitigation Measures CUL-1 and CUL-2, above.	Less Than Significant Impact.

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
received from Native American representatives with regard to AB 52 consultation and outreach. However, two comment letters were received during the public review period for the Initial Study/Notice of Preparation (IS/NOP), but after the AB 52 consultation period had concluded. The letter from the NAHC, received on November 14, 2019, provided information related to Native American consultation as required by AB 52 and Senate Bill (SB) 18. The letter from the Juaneño Band of Mission Indians, received on December 5, 2019, requested that a treatment plan be prepared that includes measures regarding monitoring and procedures regarding how inadvertent discoveries would be addressed. Due to the presence of cultural resources within the project site and the location of the project site in an area near the San Juan Creek, the project area is considered potentially sensitive for tribal cultural resources. In addition, the City requires monitoring for development projects in culturally sensitive areas. As such, monitoring by an archaeological monitor under the supervision of an Orange County Certified Archaeologist and by a Native American representative is required. Mitigation Measure CUL-1 would reduce any potential impacts to previously undiscovered tribal cultural resources to a less than significant level. Unknown human remains, including possible Native American remains, could be discovered onsite. Therefore, Mitigation Measure CUL-2 is proposed and requires compliance with Public Resources Code (PRC) Section 5097.98. Mitigation Measure CUL-2 would reduce any potential impacts related to the discovery of unknown Native American human remains on the project site to a less than significant level. Refer to Mitigation Measures CUL-1 and CUL-2 in Section 4.4., Cultural Resources.		

Table 1.B: Summary of Potential Environmental Impacts, Project Design Features, Mitigation Measures, Regulatory Compliance Measures, and Level of Significance

Potential Environmental Impact	Project Design Features, Mitigation Measures, and Regulatory Compliance Measures	Level of Significance After Mitigation
Cumulative Tribal Cultural Resources Impacts. **Less Than Significant with Mitigation Incorporated.** The cumulative study area for tribal cultural resources is the geographical area of the City of San Juan Capistrano, which is the geographical area covered by the City's General Plan, including all goals and policies therein. Future development in the City could include excavation and grading that could potentially impact tribal cultural resources. The cumulative effect of the proposed project would be the continued loss of these resources. The proposed project, in conjunction with other development in the City, has the potential to cumulatively impact tribal cultural resources; however, it should be noted that each development proposal requiring a discretionary approval received by the City would undergo environmental review pursuant to CEQA. If there is a potential for significant impacts to tribal cultural resources, an investigation would be required to determine the nature and extent of the resources and to identify appropriate mitigation measures. If subsurface cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, applicable City ordinances and General Plan policies would be implemented as appropriate to reduce the effects of additional development to tribal cultural resources within the City.	Refer to Mitigation Measures CUL-1 and CUL-2, above.	Less Than Significant Impact.

2.0 INTRODUCTION

2.1 OVERVIEW AND PROJECT BACKGROUND

This Draft Environmental Impact Report (EIR) has been prepared to evaluate environmental impacts associated with the proposed Tirador Residential Development Project (proposed project) located in the City of San Juan Capistrano (City). The City is the "public agency which has the principal responsibility for carrying out or approving the project" and, as such, is the "Lead Agency" for this project under the California Environmental Quality Act of 1970 (CEQA) (*State CEQA Guidelines for Implementation of CEQA* Section 15367). CEQA requires the Lead Agency to consider the information contained in the EIR prior to taking any discretionary action. This Draft EIR is intended to serve as an informational document to be considered by the City and the Responsible Agencies during deliberations on the proposed project. The anticipated project approvals associated with the proposed project are described in Section 3.0, Project Description.

The City of San Juan Capistrano, as the Lead Agency, determined that the proposed project may have a significant effect on the environment and that an EIR would be required to more fully evaluate potential adverse environmental impacts that may result from development of the proposed project. As a result, this Draft EIR has been prepared in accordance with CEQA, as amended (Public Resources Code [PRC] Section 21000, et seq.), and the CEQA Guidelines for Implementation of CEQA (California Code of Regulations [CCR], Title 14, Section 15000, et seq.). This Draft EIR also complies with the procedures established by the City for the implementation of CEQA.

Questions regarding the preparation of this document and the City's review of the proposed project should be referred to the following:

Laura Stokes, Housing Supervisor/Associate Planner
City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675
Tel: (949) 443-6313
Email: LStokes@sanjuancapistrano.org

2.2 PURPOSE AND TYPE OF EIR/INTENDED USES OF THE EIR

This Draft EIR has been prepared to evaluate environmental impacts that may result from implementation of the proposed project. As the Lead Agency, the City has the authority for preparation of this Draft EIR and, after the comment/response process, certification of the Final EIR (FEIR) and approval of the proposed project as described in this Draft EIR.

The City and Responsible Agencies have the authority to make decisions on discretionary actions relating to development of the proposed project. As previously stated, this Draft EIR is intended to serve as an informational document to be considered by the City and Responsible Agencies during deliberations on the proposed project. This Draft EIR evaluates and mitigates a reasonable worst-case scenario of potential impacts associated with the proposed project.

This Draft EIR will serve as a Project EIR pursuant to *State CEQA Guidelines* Section 15161. According to Section 15161 of the *State CEQA Guidelines*, a Project EIR is appropriate for specific development projects in which information is available for all phases of the project, including planning, construction, and operation.

As previously stated, the City is the Lead Agency for the proposed project under CEQA (*State CEQA Guidelines* Section 15367). CEQA requires the Lead Agency to consider the information contained in the EIR prior to taking any discretionary actions. This Draft EIR provides information to the Lead Agency and other public agencies, the general public, and decision makers regarding the potential environmental impacts from construction and operation of the proposed project. The purpose of the public review of the Draft EIR is to evaluate the adequacy of the environmental analysis in terms of compliance with CEQA. Section 15151 of the *State CEQA Guidelines* states the following regarding standards from which adequacy is judged:

> "An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts. The courts have not looked for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

Under CEQA (PRC Section 21002.1[a]):

> "The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."

As previously discussed in Chapter 1.0, Executive Summary, an EIR is the most comprehensive form of environmental documentation identified in CEQA and the *State CEQA Guidelines* and provides the information needed to assess the environmental consequences of a proposed project. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts.

2.3 ENVIRONMENTAL REVIEW PROCESS

The California Environmental Quality Act (CEQA) (PRC Section 21000, et seq.), requires that a public agency prepare an EIR when the public agency finds substantial evidence that the project may have a significant effect on the environment (PRC Section 21080 (d)). The basic purposes of CEQA are to:

1. Inform governmental decision makers and the public about the potential significant environmental effects of proposed activities;

2. Identify the ways that environmental damage can be avoided or significantly reduced;

3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and

4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

In compliance with the *State CEQA Guidelines*, the City has taken steps to maximize opportunities for the public and other public agencies to participate in the environmental review process. The City conducted the scoping process, issued a Notice of Preparation (NOP) for the proposed project, and determined that an EIR was required to evaluate the potentially significant environmental effects of the proposed project and related actions. In addition, a public scoping meeting was held, as discussed further below.

2.3.1 Initial Study and Notice of Preparation

The City, as the Lead Agency, originally prepared an Initial Study (IS) and issued an NOP of an EIR on November 7, 2019.

The State Clearinghouse (SCH) issued a project number for the EIR (SCH No. 2019110154). The primary purpose of preparing the IS was to scope the environmental analysis and describe potential environmental impacts that may result from project approval. The IS was also used to scope out environmental issues that were determined to be "less than significant" or "no impact."

In accordance with the *State CEQA Guidelines*, Section 15082, the NOP was circulated to responsible agencies and individuals from November 7, 2019, to December 9, 2019, for a period of 33 days, during which time written comments were solicited pertaining to environmental issues and topics that the EIR should evaluate.

Responses to the IS/NOP were received from the following agencies:

- California Department of Fish and Wildlife (CDFW)
- California Department of Transportation (Caltrans) District 12
- California Native American Heritage Commission (NAHC)
- Capistrano Acres Mutual Water Company (CAMWC)
- Orange County Fire Authority (OCFA)
- Orange County Public Works (OCPW)
- Orange County Transportation Authority (OCTA)
- South Coast Air Quality Management District (SCAQMD)
- Juaneño Band of Mission Indians

2.3.2 Scoping Meeting Summary

The City held two public scoping meetings to present the proposed project and to solicit input from interested individuals regarding environmental issues that should be addressed in the Draft EIR; the first meeting was held at Community Center Community Hall on November 20, 2019, from 5:00 to 7:00 p.m., and the second meeting was held at the La Sala Auditorium on November 21, 2019, from

5:00 to 7:00 p.m. Key environmental issues and concerns raised in the response to the IS/NOP scoping process included:

- **Air Quality:** Recommendations were made that the air quality analysis follow South Coast Air Quality Management District (SCAQMD) guidance for air quality analysis, including specific mitigation measures, and recommended that a Health Risk Assessment (HRA) be prepared due to the proposed project's proximity to Interstate 5 (I-5).

- **Biological Resources:** Recommendations were made that the biological resources analysis include potential project-related impacts to steelhead and other sensitive aquatic species, least Bell's vireo habitat, riparian and wetland habitats, flora and fauna with special emphasis upon identifying threatened, sensitive, and locally unique species and sensitive habitats, and wildlife corridor/movement areas. Recommendations were also made to analyze the efficacy of Low Impact Development (LID) options to minimize stormwater impacts, how changes in land use would affect habitat edges, and how fuel modification zones would impact biological resources. Suggestions were made to incorporate mitigation measures related to the protection of rare natural communities, sensitive plants, animals, and habitats, habitats targeted for preservation and/or restoration, nesting birds; preparation of planting plans related to restoration and revegetation; and protection against shot hole borers.

- **Hydrology and Water Quality:** Recommendations were made that the hydrological studies should comply with the *Orange County Hydrology Manual* (1986) and the *Orange County Flood Control Design Manual* (2000), and that the City review and approve all hydrological analyses to confirm that the project is protected from erosion and flooding in a 100-year storm event. It was also recommended that the City ensure that floodplains are identified and structures conform to Federal Emergency Management Agency (FEMA) regulations in accordance with the City's floodplains ordinances, and that encroachment should not result in any increase in flood levels within the floodway during the occurrence of base flood discharge.

- **Land Use and Planning:** Information was provided stating that the easements used for water wells and water transmission facilities held by the CAMWC are not identified properly on the project's site plan, and that the project improvements shown within the easement areas are infeasible given the rights of the easements.

- **Transportation:** Recommendations were made to prepare a Traffic Impact Study to analyze potential short-term and long-term impacts to the State Highway System, including I-5 and State Route 74 (SR-74). It was also requested that the Traffic Impact Analysis prepared for the proposed project be consistent with the latest *Orange County Congestion Management Program* (CMP) (OCTA November 2019).

- **Tribal Cultural Resources:** Information related to Native American consultation as required by Assembly Bill (AB) 52 and Senate Bill (SB) 18 was provided, and the Juaneño Band of Mission Indians requested that a that a treatment plan be prepared that includes measures regarding monitoring and procedures for how an inadvertent discoveries would be addressed.

Please note that this is not an exhaustive list of areas of controversy, but rather key issues that were raised during the scoping process. The Draft EIR addresses each of these areas of concern or controversy in detail, examines project-related and cumulative environmental impacts, identifies significant adverse environmental impacts, and proposes mitigation measures designed to reduce or eliminate potentially significant impacts. Appendix A includes the IS/NOP and copies of written comments received in response to the IS/NOP.

2.3.3 Public Review Period

This Draft EIR is being distributed to numerous public agencies and other interested parties for review and comment. The Draft EIR is also available at the following locations and on the City's website:

City of San Juan Capistrano
Development Services Department
32400 Paseo Adelanto
San Juan Capistrano, CA 92675
Hours: Monday through Thursday, 7:30 a.m. to 5:30 p.m.
Friday, 7:30 a.m. to 4:30 p.m.
Saturday and Sunday, Closed

San Juan Capistrano Library
31495 El Camino Real
San Juan Capistrano, CA 92675
Hours: Monday through Thursday, 10:00 a.m. to 7:00 p.m.
Friday, Closed
Saturday and Sunday, 9:00 a.m. to 5:00 p.m.

All comments received from agencies and individuals on the Draft EIR will be accepted during the public review period, which will not be less than 45 days, in compliance with CEQA. All comments on the Draft EIR should be sent to the following City contact person:

Laura Stokes, Housing Supervisor/Associate Planner
City of San Juan Capistrano Development Services, Planning Division
32400 Paseo Adelanto
San Juan Capistrano, CA 92675
Phone: (949) 443-6313
Email: LStokes@sanjuancapistrano.org

2.4 SCOPE OF THIS DRAFT EIR

As required by *State CEQA Guidelines* Section 15128, this Draft EIR must identify the effects of the proposed project determined to be significant. Per *State CEQA Guidelines* Section 15060, the City determined that the proposed project may have a significant impact on the environment and an EIR would clearly be required for the proposed project, and the EIR process was initiated. As explained in Section 2.2.1 above, the City issued an NOP soliciting comments from Responsible and Trustee Agencies and other interested parties, including members of the public.

The thresholds of significance criteria utilized in this Draft EIR are based on Appendix G of the *State CEQA Guidelines* and the City's adopted *Local Guidelines for Implementing the California Environmental Quality Act* (2019). All environmental topics contained in the Appendix G Checklist are addressed in this Draft EIR: aesthetics, agriculture and forest resources (refer to discussion below in Section 2.5.1, Agriculture and Forest Resources), air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials (refer to discussion below in Section 2.5.2, Hazards and Hazardous Materials), hydrology and water quality, land use and planning, mineral resources (refer to discussion below in Section 2.5.3, Mineral Resources), noise, population and housing (refer to discussion below in Section 2.5.4, Population and Housing), public services (refer to discussion below in Section 2.5.5, Public Services), recreation (refer to discussion below in Section 2.5.6, Recreation), traffic, tribal cultural resources, utilities and service systems (refer to discussion below in Section 2.5.7, Utilities and Service Systems) and wildfire (refer to discussion below in Section 2.5.8, Wildfire). The analysis herein determines whether there are no impacts, less than significant impacts, less than significant impacts with mitigation, or significant and unavoidable impacts associated with the proposed project. Mitigation measures are proposed where feasible to reduce or eliminate identified impacts.

2.5 EFFECTS FOUND NOT TO BE SIGNIFICANT

As required by *State CEQA Guidelines* Section 15128, this Draft EIR identifies the potential effects of the proposed project that were determined not to be significant and adverse, and therefore, not addressed in the Draft EIR. The proposed project would not result in adverse impacts related to agriculture and forestry resources, hazards and hazardous materials, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfires. These issues are briefly discussed below along with the substantiation for why they were determined not to be significant.

2.5.1 Agriculture & Forest Resources

The proposed project is located on an approximately 16.1-acre vacant site. According to the City's Zoning Map, the project site is zoned as Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP 78-01). The purpose of the Planned Community zone is to encourage the use of modern land planning and design techniques to create developments integrating a mixture of different types of land uses. As such, the project site is not zoned for agricultural or forest use and is not used for agricultural or forest production. As the project site is currently mapped as "Other Land" by the Farmland Mapping and Monitoring Program (FMMP), the project would not convert any Farmland of Statewide Importance. Additionally, the project site is not located within an area covered under a Williamson Act contract, and no impacts related to an agricultural use or a Williamson Act contract would occur with implementation of the proposed project. The proposed project would not include other changes in the existing environment that would result in conversation of farmland to non-agricultural uses. Therefore, this issue is not evaluated further in this Draft EIR.

2.5.2 Hazards & Hazardous Materials

The project site is not included on any hazardous materials site list pursuant to Government Code Section 65962.5 and would not result in a significant hazard to the public or the environment.

Operation of the proposed project would not create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Adherence to applicable rules and regulations as required during construction regarding hazardous materials, including fugitive dust emissions, would reduce potential risks associated with the release of hazardous materials to the environment or public, including nearby schools, to less than a significant level. The proposed project does not include any characteristics (e.g., permanent road closure or long-term blocking of road access) that would physically impair or otherwise conflict with the City's Emergency Preparedness Program, and all infrastructure improvements included as part of the project would occur within the boundaries of the project site and would not require or result in any temporary lane closures on roadways adjacent to the site. Further, the proposed project would be required to comply with all applicable codes and ordinances for emergency vehicle access, which would ensure adequate access to, from, and on the project site for emergency vehicles. Therefore, this issue is not evaluated further in this Draft EIR.

2.5.3 Mineral Resources

The project site is not designated as a mineral resources recovery site on the City's General Plan, Specific Plans, or other land use plan, and no mineral extraction activities currently occur on the site. According to the California Department of Conservation, the project site has been classified as Mineral Resource Zone (MRZ)-2, indicating that the project site is in an area designated as regionally significant.[1] Such designations require that a Lead Agency's land use decisions involving designated areas be made in accordance with its mineral resource management policies and that it consider the importance of the mineral resource to the region or the State as a whole, not just to the Lead Agency's jurisdiction. The project site and surrounding area are classified as MRZ-2 due to proximity to the San Juan Creek. Construction of the proposed project would involve grading and earthwork activities that would result in disturbances to on-site soils, including any aggregate material that may be present on the site. However, project construction would not involve the export of any on-site soils or materials that would result in the permanent loss of on-site aggregate material. Therefore, implementation of the project would not remove on-site aggregate material, and would not result in the permanent loss of such materials. Further, the closest mining operations to the project site are located 4.5 miles east of the site. Although the project site is designated as MRZ-2, the site has not historically or is currently utilized for mineral resource extraction. Therefore, this issue is not evaluated further in this Draft EIR.

2.5.4 Population and Housing

Construction of the proposed project would provide short-term construction jobs over an approximately 24 month period. Many of the construction jobs would be temporary and would be specific to the variety of construction activities. Although the proposed project would increase the number of employees at the project site during construction activities, it is expected that local and regional construction workers would be available to serve the proposed project's construction needs.

[1] State of California Department of Conservation (DOC). 1994. California Division of Mines and Geology. Generalized Mineral Land Classification or Orange County. Open-File Report 94-15, Plate 1.

According to the California Department of Finance City/Population and Housing Estimates (January 2018), the average number of persons per dwelling unit in the City in 2018 was 3.10 persons.[1] Based on the City's average occupancy rate, the addition of 132 units would result in approximately 410 additional residents. The addition of 410 residents would be approximately 1.14 percent of the City's 2017 population of 36,064[2] and an increase of 1.08 percent of the City's projected population of 38,100 for the year 2020 as projected by the Southern California Association of Governments (SCAG).[3] As such, the proposed project would not result in significant unplanned population growth as a result of project implementation.

According to the City's 2014–2021 General Plan Housing Element, Southern California Association of Governments (SCAG) has established a Regional Housing Needs Assessment (RHNA) goal for the City to develop 638 new housing units by the year 2021. Of these 638 units, 147 would be set aside for Extremely Low/Very Low Income Groups, 104 units for Low Income Groups, 120 for Moderate Income Groups, and 267 for Above Moderate Income Groups. In order to meet these requirements, the City's Housing Element identifies the project site as accommodating 230 very-low income units. The proposed project would allow for the development of 118 new market-rate housing units and 14 new moderate-income housing units on the project site, which would result in fewer affordable housing units for the site than identified in the City's Housing Element. Nonetheless, implementation of the project, which includes construction of 14 moderate-income units, would contribute to the City's realization of RHNA goals. To comply with SB 166, the City has identified an alternative site which includes 9.3 acres designated as Very High Density Residential Land Use. This site, identified as Assessor's Parcel Number (APN) 121-070-57, is entitled to be developed at a density of 30 dwelling units per acre, or 279 units. The 219 units which are no longer able to be accommodated with the proposed development on the project site can be accommodated on this alternative site. The City will notify the State Department of Housing and Community Development regarding the alternative site identified to accommodate the replacement housing should the proposed project be approved. Further, the project would not result in a loss of housing or persons, nor require or necessitate the development of replacement housing elsewhere. Therefore, this issue is not evaluated further in this Draft EIR.

2.5.5 Public Services

The proposed project is not anticipated to induce substantial population growth that would increase demand for public services. As stated in Section 2.5.4, Population and Housing, the development of 132 units as part of the project would result in approximately 410 additional residents.

Fire protection services would be provided to the project site by the Orange County Fire Authority (OCFA). The proposed project would be required to comply with all applicable building code requirements requiring fire protection devices, such as sprinklers, alarms per the California Fire

1 California Department of Finance City/Population and Housing Estimates (January 2018) (132 dwelling units * 3.10 person per unit = 409.2)

2 United States Census Bureau. Quick Facts Finder. 2017. Website: https://www.census.gov/quickfacts/fact/table/sanjuancapistranocitycalifornia,ca/PST045217 (accessed December 5, 2018).

3 Southern California Association of Governments. Regional Transportation Plan 2012-2035. Growth Forecast Appendix. Table 18.

Code (Municipal Code Section 8-10.01 [Adoption of the 2016 California Fire Code]), adequately spaced fire hydrants, fire access lanes, and adequate emergency access. In order to meet the California Fire Code requirements, the project would include the addition of six on-site fire hydrants, fire lanes throughout the site, and emergency access at all entry points to the property. In addition, buildings proposed on the southwestern portion of the site (which are closer to areas near San Juan Creek that could be subject to wildfires) would include automatic sprinkler systems and would comply with Section R337 of the CCR to further minimize impacts related to fires. As such, the proposed project would be designed to comply with all Fire Department access requirements and California Fire Code requirements. Therefore, construction and operation of the proposed project would not impair emergency response vehicles or increase response times, and would not substantially increase calls for service, thereby triggering the need for new or altered facilities. Therefore, this issue is not evaluated further in this Draft EIR.

The City contracts with the Orange County Sheriff's Department (OCSD) for police protection services. In total, 28 OCSD personnel are assigned to the City, including one lieutenant, four sergeants, two investigators, and 21 sheriff's deputies.[1] The City's staffing level is based on response times and crime rates. At the present time, OCSD maintains a staffing ratio of approximately one sworn officer for every 1,300 residents in the City.[2] When considered with the existing population, the project-related population increase would have a negligible impact on the OCSD's ratio of police officers per 1,300 residents.[3] As such, the proposed project would not trigger the need for expanded police services or for new or altered police facilities. Therefore, this issue is not evaluated further in this Draft EIR.

The provision of education and school facilities in the City is the responsibility of the Capistrano Unified School District (CUSD). Based on CUSD generation rates for single-family and multi-family residential units, the total number of students generated by the proposed development would be 48 new students.[4] Pursuant to California Education Code Section 17620(a)(1), the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of school facilities. The Project Applicant would be required to pay such fees to reduce any impacts of new development on school services as provided in Section 65995 of the California Government Code. Pursuant to the provisions of Government Code Section 65996, a project's impact on school facilities is fully mitigated through payment of the requisite school facility development fees current at the time a building permit is issued. The current Development Impact Fee for commercial projects within the CUSD's jurisdictional boundaries is $3.79 per square foot.[5] With payment of the required fees, potential impacts to school services and facilities associated with implementation of the proposed project would be less than significant. Therefore, this issue is not evaluated further in this Draft EIR.

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1 City of San Juan Capistrano. 2017. *Mitigated Negative Declaration and Initial Study for the Church of Jesus Christ Latter Day Saints Meetinghouse Project*. September 2017.

2 28 officers / 36,064 (2017 population) = approximately 1 officer per 1,300 persons.

3 2018 population of 36,759 + 410 persons = 31,759. 31,759/1,300=28.6 officers.

4 Capistrano Unified School District, Residential and Commercial/Industrial Fee Study. 2017–2018.

5 Ibid.

According to the Parks and Recreation Element of the City's General Plan (2002), the City maintains approximately 193 acres of parks and recreational uses. Currently, the City has an established standard of 5 acres of park space per 1,000 residents. Although the proposed project would include the development of housing, which would create an additional demand for park facilities, the proposed project also includes the development of recreation areas along the multi-purpose trail that would satisfy a portion of the total required parkland dedication that, in combination with in-lieu park fees, would satisfy the requirements for provision of parks. Therefore, the dedicated recreation areas in combination with payment of in lieu fees provided by the proposed project would meet any increase in parks required by the proposed project's increase in population and would ensure that existing parks would not be physically altered or degraded as a result of project implementation. Therefore, this issue is not evaluated further in this Draft EIR.

The Orange County Public Library (OCPL) system provides library services to the County, including the City, and includes 33 branches. The only OCPL system branch in the City is the San Juan Capistrano Regional Library located at 31495 El Camino Real.[1] The City's General Plan determines the adequacy of library services according to a ratio of the resident population to the total library floor area and collection size, using the standards of 0.2 sf of library space per capita and 1.5 books per capita.[2] Using this standard and the estimated project-related increase of 410 persons, the San Juan Capistrano Regional Library would need to be 7,434 sf in size with 55,753 books. Although the San Juan Capistrano Regional Library exceeds the standard for size with a 12,000 sf facility, the library would need an additional 9,056 books to meet the projected demand for library books. The San Juan Capistrano Library reduced the total amount of hardcopy library materials from 80,000 to 45,789 between 2014 and 2017 in an effort to eliminate outdated materials and replace select volumes with electronic copies. Due to the accessibility of online materials via the 23 public computers at the library, the replacement of the hardcopy materials with electronic copies is not considered a loss of library volumes. In addition, authorized by Government Code Section 66001(e), the Orange County Board of Supervisors adopted Resolution No. 13-062 with respect to the Development Fee program for Branch Libraries, stating that those facilities have been constructed and the fee program is no longer needed. As such, the proposed project's increase in demand on library services is incremental and would not necessitate the need for expanded library facilities, the development of which could cause a physical adverse environmental impact with respect to libraries. Therefore, this issue is not evaluated further in this Draft EIR.

2.5.6 Recreation

As stated above in Section 2.5.5, Public Services, with the provision of the on-site recreation areas and the payment of in-lieu park fees, impacts to recreation requirements would be less than significant. In addition, the proposed project would not increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial deterioration of the facilities would occur or be accelerated. The construction or expansion of off-site recreational facilities would not occur as the project is providing on-site recreational amenities. Therefore, this issue is not evaluated further in this Draft EIR.

1 City of San Juan Capistrano. 1999. General Plan Public Services & Utilities Element.
2 Ibid.

2.5.7 Utilities and Service Systems

Project impacts related to construction or expansion of wastewater treatment facilities or storm drainage facilities would be less than significant as the proposed project would not necessitate new or expanded water entitlements, and the City would be able to accommodate the increased demand for potable water. Additionally, although the operation of the proposed project may result in increased wastewater flows, these flows can be accommodated within the existing design capacity of the existing wastewater treatment facilities and would not result in the wastewater treatment facilities exceeding the wastewater treatment requirements established by the San Diego Regional Water Quality Control Board (RWQCB). As part of the project, storm drains would be installed throughout the center of the project site. An existing swale running along I-5 would convey runoff from the westerly portions of the project site to the existing 27-inch stormdrain pipe, which would eventually be conveyed into San Juan Creek. All on-site runoff from the easterly portions of the proposed development would be conveyed to a Modular Wetlands System (a stormwater biofiltration system proposed at various locations on the project site) prior to converging into the El Horno Creek Channel. Receiving waters have sufficient capacity to accommodate the project's increase in runoff, and the project would not exceed the capacity of downstream storm drain lines. The San Diego Gas and Electric Company (SDG&E) would supply electricity and natural gas to the project site. Although impacts with respect to energy resources are evaluated as part of this Draft EIR (refer to Section 4.5, Energy), implementation of the proposed project is not anticipated to result in impacts related to the construction or relocation of existing electric power or natural gas facilities. Specifically, because the project-related demand for electricity and natural gas is anticipated to be typical of existing residential users in SDG&E's territory, the project itself is not anticipated to result in an increased demand for electric power or natural gas that would require new electric facilities to serve the site. The primary cable and telephone service providers available to residents within the project's vicinity (and, more generally, within San Juan Capistrano) are AT&T and Cox Communications. The project-related increase of 410 people would not generate a significant increase in the demand for telecommunication services such that the project would necessitate the need for new telecommunications facilities. As such, any project-related impacts to telecommunications facilities would be negligible and would not cause significant environmental impacts. The proposed project would require the construction of new connections to the site for water, wastewater, storm water drainage, electricity, and telecommunications lines. However, for the reasons discussed above, the relocation and construction of these facilities would not result in significant environmental impacts. Therefore, impacts to these utility facilities would be less than significant. Lastly, as the proposed project would comply with federal, state, and local statues and regulations related to solid wastes and would be served by a landfill with sufficient capacity to accommodate the project's solid waste disposal needs, there would be a less than significant impact on utilities and service systems. Therefore, these issues are not evaluated further in this Draft EIR.

2.5.8 Wildfire

According to the City's General Plan Safety Element (1999), the project site is not located in an area identified as a Wildland Fire Area that may contain substantial fire risk or a Very High Fire Hazard Severity Zone (VHFHSZ). In addition, according to the California Department of Forestry and Fire

Protection (CAL FIRE), the project site is not located in a fire hazard area.[1] Although the eastern portion of the project site is located within a fuel modification zone, with the adoption of a Fuel Modification Plan to be approved by the Orange County Fire Authority (OCFA), the proposed project would not expose people or structures to the significant risk involving wildfires. Therefore, this issue is not evaluated further in this Draft EIR.

2.6 FORMAT OF THE EIR

Pursuant to *State CEQA Guidelines*, Section 15120(c), this Draft EIR contains the information and analysis required by Sections 15122 through 15131 of the *State CEQA Guidelines*. Each of the required elements is covered in one of the Draft EIR chapters described below.

2.6.1 Chapter 1.0: Executive Summary

Chapter 1.0 contains the Executive Summary of the Draft EIR, listing all significant project impacts, mitigation measures that have been recommended to reduce any significant impacts of the proposed project, and the level of significance of each impact following mitigation. The summary is presented in a table format.

2.6.2 Chapter 2.0: Introduction

Chapter 2.0 contains a discussion of the purpose and intended use of the Draft EIR.

2.6.3 Chapter 3.0: Project Description

Chapter 3.0 includes discussion of the proposed project's geographical setting; the project site's previous uses; and the proposed project's goals, objectives, characteristics, components, construction phasing, and anticipated discretionary actions and permits for the project.

2.6.4 Chapter 4.0: Environmental Analysis, Impacts, and Mitigation Measures

Chapter 4.0 includes an analysis of the proposed project's environmental impacts. It is organized into the following topical sections (Sections 4.1 through 4.12): aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, land use and planning, noise, transportation, and tribal cultural resources. The environmental setting discussions describe the "existing conditions" of the environment in the planning area and in the vicinity of the site as they pertain to the environmental issues being analyzed (Section 15125 of the *State CEQA Guidelines*).

The project impact discussions identify and focus on the significant environmental effects of the proposed project. The direct and indirect significant effects of the proposed project on the environment are identified and described, giving due consideration to both the short-term and long-term effects, as necessary (Section 15126.2[a] of the *State CEQA Guidelines*).

[1] California Department of Forestry & Fire Protection (CAL FIRE). 2011. Orange County Fire Hazard Severity Zones. October. Website: http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/orange/c30_SanJuanCapistrano_vhfhsz.pdf (accessed December 4, 2018).

Chapter 4.0 also includes a discussion of the cumulative effects of the proposed project within the analysis of each environmental topic. As defined in Section 15130 of the *State CEQA Guidelines,* cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area. Cumulative impacts are based on the build out of the project and are discussed relative to the cumulative study area as identified for each environmental topic.

The discussions of mitigation measures identify and describe feasible measures that could minimize or lessen significant adverse impacts for each significant environmental effect identified in the Draft EIR (Section 15126.4 of the *State CEQA Guidelines*). The levels of significance before and after mitigation are provided. Unavoidable adverse effects are identified where mitigation is not expected to reduce the effects to less than significant levels.

2.6.5 Chapter 5.0: Alternatives to the Proposed Project

In accordance with *State CEQA Guidelines* Section 15126.6, the alternatives discussion in Section 5.0 describes a reasonable range of alternatives that could feasibly attain the basic objectives of the proposed project and that are capable of eliminating or reducing any significant adverse environmental effects.

2.6.6 Chapter 6.0: Other CEQA Considerations

Chapter 6.0 includes CEQA-mandated discussions on the following topics as required by Section 15126 of the *State CEQA Guidelines*: (1) significant irreversible environmental changes that would result from implementation of the proposed project; (2) significant adverse environmental impacts for which either no mitigation or only partial mitigation is feasible, and (3) growth-inducing impacts of the proposed project.

2.6.7 Chapter 7.0: Mitigation Monitoring and Reporting Program

PRC Section 21081.6 requires that agencies adopt a mitigation monitoring and reporting program for any project for which findings have been made pursuant to PRC Section 21081. Chapter 7.0 provides a list of all proposed project mitigation measures, defines the party responsible for implementation of those measures, and identifies the timing for implementation of each measure.

2.6.8 Chapter 8.0: List of Preparers and Persons Consulted

Chapter 8.0 provides a list of the Draft EIR preparers, technical report authors, and other experts included in the preparation of the Draft EIR and the organizations and persons consulted during preparation of the Draft EIR.

2.6.9 Chapter 9.0: References

Chapter 9.0 provides the references used in this Draft EIR.

2.7 INCORPORATION BY REFERENCE

As permitted in Section 15150 of the *State CEQA Guidelines*, an EIR may reference all or portions of another document that is a matter of public record or is generally available to the public. Information from the documents that have been incorporated by reference has been briefly summarized in the appropriate sections of this Draft EIR, along with a description of how the public may obtain and review these documents. These documents include:

- City of San Juan Capistrano General Plan Elements (as amended) (available online at: http://sanjuancapistrano.org/Departments/Development-Services/Planning-Zoning/General-Plan)

- City of San Juan Capistrano Municipal Code and other titles referenced herein (available online at: http://www.qcode.us/codes/sanjuancapistrano/)

3.0 PROJECT DESCRIPTION

This Draft Environmental Impact Report (EIR) has been prepared to evaluate the environmental impacts that may result from implementation of the proposed Tirador Residential Development Project (proposed project). As Lead Agency, the City of San Juan Capistrano (City) has the authority for preparation of this Draft EIR and, after the comment/response process, certification of the Final EIR and approval of the proposed project as described in this Draft EIR. The City and Responsible Agencies have the authority to make decisions on discretionary actions related to the approval of the proposed project. This Draft EIR is intended to serve as an informational document to be considered by the City and the Responsible Agencies during deliberations on the proposed project. This Draft EIR evaluates for a reasonable worst-case scenario of potential environmental impacts associated with the proposed project and provides mitigation where necessary.

3.1 PROJECT OVERVIEW

Watt Companies (the Project Applicant) proposes to construct a 132-unit residential development consisting of 43 two-story detached single-family units and 89 three-story attached townhome units. Amenities provided throughout the residential development would include a gathering area with barbeques, seating, a shade structure, an open play turf area, a tot lot, play equipment, a dog waste station, trash receptacles, and a multi-purpose pedestrian, bicycle, and equestrian trail with additional amenities.

3.2 EXISTING CONDITIONS

3.2.1 Regional Project Location

The proposed project is located on an approximately 16.1-acre site in the City of San Juan Capistrano, which itself is located in southern Orange County, California. The City encompasses approximately 14 square miles of land (approximately 8,960 acres) within the County. The City is bounded by the adjacent Cities of Mission Viejo and Laguna Niguel to the north, the Cities of Laguna Niguel and Dana Point to the west, and the City of San Clemente to the south, as well as unincorporated Orange County land to the east.

As shown on Figure 3.1, Regional Project Location (all figures follow at the end of this chapter), regional access to the project site is provided by Interstate 5 (I-5), State Route 73 (SR-73), State Route 74 (SR-74, also known as Ortega Highway), and Pacific Coast Highway (PCH, also known as State Route 1). The I-5 freeway bisects the central portion of the City in a north-south direction and is directly adjacent to the west of the project site; SR-73 extends in an east-west direction in the northern portion of the City and is located approximately 3.2 miles northwest of the project site; Ortega Highway extends in an east-west direction approximately 0.2 mile north of the project site; and PCH extends in a north-south direction and is approximately 2.8 miles south of the project site.

3.2.2 Project Vicinity and Surrounding Land Uses

The project site is comprised of the following Assessor's Parcel Numbers (APNs): 666-131-07, -08,[1] -09, -13, -14, -15, and -16. The project site is bordered on the north by Calle Arroyo, with commercial and institutional uses located beyond. El Horno Creek (a tributary of San Juan Creek) and San Juan Creek are adjacent to the south of the project site; a portion of the San Juan Creek Trail is located along the southern portion of the project site. The San Juan Hills Golf Club and multi-family residential developments are located further south of the project site. Paseo Tirador is located along a portion of the eastern boundary of the project site, with the Ortega Equestrian Center located further east. The I-5 freeway forms the western boundary of the project site with the Del Obispo Shopping Center located beyond. A detailed project vicinity map is shown on Figure 3.2, Project Vicinity.

3.2.3 Existing Project Site

The project site is located on the south side of Calle Arroyo, adjacent to a 24 Hour Fitness facility located directly northwest of the site. The project site is irregular in shape and is currently undeveloped and vacant. As such, the existing project site is primarily characterized by dirt and scattered ruderal vegetation and is relatively flat with a slight slope to the east/southeast. The eastern portion of the project site, which is the lowest topographic area on site, is adjacent to San Juan Creek and El Horno Creek and associated trails and vegetation. In addition, there are two existing wells located on the project site. The City-owned parcel, APN 666-131-08, contains an active well that will remain in use upon project implementation. The City-owned well includes a parking area that is typically used by visitors to the creek and trail area. A privately owned, inactive well is located on APN 666-131-13 and will remain inactive upon project implementation. The private well is currently owned by Capistrano Acres Mutual Water Company (CAMWC).

In its existing condition, access to the northwestern portion of the site is restricted due to the presence of a chain-link fence along the perimeter. However, the San Juan Creek Trail is publicly accessible; the trail begins at the intersection of Calle Arroyo and Paseo Tirador, traverses the project site in a southwest direction, and terminates at the Pacific Ocean in the City of Dana Point. Refer to Figure 3.3, Existing Site Photos, for current photographs of the project site.

3.2.4 Existing General Plan and Zoning

As shown on Figure 3.4, Existing Land Use Map, the project site has a General Plan land use designation of Planned Community. According to the City's General Plan Land Use Element (1999, Revised September 2014), the Planned Community land use designation denotes large areas of land under common ownership for the detailed planning and development of residential, commercial, industrial, institutional, recreational, or open space uses. There are also small portions of the project site designated as General Open Space and Community Park. The land uses proposed by the project are consistent with the land use designations.

[1] APN 666-131-08 is owned by the City of San Juan Capistrano.

Existing land uses surrounding the project site include office, commercial, and religious uses in the Ventanas Business Center to the north; Assisted Care Facilities and the Ortega Equestrian Center to the northeast and east; General Open Space and Open Space Recreational to the south and southeast; and General Commercial to the west (across I-5).

As shown on Figure 3.5, Existing Zoning Map, the project site is zoned as a Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP 78-01). The purpose of the Planned Community zone is to encourage the use of modern land planning and design techniques to create developments integrating a mixture of different types of land uses.

Existing zoning classifications surrounding the project site include Planned Community District (CDP 78-01) to the north and northeast (same zoning classification as the project site), Public and Institutional District and Office Commercial District to the south, General Open Space and Open Space Recreational to the south and southeast, and General Commercial to the west (across I-5).

No General Plan Amendment (GPA) or zoning changes would be required to implement the proposed project. The project site's land use designations and zoning classifications are discussed further in Section 4.9, Land Use and Planning, of this EIR.

3.2.5 Project History and Background

On May 6, 2008, the San Juan Capistrano City Council adopted a resolution that certified the Final EIR and approved preliminary development plans for the proposed Ventanas Business Center for a 19.43-acre property that included the subject project site. The Ventanas Business Center project consisted of 11 proposed buildings totaling 225,000 gross square feet (sf). Following the approval of the Ventanas Business Center project, the City identified the subject property site as being suitable for high-density housing, and for inclusion in the City's 2014–2021 Housing Element (Adopted January 21, 2014, Revised September 19, 2017) as a site that could accommodate affordable housing (230 very-low-income units).

In January 2014, the City adopted a Mitigated Negative Declaration (MND) and approved a GPA, a Code Amendment to CDP 78-01, and a Rezone to change the zoning of the subject property to allow for Very High Density residential development (18.1–30.0 dwelling units per acre [du/ac]) as part of Planning Sector B-3 of CDP 78-01. In conjunction with the GPA, the site was identified in the City's Housing Element (Revised 2017) as a site that could accommodate 230 very-low-income housing units.

In September 2016, the City Planning Commission approved an Addendum to the Final EIR for the Ventanas Business Center and approved a health club facility (24 Hour Fitness) on a 2.65-acre portion of the previous Ventanas Business Center project site. The health club facility project consisted of a two-story building totaling 38,000 sf of floor area and associated parking. The 24 Hour Fitness has been constructed and is currently in operation.

3.3 PROPOSED PROJECT

As shown on Figure 3.6, Conceptual Site Plan, the proposed project includes the construction of a 132-unit residential development consisting of 43 two-story detached single-family units (ranging from 1,720 to 1,890 sf) and 89 three-story attached townhome units (ranging from 1,250 to 1,850 sf). Each unit would include a private driveway and a two-car garage. Figure 3.7, Floor Plans: Single Family Homes, and Figure 3.8, Floor Plans: Townhomes, show the proposed floor plan details for each type of residence.

As shown in Table 3.A, below, a total of 229,591 sf of residential building area is proposed on the project site.

Table 3.A: Proposed Residential Uses

Floor Plan	Description	Gross Area per Unit	Proposed Number of Units	Total Gross Area
Single-Family Units				
Floor Plan P1	3 bd/2.5 bath	1,720 sf per unit	7 units	12,040 sf
Floor Plan P1-CAL	3 bd/2.5 bath	1,745 sf per unit	8 units	13,960 sf
Floor Plan P2	4 bd/2.5 bath	1,751 sf per unit	7 units	12,257 sf
Floor Plan P2-CAL	4 bd/2.5 bath	1,757 sf per unit	7 units	12,299 sf
Floor Plan P3	4 bd/2.5 bath	1,890 sf per unit	7 units	13,230 sf
Floor Plan P3-CAL	4 bd/2.5 bath	1,850 sf per unit	7 units	12,950 sf
		Total Single-Family Units	***43 units***	***76,736 sf***
Townhomes				
Floor Plan 1[1]	2 bd & den/2.5 bath	1,250 sf per unit	14 units	17,500 sf
Floor Plan 2	3 bd & den/3.5 bath	1,755 sf per unit	33 units	57,915 sf
Floor Plan 3	3 bd & den/3.5 bath	1,830 sf per unit	13 units	23,790 sf
Floor Plan 3E	3 bd & den/3.5 bath	1,850 sf per unit	29 units	53,650 sf
		Total Townhomes	***89 units***	***152,855 sf***
		Total Proposed Residential	**132 units**	**229,591 sf**

Source: Project Information (Withee Malcolm Architects, LLP, November 13, 2018).
[1] Floor Plan 1 townhome units would be affordable units.
bd = bedrooms
sf = square foot/feet

The project site would be divided by unit type, with single-family units and townhomes constructed on the eastern and western portions of the site, respectively. The residential density of the proposed project would total 8.2 du/ac, which is substantially lower than the maximum density of 30.0 du/ac allowed on the site under CDP 78-01. In addition, the proposed lot coverage would total 13 percent of the site, which is substantially lower than the maximum lot coverage of 35 percent allowed under CDP 78-01.

In total, 14 of the townhomes, or approximately 10.6 percent of the total units, would be designated affordable units and restricted to households of moderate income. Affordable units would be 1,250 sf in size and would contain 2 bedrooms, a den, and 2.5 bathrooms.

Amenities provided throughout the residential development include a gathering area with barbeques, seating, and a shade structure, an open play turf area, a tot lot, play equipment, a dog waste station, and trash receptacles.

As part of the project, a 20-foot (ft)-wide multi-purpose pedestrian, bicycle, and equestrian trail would be constructed along the project site's southern boundary; the pedestrian/bicycle and equestrian portions of the trail would each be approximately 10 ft wide and separated by wooden fencing. Amenities proposed along the multi-purpose trail include a gathering area with barbeques, seating, a shade structure, a climbing boulder, a wishing well, an open play turf area with benches, an equestrian hitching post, exercise stations, bicycle racks, drinking fountains, and trash receptacles.

3.3.1 Building Design

As stated above, the project would involve construction of a 132-unit residential development consisting of 43 two-story detached single-family units and 89 three-story attached townhome units, parking, a multi-purpose trail, and amenities. Figure 3.9, Building Elevations: Single Family Homes, and Figure 3.10, Building Elevations: Townhomes, show the details of the proposed building elevations for both types of residences. The project would be designed with Spanish- and Farmhouse-style architectural influences. However, both designs would be visually compatible and would feature contemporary architectural elements, multi-level rooflines, and a complementary color scheme.

As shown, the Spanish-style and Farmhouse-style single-family units would be a maximum of 25 ft and 28.5 ft in height, respectively. The Spanish-style units would feature tile roofs and accents, wrought-iron window planters, painted exteriors, steel garage doors, and a cement plaster exterior finish. The Farmhouse-style units would feature asphalt shingle roofing, wooden window planters and trim, horizontal siding, steel garage doors, and a cement plaster exterior finish.

The townhomes would incorporate similar design features as those described above. As shown on Figure 3.10, the proposed townhomes would be designed with contemporary architectural elements, multi-level rooflines, and a complementary color scheme. The Spanish-style and Farmhouse-style townhomes would be a maximum of 35 ft and 40 ft in height, respectively, and would be situated in rows of three, four, five, and six units. Heating, ventilation, and air conditioning (HVAC) equipment would be installed on the roofs of the buildings and would be screened or shielded from view. Distances between buildings would range from 15 to 29 ft.

3.3.2 Landscaping and Fencing

As illustrated on Figure 3.11, Conceptual Landscape Plan, the project would incorporate ornamental landscaping along Calle Arroyo and Paseo Tirador, along the site's boundary shared with 24 Hour Fitness, and along the site's southern boundary. The project would also include decorative landscaping and monument signage near the three access points to demarcate these areas as entrance points to the property. A variety of 24- and 36-inch box trees, shrubbery, and groundcover would be provided throughout the project site. Additionally, the project would include two open play turf areas. Landscaping proposed along the internal access roads, the perimeter of the site, at

entry monuments, and along the multi-purpose trail would serve to establish the character of the project site.

Section 9-3.301, Residential Districts, of the City's Municipal Code, stipulates that residential developments include a minimum of 200 sf of common open space per unit. The project would provide 44,131 sf of common recreational open space, which is substantially greater than the 26,400 sf of open space required by the Municipal Code.

Currently, recycled water service is unavailable at the project site; however, in conjunction with project implementation, a public recycled water line would be installed off site in the Calle Arroyo roadway right-of-way alongside existing water and sanitary sewer lines and would allow recycled water service to be extended to the project site. As part of the project, private recycled water lines would be installed on the site and would provide irrigation to common landscaped areas.

Landscape water conservation features would include the use of smart controllers (including solar and rain sensors to turn off irrigation in instances of rain and flow sensors and master valves to turn off irrigation in instances of line failure), a drip irrigation system, and a 3-inch layer of mulch to regulate soil temperature.

Figure 3.12, Conceptual Wall and Fence Plan, shows the details of these project features. The project would include a block wall that would be 5.5 ft in height to separate the residential development from the 24 Hour Fitness facility and to visually screen the private rear yards from Calle Arroyo and Paseo Tirador. Single-family units in the interior of the site would include vinyl privacy fences (also 5.5 ft in height) around the perimeter of rear private yards. Townhomes would include courtyard walls 3.5 ft in height around the perimeter of rear yards. As stated above, a 3.5 ft wooden two-rail fence would separate the pedestrian/bicycle and equestrian portions of the multi-purpose trail. A soundwall ranging from approximately 6 to 14 ft in height would be located along the project site's western boundary in order to screen the residential development from the I-5 freeway noise.

3.3.3 Access and Parking

Access to the project site would be provided via three driveways on Calle Arroyo. One fire department access point would connect to the 24 Hour Fitness parking lot; this access point would be used for emergency access only and secured with a gate. Paseo Tirador, an existing street within the project site, would be extended to the southwesternmost portion of the site and would be utilized as the main street serving the development. The City has vacated Paseo Tirador, and it will become a private road as part of the proposed development. Multiple roads providing access to individual units would connect to Paseo Tirador and, in some cases, Calle Arroyo.

As part of the project, a multi-purpose pedestrian, equestrian, and bicycle trail would be constructed along the project site's southern boundary. The multi-purpose trail would connect to the existing sidewalk along Calle Arroyo directly east of the project site, traverse along the site's southern boundary, and connect to the existing San Juan Creek Trail southwest of the site.

As shown in Table 3.B, the proposed project would be consistent with the City's parking requirements (refer to Section 9-3.535, Parking, in the City's Municipal Code).

Table 3.B: Project Parking

Use	Size	City's Minimum Parking Requirements	Required Number of Parking Spaces	Proposed Number of Parking Spaces	Surplus/ (deficit)
Single-Family Residential	43 units	2 covered spaces per unit (43 units x 2 spaces)	86	86	0
		0.8 guest space per unit (43 units x 0.8 space)	34	53	19
Single-Family Residential Parking			**120**	**139**	**19**
Multi-Family Residential	89 units	2 covered spaces per unit (89 units x 2 spaces)	178	178	0
		0.8 guest space per unit (89 units x 0.8 space)	71	72	1
Multi-Family Residential Parking			**249**	**250**	**1**
Total Residential Parking			***369***	***389***	***20***

Sources: Parking Summary Exhibit (IBI Group, March 2018) and Section 9-3.535, Parking (City of San Juan Capistrano Municipal Code).

The proposed project would require a minimum of 369 parking spaces, including 120 single-family unit spaces and 249 townhome spaces. As shown in Table 3.B, the project would provide a total of 389 on-site parking spaces, including 139 single-family unit spaces and 250 townhome spaces. Five guest spaces would be Americans with Disabilities Act (ADA) accessible, including one van-accessible space and four standard spaces. To comply with the 2019 California Green Building Standards Code (CALGreen Code), 8 of the 72 multi-family guest stalls would be capable of supporting future electric vehicle connections. The project would satisfy the City's parking requirements and would provide a surplus of 20 parking spaces on the project site. Therefore, adequate parking would be provided for the project site.

Project approval will be subject to a Lot Line Adjustment and an Agreement Affecting Real Property (AARP) with the City for an area that is proposed for parking and landscape purposes. As a result, visitor parking spaces near the City-owned and operable well would become part of the project site, and the well would remain on the City-owned parcel. Figure 3.13, AARP Land Exhibit, shows the portion of the project site owned by the City.

As stated previously, an inactive well owned by CAMWC is located on APN 666-131-13 and will remain inactive upon project implementation. As part of the project, easements would be established to serve the existing well. Figure 3.14 shows the proposed easement location.

3.3.4 Public Transit

Transit service is provided within the project vicinity by the Orange County Transportation Authority (OCTA). Specifically, OCTA runs Route 91 within the project vicinity, originating in Laguna Hills at the Laguna Hills Mall and ending in San Clemente at the Metrolink Station. An OCTA bus stop is provided

approximately 1 mile west of I-5 on Camino Capistrano north of Ortega Highway. OCTA Route 91 provides transportation to/from the Laguna Hills Transportation Center and the San Clemente Metrolink Station with a stop at the San Juan Capistrano Train Depot. This stop can be accessed by foot or by bicycle from the project site along the San Juan Creek Trail and Camino Capistrano.

In addition, Amtrak and Metrolink provide service in close proximity to the project site. Specifically, Amtrak's Pacific Surfliner and Metrolink's Inland Empire-Orange County and Orange County lines run along railroad tracks, with a station located approximately 1.2 miles west of the project site at 26701 Verdugo Street.

3.3.5 Lighting

Currently, there is no existing lighting on the project site. Existing lighting adjacent to the project site is limited to one streetlight at the end of Calle Arroyo and parking lot/security lighting associated with the adjacent 24 Hour Fitness facility. Outdoor lighting included as part of future development on the project site would be typical of residential uses (e.g., wall-mounted lighting, pole-mounted streetlights, and security lighting along pathways). Accent lights would also be incorporated to highlight landscape focal points and directional monument signs. All outdoor lighting would be directed downward and shielded to minimize or eliminate off-site spill. Additionally, the location of all exterior lighting would comply with lighting standards established in Section 9-3-529 of the City's Municipal Code. Figure 3.15, Photometric Plan, shows the details of the project's lighting plan.

3.3.6 General Plan and Zoning

As stated previously, the majority of the project site has a General Plan land use designation of Planned Community. Additionally, the southernmost and easternmost portions of the project site are designated as General Open Space and Community Park, respectively. The land uses proposed by the project are consistent with the land use designations. Therefore, the proposed project would not require a GPA.

The project site is identified in the City's General Plan 2014–2021 Housing Element (Revised 2017) as accommodating 230 very-low-income units. The proposed project includes 118 market- rate units and 14 moderate-income affordable units on the site. As such, the project would result in 216 fewer affordable housing units for the site than identified in the City's Housing Element. Senate Bill (SB) 166, which went into effect on January 1, 2018, requires a local jurisdiction to ensure that its Housing Element inventory can accommodate at all times its remaining unmet Regional Housing Needs Assessment (RHNA). At no time during the 2014–2021 Housing Element planning period shall a local jurisdiction permit or cause its inventory of sites to be insufficient to meet its remaining unmet share of the RHNA for lower- or moderate-income households. Therefore, to ensure compliance with SB 166, the City has identified an alternative site that includes 9.3 acres designated as Very High Density Residential Land Use. This site, identified as APN 121-070-57, is entitled to be developed at a density of 30 dwelling units per acre, or 279 units. The 219 units, which are no longer able to be accommodated with the proposed development on the project site, can be accommodated on this alternative site. The City will notify the State Department of Housing and Community Development regarding the alternative site identified to accommodate the replacement housing should the proposed project be approved.

As mentioned previously, the project site is governed by the land use provisions of the Municipal Code and by CDP 78-01. Because the project will include residential units restricted to households of moderate income, the Project Applicant is permitted to request one development incentive or concession. The proposed project would utilize a concession to allow the second-story floor area to exceed 80 percent of the first-story floor area. The Project Applicant is also requesting waivers to the Municipal Code and CDP 78-01 Development Standards for the items below.

1. Allow a 0 ft setback from the property line between the project site and APN 666-131-08, where the City of San Juan Capistrano water well is located, and a 10 ft setback from the property line between the site and the property immediately adjacent to the north;

2. Allow the minimum distance between buildings to be less than 20 ft (8 ft); and

3. Exempt the project from providing recreational vehicle parking spaces.

3.3.7 Construction Duration, Phasing, and Grading

Figure 3.16, Conceptual Grading Plan, shows the details of project grading. Construction activities of the proposed project would include the grading and excavation of the site; construction of the building area; and installation of landscaping on the project site. Construction of the proposed project is anticipated to be completed within a period of approximately 20 months, as described below. Land development, which would include grading, utility relocation, and installation, construction of retaining walls, and street improvements, would occur in approximately 195 days. Building production would occur in approximately 280 days and would consist of four phases (model construction would occur during the first phase). The first phase of single-family units has an anticipated completion date of March 2022, while the first phase of townhomes has an anticipated completion date of May 2022.

Construction of the proposed project would require a net import of approximately 17,950 cubic yards (cy) of material. Grading and building activities would involve the use of standard earthmoving equipment such as loaders, bulldozers, cranes, and other related equipment. All heavy-duty equipment and other construction equipment would be staged on the project site.

3.3.8 Infrastructure to Serve the Project Site

The project site receives domestic water service, sewer service, and storm drain service from the City of San Juan Capistrano Utilities Department. Figure 3.17, Conceptual Utility Plan, shows the details of the infrastructure plan. The following infrastructure improvements are proposed as part of the project:

- **Water:** The project site currently receives domestic water service from the City of San Juan Capistrano Utilities Department. However, the City is currently in the process of transferring citywide water services to the Santa Margarita Water District (SMWD). Barring unforeseen difficulties or setbacks, and dependent on the preparation and approval of all necessary and related agreements, the transfer of water services to SMWD is expected to be completed by the Fall of 2020.

The project would include the installation of a new 4-inch private water line along Paseo Tirador and other internal roads, which would connect to an existing 16-inch public water line on Calle Arroyo north of the project site. In addition, the project would replace an existing 12-inch public water line with a new 16-inch public water line adjacent to the I-5 freeway at the project site's western boundary. The proposed 4-inch private water line would connect to the proposed 16-inch public water line. Existing water lines are transmission lines and must be relocated or protected in place, allowing access for future repair and replacement by the City. Private water lines proposed as part of the project would connect to main lines using a meter and backflow device.

- **Recycled Water:** The project site is not currently served by recycled water. However, in conjunction with project implementation, a public recycled water line would be installed off site in the Calle Arroyo roadway right-of-way alongside existing water and sanitary sewer lines. The 6-inch recycled water line would connect to an existing 6-inch line at the intersection of Calle Arroyo and Rancho Viejo Road and connect to the project site at the intersection of Calle Arroyo and Paseo Tirador. As part of the project, private recycled water lines would be installed on the site and connect to the proposed 6-inch line at Calle Arroyo and Paseo Tirador. Private recycled water would irrigate common landscaped areas on the project site.

- **Well Water:** The City owns a private well directly adjacent to the project site. As part of the project, a new 8-inch well line would be installed between the residential development and the creek area; it would begin at the existing 8-inch well line at the water well and connect to an existing 8-inch well line adjacent to the I-5 freeway at the project site's western boundary. The City's well, which would not serve the project, would continue to operate after project implementation..

- **Sewer Service:** The project site currently receives domestic wastewater service from the City of San Juan Capistrano Utilities Department. However, the City is currently in the process of transferring citywide wastewater services to the SMWD. Barring unforeseen difficulties or setbacks, and dependent on the preparation and approval of all necessary and related agreements, the transfer of wastewater services to SMWD is expected to be completed by the Fall of 2020.

  As part of the project, an 8-inch sanitary sewer line would be installed within all internal roads serving the residential uses and connect to an existing 15- to 18-inch sanitary sewer line within Paseo Tirador. Laterals are private and sized per the City's Municipal Code. In addition, the project would involve upsizing an existing 15-inch public sanitary sewer line to an 18-inch line adjacent to the I-5 freeway at the project site's western boundary. All proposed sewer connections and junctures of sewer lines would require a manhole or drop manhole.

- **Storm Drains:** Stormwater runoff from the project site currently outflows to San Juan Creek via an existing 27-inch stormdrain pipe at the southwestern corner of the project site, and the Horno Creek Channel at the southeastern side of the project site. As part of the project, storm drains would be installed throughout the center of the project site. All on-site runoff from the westerly portions of the project site would flow from catch basins to a subsurface water quality

detention facility, located adjacent to I-5 within an open space area, to the existing 27-inch stormdrain pipe. Additionally, an existing swale running along the I-5 freeway would convey runoff from the westerly portions of the project site to the existing 27-inch stormdrain pipe, which would eventually be conveyed into San Juan Creek. All on-site runoff from the easterly portions of the proposed development would be conveyed to a Modular Wetlands System, which is a stormwater biofiltration system proposed at various locations on the project site, prior to converging into Horno Creek Channel.

3.3.9 Conservation and Sustainability Features

Future development facilitated by project approval would be consistent with the CALGreen Code and would include the following sustainability features:

- Installation of "purple pipes" to allow the use of private recycled water for irrigation of common landscaped areas on the project site
- Installation of energy-efficient lighting technologies
- Installation of "smart" weather-based irrigation controllers
- Exclusion of landscape materials that are listed on the Invasive Plant Inventory of the California Invasive Plant Council
- Inclusion of California or Mediterranean Species requiring minimal watering
- Utilization of drip irrigation for all non-turf areas

As part of the project, approximately 5.6 acres of the project site adjacent to San Juan Creek would be dedicated as a conservation area. This land would be conserved in perpetuity.

3.3.10 Project Objectives

The City and the Project Applicant have established the following intended specific objectives, which would aid decision-makers in their review of the project and its associated environmental impacts:

1. Develop a residential development to increase the City's market-rate and affordable housing stock.
2. Develop a project that balances the development potential of the project site with environmental considerations.
3. Revitalize the vacant site with a well-designed and landscaped residential project that is compatible with the surrounding community.
4. Increase the City's tax base by generating revenue for the City through property taxes.

5. Provide non-traditional home ownership opportunities through the provision of townhomes and affordable units.

6. Provide recreational opportunities for the surrounding community with incorporation of a multi-purpose pedestrian, bicycle, and equestrian trail and associated amenities.

7. Dedicate approximately 5.6 acres of the project site adjacent to San Juan Creek as a conservation area.

8. Locate housing adjacent to available infrastructure to serve the project.

9. Implement the City's General Plan.

3.4 DISCRETIONARY PERMITS, APPROVALS, OR ACTIONS REQUIRED

In accordance with Sections 15050 and 15367 of the *State CEQA Guidelines*, the City is the designated Lead Agency for the proposed project and has principal authority and jurisdiction for California Environmental Quality Act (CEQA) actions. Responsible Agencies are those agencies that have jurisdiction or authority over one or more aspects associated with the development of a proposed project and/or mitigation. Trustee Agencies are State agencies that have jurisdiction by law over natural resources affected by a proposed project.

The project will require a number of discretionary actions for full implementation. Required discretionary actions to be approved by the City include the following: Certification of the EIR, Affordable Housing Incentives, Concessions, and Waivers to CDP 78-01 Development Standards, Architectural Control, Grading Plan Modification, Floodplain Land Use Permit, and Tentative Tract Map. Furthermore, the proposed project requires a Conditional Letter of Map Revision Based on Fill (CLOMR-F) related to the Federal Emergency Management Agency (FEMA) Flood Maps. Finally, the City and the Project Applicant will enter into an AARP, whereby the City will sell a 0.15-acre portion of land contiguous to the project site to the developer for parking and landscape purposes, as depicted in Figure 3.13. Discretionary actions associated with the proposed project are described in further detail below.

3.4.1 Certification of the Environmental Impact Report

The City would be required to certify the EIR to comply with CEQA and the *State CEQA Guidelines*.

3.4.2 Applicability of State and Local Density Bonus Law

Approximately 10 percent of the project's dwelling units will be designated affordable units restricted to households of moderate income. In total, 14 of the townhomes, or approximately 10.6 percent of the total units, would be designated as restricted affordable units. Pursuant to the State Density Bonus Law (Government Code Section 65915) and the City's Municipal Code Section 9-3.505, the Project Applicant will therefore be entitled to one incentive or concession providing relief from site development standards, zoning code requirements, or architectural design requirements otherwise applicable to the project. The proposed project would utilize a concession

to render inapplicable the requirement that the second-story floor area not exceed 80 percent of the first-story floor area.

3.4.3 Waiver of Site Development Standards Under Density Bonus Law

State law prohibits local agencies from applying development standards that would physically preclude construction of a development involving a request for incentives in exchange for the inclusion of restricted affordable units pursuant to Government Code Sections 65915(b) and 65915(e)(1). Imposition of all of the design standards applicable to the project site would result in a significant reduction of the floor area and the number of units the project proposes to yield, making it infeasible to include restricted affordable units. Construction of the project, including the designated affordable units, would thus be physically precluded if certain City development standards are applied. The Project Applicant will therefore request waiver of those standards as permitted by the State Density Bonus Law and the City's affordable housing ordinance. The requested waivers will allow the following: a building separation of 8 ft in lieu of the otherwise required 20 ft; a 0 ft setback from the property line between the site and APN 666-131-08, where the City of San Juan Capistrano water well is located; a 10 ft setback from the property line between the site and the property to the north, which has been developed with a 24 Hour Fitness rather than 20 ft as required under the zoning code; and the elimination recreational vehicle parking spaces.

1. Allow a 0 ft setback from the property line between the project site and APN 666-131-08, where the City of San Juan Capistrano water well is located, and a 10 ft setback from the property line between the site and the property immediately adjacent to the north;

2. Allow the minimum distance between buildings to be less than 20 ft (8 ft); and

3. Exempt the project from providing recreational vehicle parking spaces.

3.4.4 Architectural Control

The site plan is required to undergo the Architectural Control review process. Preliminary review of the site plan, architectural design, lighting, site amenities, and landscaping was conducted by the City's Design Review Committee on March 8, 2018. The City's Design Review Committee directed the Project Applicant to revise the project's architecture to include additional details, movement, and design features in order to justify the project's three-story height and overall maximum height (e.g., the proposed maximum height of 40 ft rather than the allowable maximum building height of 35 ft). The revised site plan, the structural architectural design, the lighting plans, site amenities, and landscaping plan were subsequently reviewed by the Design Review Committee on July 19, 2018. The Design Review Committee conceptually approved the design of the revised plans.

3.4.5 Grading Plan Modification

The proposed project would require approval of a Final Grading Plan and proposed elevations. The Final Grading Plan would address mass grading activities that are anticipated throughout the site. The grading modification application is a process to ensure that grading modifications on a previously graded site are consistent with the City's General Plan, Municipal Code, and other adopted governing documents, such as the project's EIR. In addition, the grading modification

application process ensures that the proposed grading would be compatible with adjacent lots and would not result in adverse impacts following implementation.

3.4.6 Floodplain Land Use Permit

According to Federal Emergency Management Agency (FEMA) Flood Maps, the southeastern portion of the project site falls within the Flood Zone AE, which is identified as a Special Flood Hazard Area.[1] The proposed project would require review and evaluation of any potential impacts related to identified floodplains and both San Juan Creek and El Horno Creek through review of a Floodplain Land Use Permit.

3.4.7 Tentative Tract Map

The proposed project would require review and approval of the proposed subdivision of the property to accommodate the planned single-family homes and townhome units.

3.4.8 Agreement Affecting Real Property

The City currently owns a 0.15-acre portion of the project site as depicted in Figure 3.13. The proposed project would therefore require that the City and the Project Applicant enter into an AARP, whereby the City will sell that portion of the project site to the Project Applicant for parking and landscape purposes

3.5 PROBABLE FUTURE ACTIONS BY RESPONSIBLE AGENCIES

Because the proposed project also involves approvals, permits, or authorization from other public agencies, these public agencies are "Responsible Agencies" under CEQA. Section 15381 of the *State CEQA Guidelines* defines Responsible Agencies as public agencies other than the Lead Agency that will have discretionary approval power over the proposed project or some component of the project, including mitigation. These public agencies include, but are not limited to, the public agencies identified in Table 3.C, below.

Table 3.C: Probable Future Actions by Responsible Agencies

Responsible Agency	Action
Orange County Fire Authority (OCFA)	Fire Master Plan
Federal Emergency Management Agency (FEMA)	The project will require FEMA to review and approve the project plans.
San Diego Regional Water Quality Control Board (RWQCB)	The Project Applicant must obtain coverage under the San Diego RWQCB's *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region* (Order No. R9-2013-0001, NPDES No. CAS010266, as amended by Order No, R9-2015-0001) (South Orange County MS4 Permit).

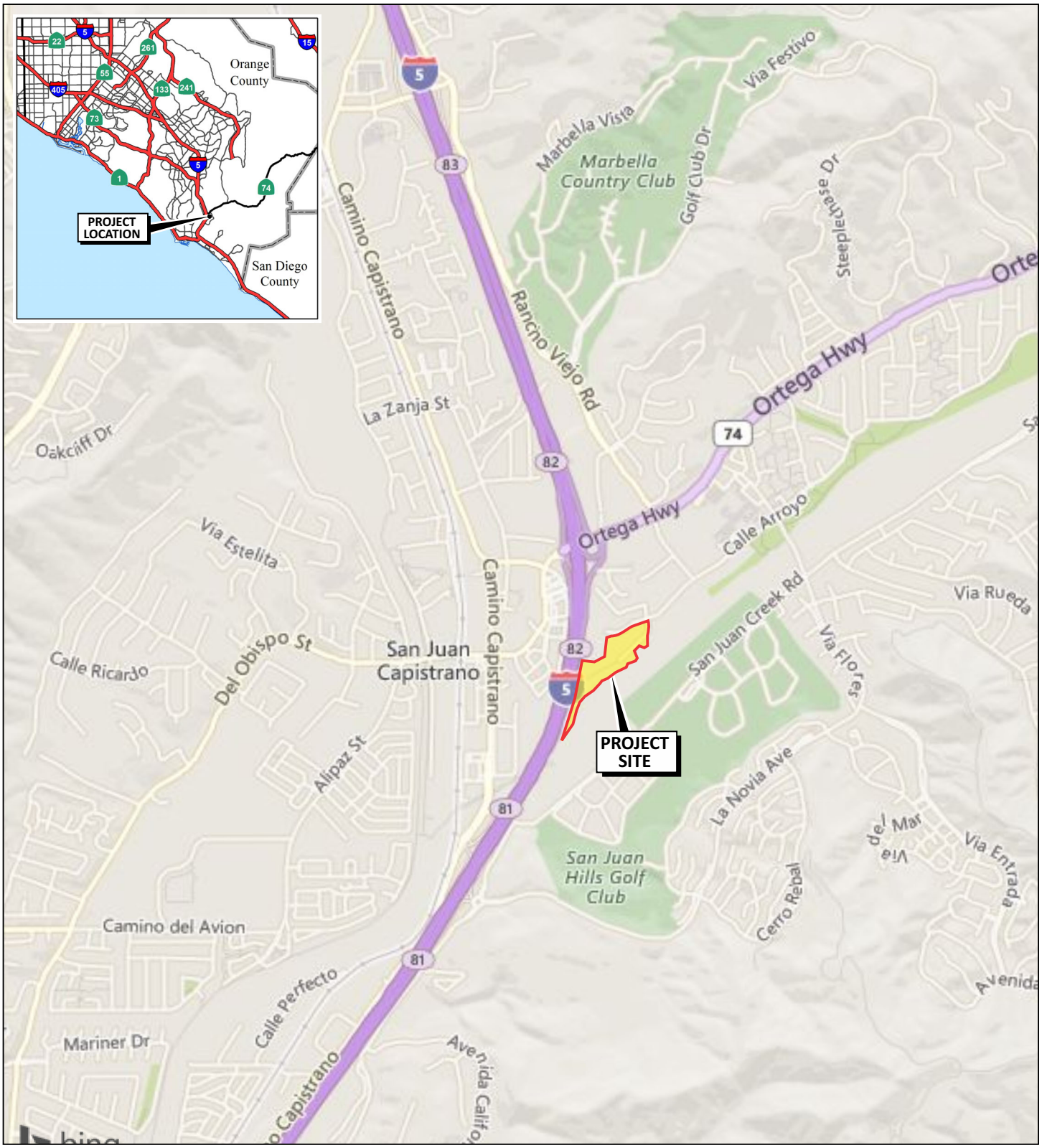
FIRM = Flood Insurance Rate Map

[1] Federal Emergency Management Agency (FEMA). Flood Maps 06059C0506J and 06059C0507J (effective December 3, 2009). Website: https://msc.fema.gov/portal/home (accessed November 2, 2018).

3.6 OTHER MINISTERIAL CITY ACTIONS

Ministerial permits/approvals (e.g., lot line adjustment, grading permits, curb cuts, and building permits) would also be issued by the City.

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FIGURE 3.1

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SOURCE: Bing Maps

Tirador Residential Development Project

Regional Project Location

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El Camino Real Park
San Juan Elementary School
St. Margaret's Episcopal School
Cook La Novia Park
Plaza Del Obispo Shopping Center
PROJECT SITE
San Juan Hills Golf Club
Ortega Hwy
Rancho Viejo Rd
Camino Capistrano
Del Obispo St
Paseo Adelanto
Valle Rd
San Juan Creek Rd
Calle Arroyo
Paseo Tiradori
Via Barrida
Via Callejon
Paseo Burladero
Calle Caballero
Capote de Paseo
Via Caori
Via Fortuna
Via Sequoia
Paseo Alondra
Via Cancela
Avenida Larga
Via Buena
Via Catalonia
Via Estrada
Via Orontes
Paseo Perdido
Calle Monserate
Calle Rolando
Paseo Andorra
Calle Marisma
Calle Cervino
Camino Valverde
W Trabuco Creek Trail
Paseo Carolina
Calle Winona
Calle Delphina
Calle Lucana
Via Bellardes
Via Alano
Via Arboleda
Old San Juan Rd
Mission St
Lobo St
Los Rios St
Ramos St
Spring St
El Camino Real
Acjachema St
La Matanza St
La Zanja St
Andres Rico Rd
Don Juan Ave
El Horcho St
Camino Capistrano
Avenida de la Vista
Calle San Luis
Calle San Francisco
Via Los Pajaros
Via Santo Tomas
Via San Vicente
Paseo Boveda
Via Pinorato
Calle de la Rosa
Paseo Diosa
Paseo Campeon
Paseo Caliz
Camino de Madera
Ganado Rd
Galanto Way
Windsong Dr
La Novia Ave
Via la Senda
Sundance Dr
Arroyo Park
Via Paloma
Via Vista Del
Via Mirar
Via Cuarrel
Paseo Ba
Santa Margarita Pl
Casa Grande Dr
Bedford Dr
Rosedale Dr
Paseo Espada
Paseo Tiradori
Via Cancela
Avenida Larga
Via Barrida

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View looking southeast from Calle Arroyo.



View looking southwest from Calle Arroyo.



View looking west from Calle Arroyo.



View looking west from intersection of Paseo Tirador and Calle Arroyo.

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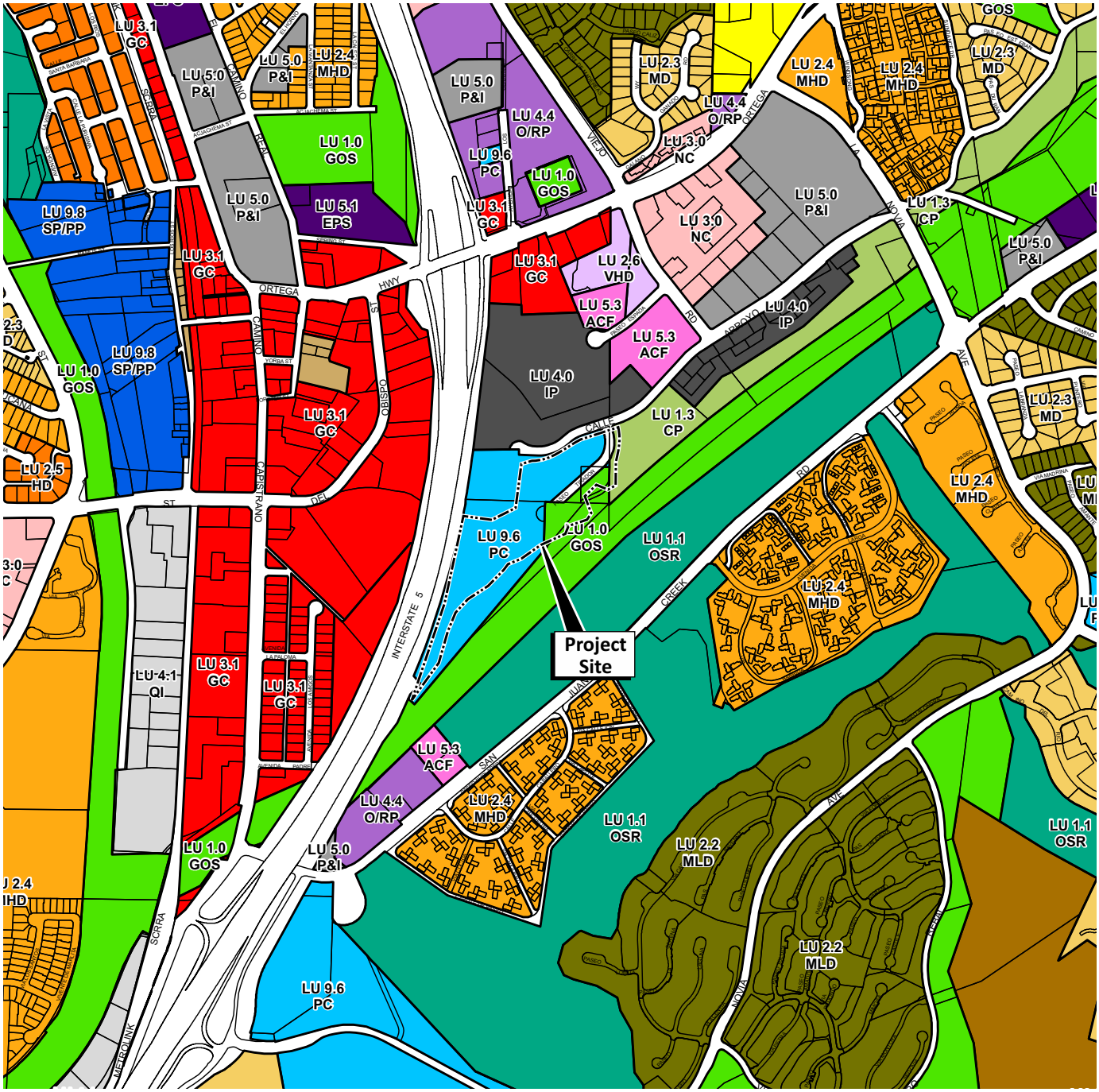
FIGURE 3.3

Tirador Residential Development Project

Existing Site Photos

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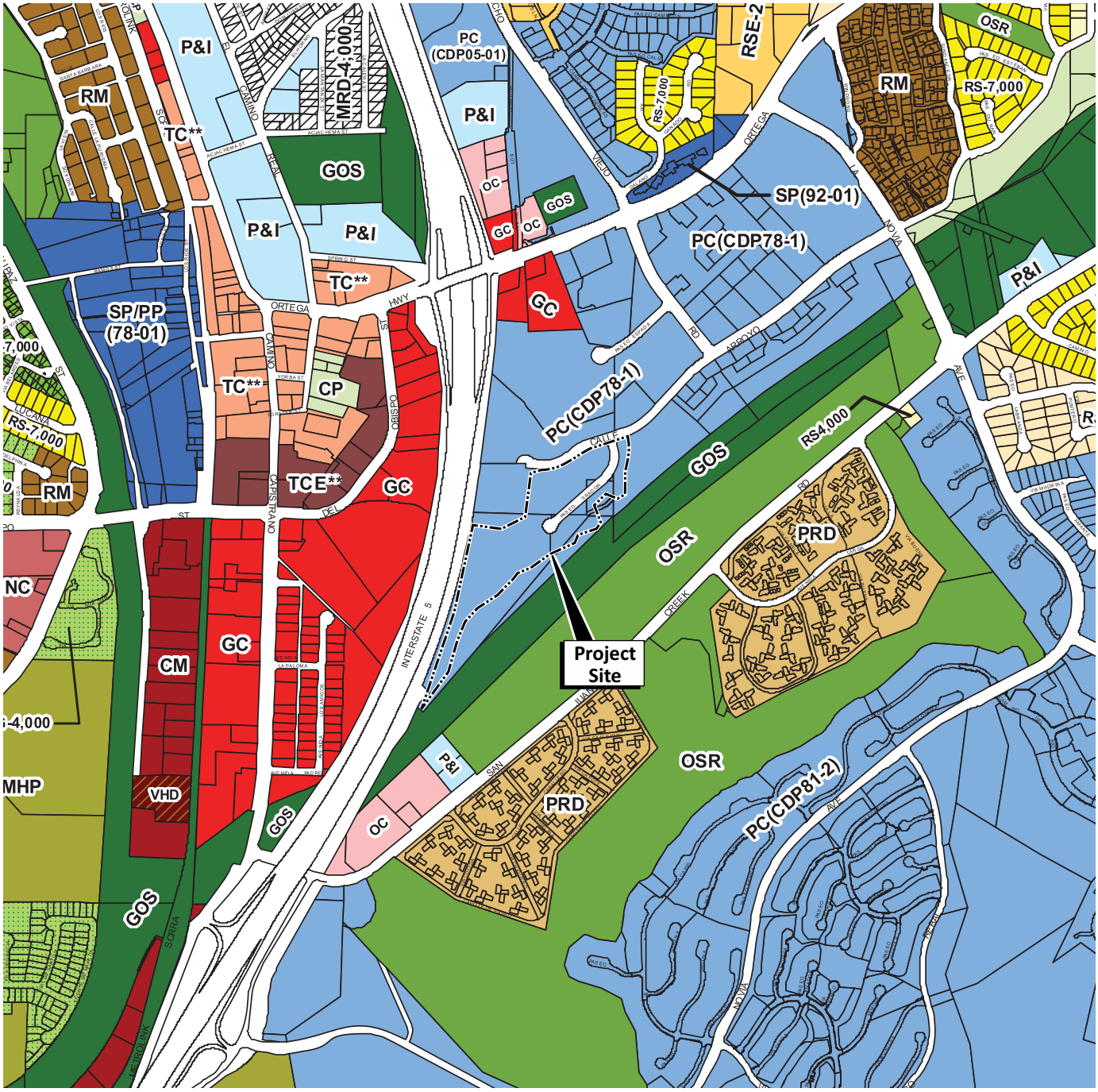
FIGURE 3.4

Tirador Residential Development Project

Existing Land Use Map

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FIGURE 3.5

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SOURCE: City of San Juan Capistrano

Tirador Residential Development Project

Existing Zoning Map

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FIGURE 3.6

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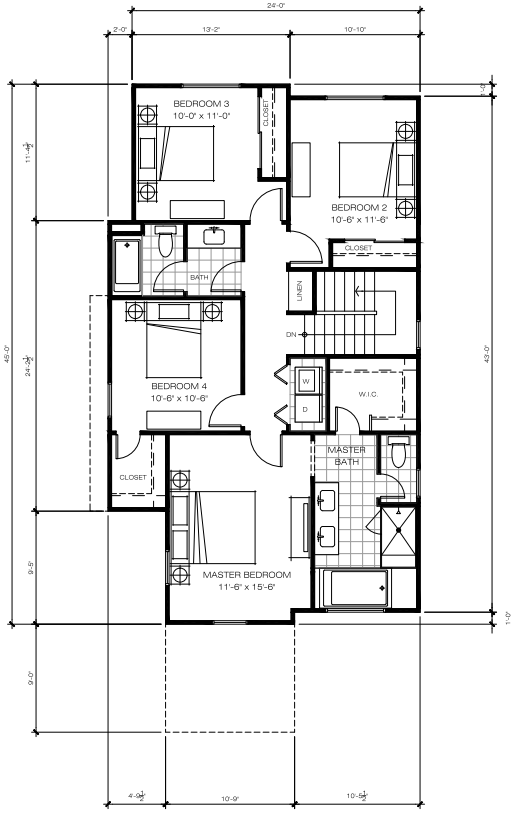
SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project

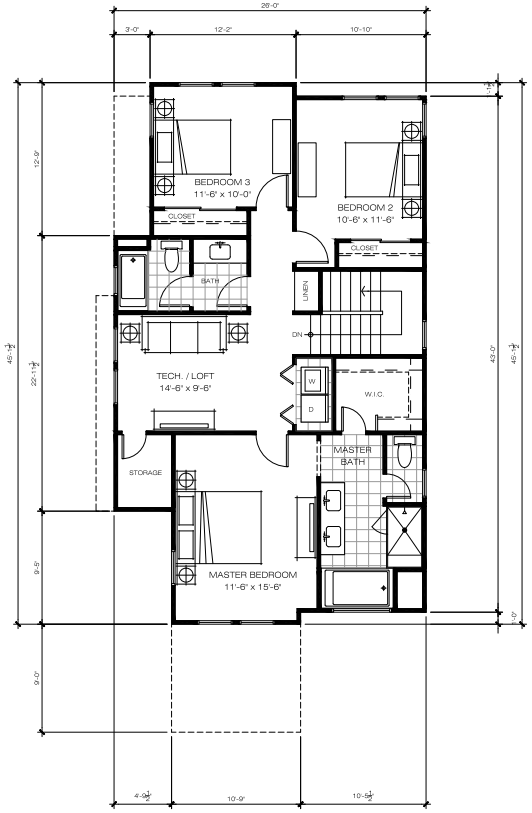
Conceptual Site Plan

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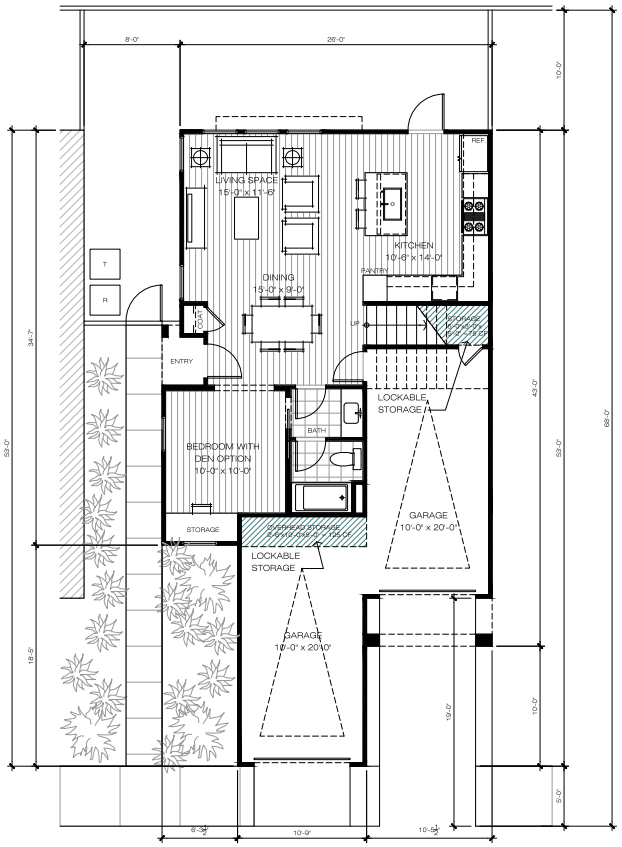
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PLAN P2
SECOND FLOOR - 1,020 SF



PLAN P1
SECOND FLOOR - 1,005 SF



PLAN P1 & P2 TYPICAL
FIRST FLOOR - 715 SF

4 BR + 3 BATH / DEN

PLAN TYPE P1 & 2

PLAN TYPE P2 4 BR + 2.5 BATH + DEN	
FIRST FLOOR	- 715 SF
SECOND FLOOR	-1,020 SF
TOTAL	-1,735 SF
GARAGE	- 441 SF
LOCKABLE STORAGE	- 200 CF

PLAN TYPE P1 3 BR + 3 BATH / LOFT + DEN	
FIRST FLOOR	- 715 SF
SECOND FLOOR	-1,005 SF
TOTAL	-1,720 SF
GARAGE	- 441 SF
LOCKABLE STORAGE	- 200 CF

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FIGURE 3.7

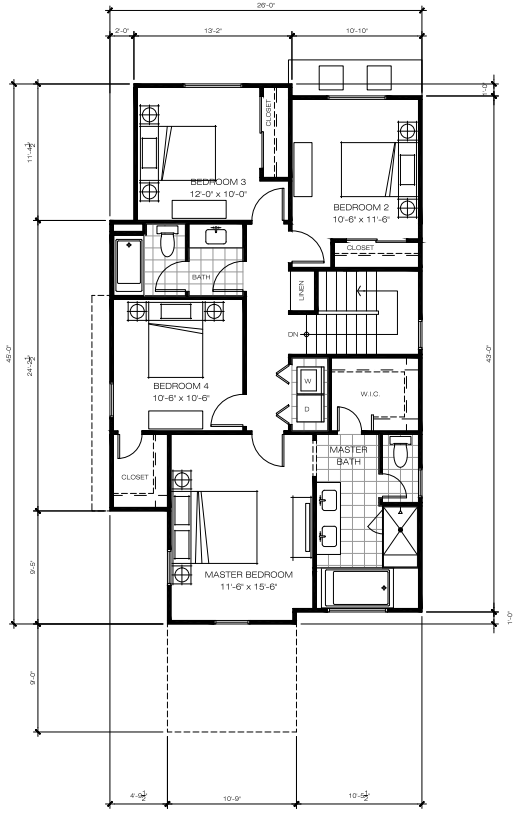
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SOURCE: Withee Malcolm Architects, LLP

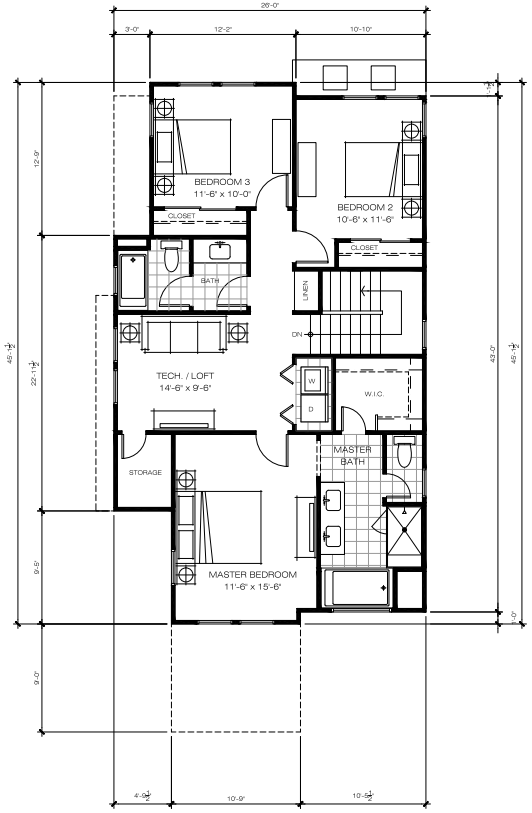
Tirador Residential Development Project
Floor Plans: Single-Family Homes

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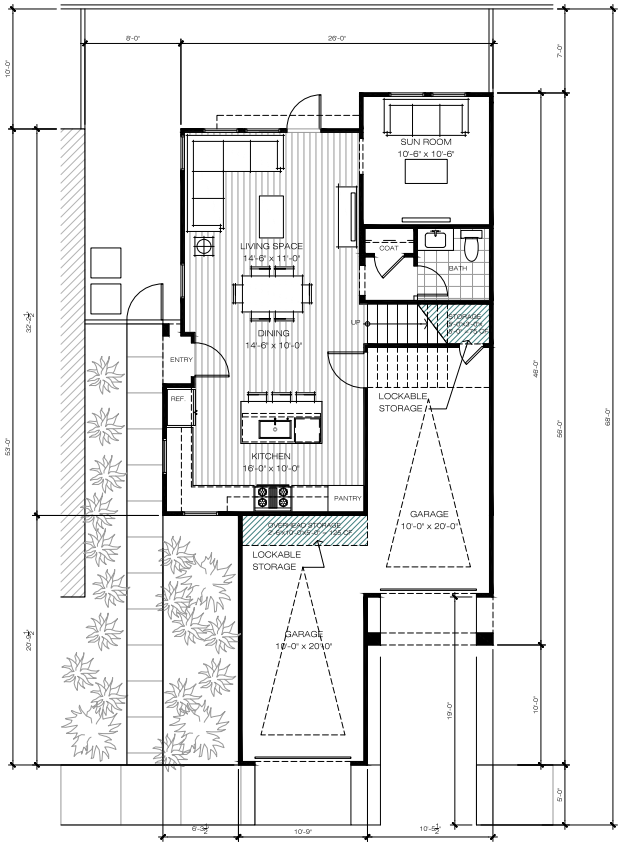
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PLAN P2
SECOND FLOOR - 1,020 SF



PLAN P1
SECOND FLOOR - 1,007 SF



PLAN P1 & P2 TYPICAL
FIRST FLOOR - 738 SF

4 BR + 3 BATH / DEN

PLAN TYPE P2
4 BR + 2.5 BATH + SUNROOM

FIRST FLOOR	- 737 SF
SECOND FLOOR	-1,020 SF
TOTAL	-1,757 SF
GARAGE	- 441 SF
LOCKABLE STORAGE	- 200 CF

PLAN TYPE P1 & 2 CAL

PLAN TYPE P1
3 BR + 3 BATH / LOFT + SUNROOM

FIRST FLOOR	- 738 SF
SECOND FLOOR	-1,007 SF
TOTAL	-1,745 SF
GARAGE	- 441 SF
LOCKABLE STORAGE	- 200 CF

LSA

FIGURE 3.7

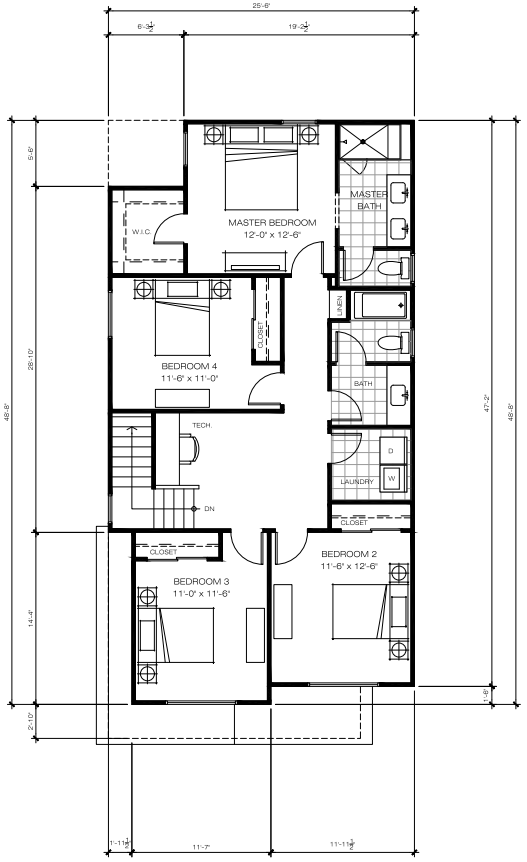
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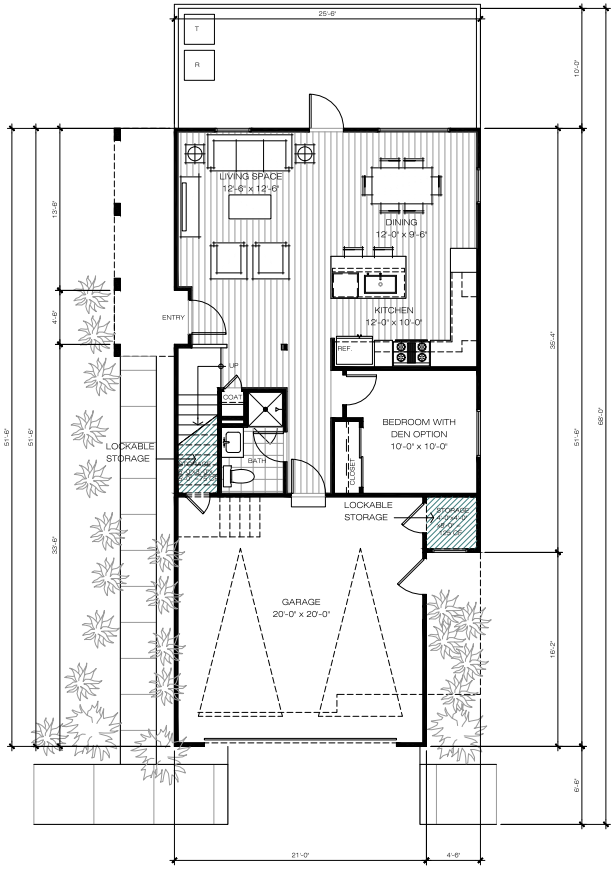
Tirador Residential Development Project
Floor Plans: Single-Family Homes

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SECOND FLOOR - 1,125 SF



FIRST FLOOR - 732 SF

PLAN TYPE P3

PLAN TYPE P3	
4 BR + 3 BATH / DEN	
FIRST FLOOR	- 732 SF
SECOND FLOOR	-1,125 SF
TOTAL	-1,857 SF
GARAGE	- 455 SF
LOCKABLE STORAGE	- 200 CF

LSA

FIGURE 3.7

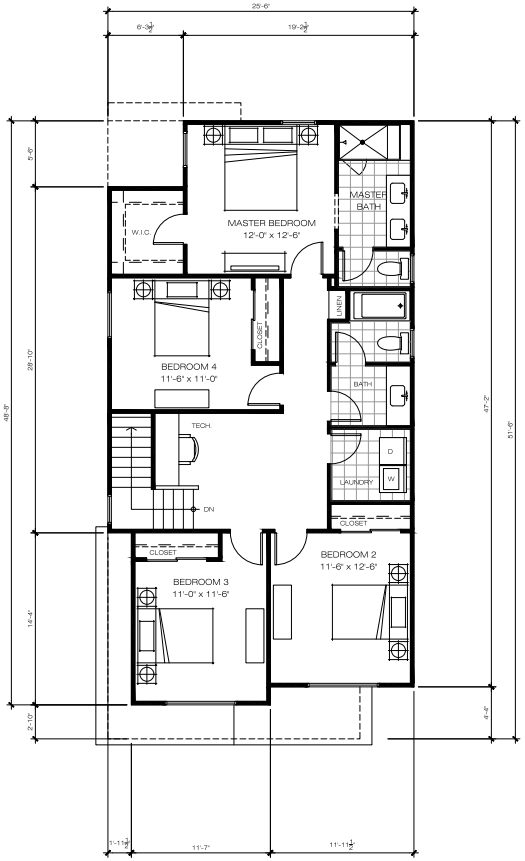
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SOURCE: Withee Malcolm Architects, LLP

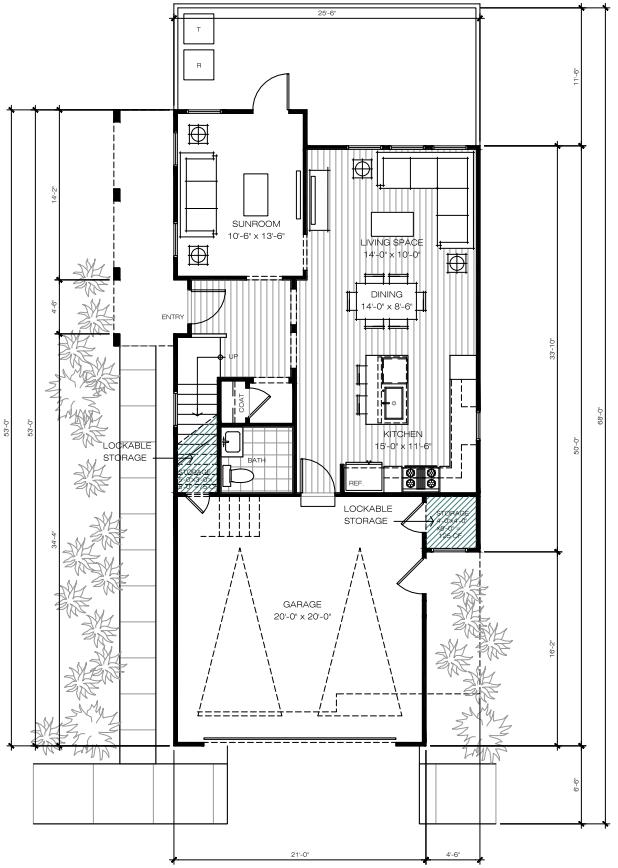
Tirador Residential Development Project
Floor Plans: Single-Family Homes

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SECOND FLOOR - 1,125 SF



FIRST FLOOR - 725 SF

PLAN TYPE P3 CAL

PLAN TYPE P3	
4 BR + 3 BATH - SUNROOM	
FIRST FLOOR	- 725 SF
SECOND FLOOR	-1,125 SF
TOTAL	-1,850 SF
GARAGE	- 455 SF
LOCKABLE STORAGE	- 200 CF

LSA

FIGURE 3.7
Page 4 of 4

0 8 16
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SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project
Floor Plans: Single-Family Homes

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TYPICAL 4PLEX PLANS



TYPICAL 6PLEX PLANS

TYPICAL BUILDING PLANS

LSA

FIGURE 3.8
Page 1 of 4

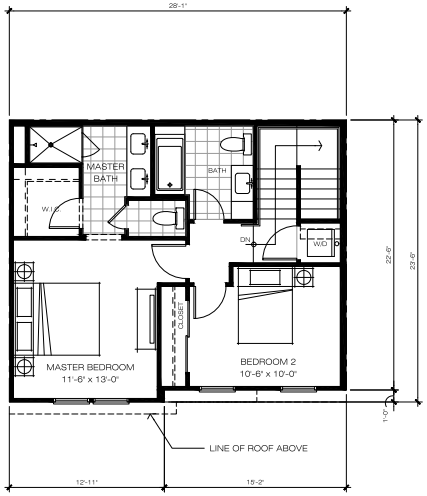
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SOURCE: Withee Malcolm Architects, LLP

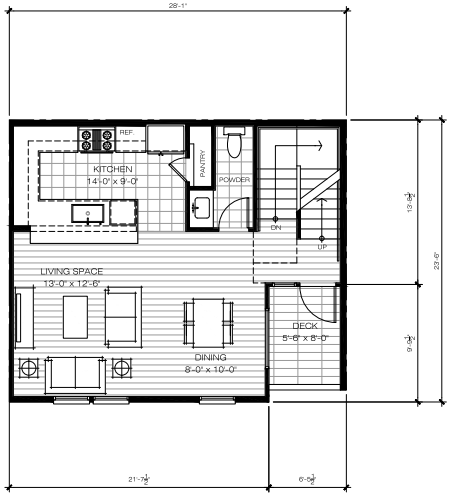
Tirador Residential Development Project
Floor Plans: Townhomes

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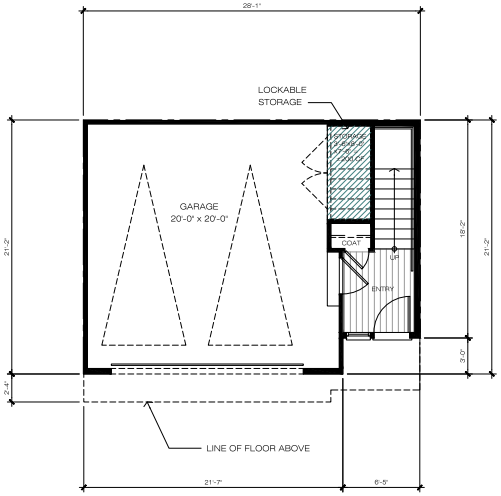
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THIRD FLOOR - 582 SF



SECOND FLOOR - 535 SF



FIRST FLOOR - 133 SF

FIRST FLOOR	-	133 SF
SECOND FLOOR	-	535 SF
THIRD FLOOR	-	582 SF
TOTAL		-1,250 SF
GARAGE	-	438 SF
LOCKABLE STORAGE	-	200 CF

PLAN TYPE 1
2 BR + 2.5 BATH

LSA

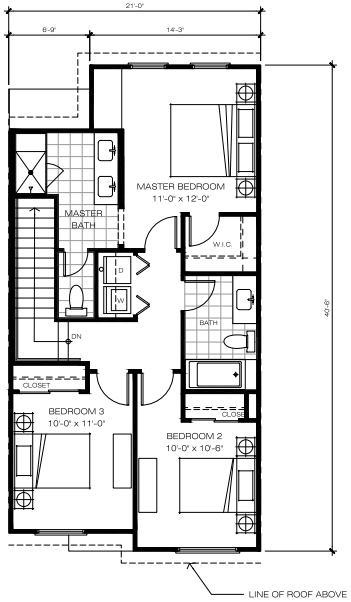
FIGURE 3.8

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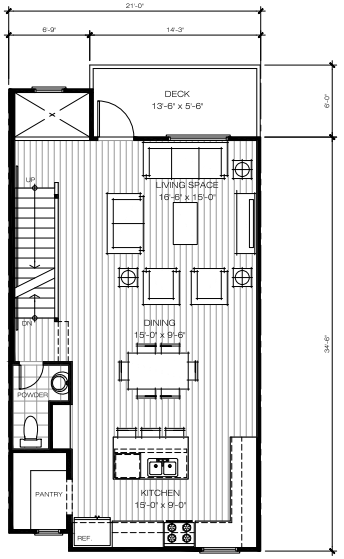
SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project
Floor Plans: Townhomes

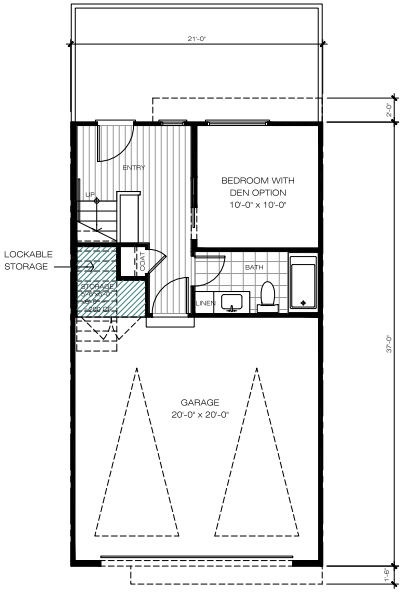
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THIRD FLOOR - 760 SF



SECOND FLOOR - 675 SF



FIRST FLOOR - 320 SF

FIRST FLOOR	-	320 SF
SECOND FLOOR	-	675 SF
THIRD FLOOR	-	760 SF
TOTAL	-	1,755 SF
GARAGE	-	453 SF
LOCKABLE STORAGE	-	200 CF

PLAN TYPE 2
3 BR + 3 & 1/2 BATH / DEN

LSA

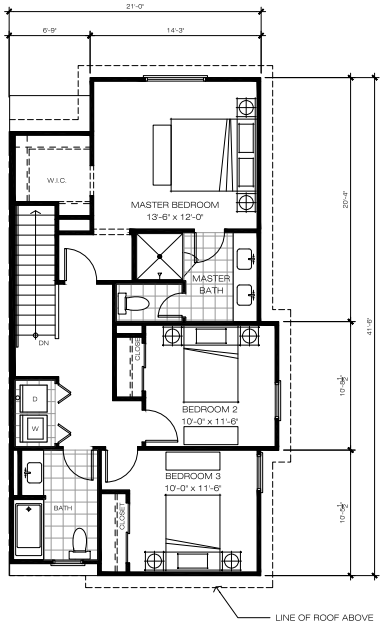
FIGURE 3.8

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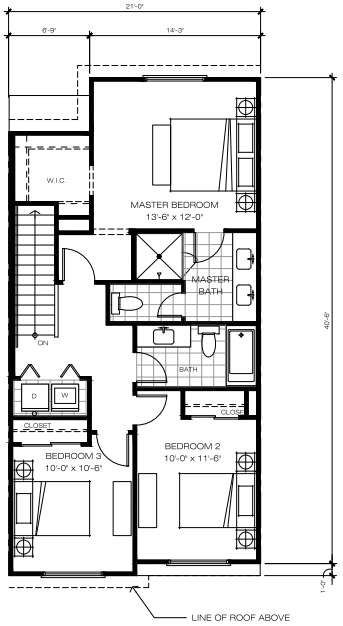
SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project
Floor Plans: Townhomes

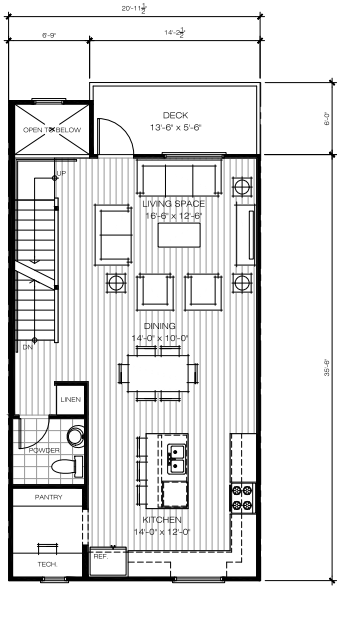
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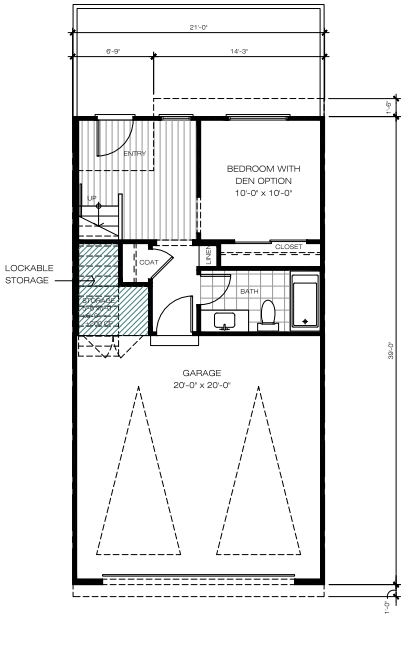
THIRD FLOOR (END) - 806 SF



THIRD FLOOR - 788 SF



SECOND FLOOR - 686 SF



FIRST FLOOR - 356 SF

PLAN TYPE 3 - END

FIRST FLOOR	- 356 SF
SECOND FLOOR	- 686 SF
THIRD FLOOR	- 808 SF
TOTAL	-1,850 SF
GARAGE	- 460 SF
LOCKABLE STORAGE	- 200 CF

PLAN TYPE 3 - TYPICAL

FIRST FLOOR	- 356 SF
SECOND FLOOR	- 686 SF
THIRD FLOOR	- 788 SF
TOTAL	-1,830 SF
GARAGE	- 460 SF
LOCKABLE STORAGE	- 200 CF

PLAN TYPE 3
3 BR + 3 & 1/2 BATH / DEN

LSA

FIGURE 3.8
Page 4 of 4

0 8 16
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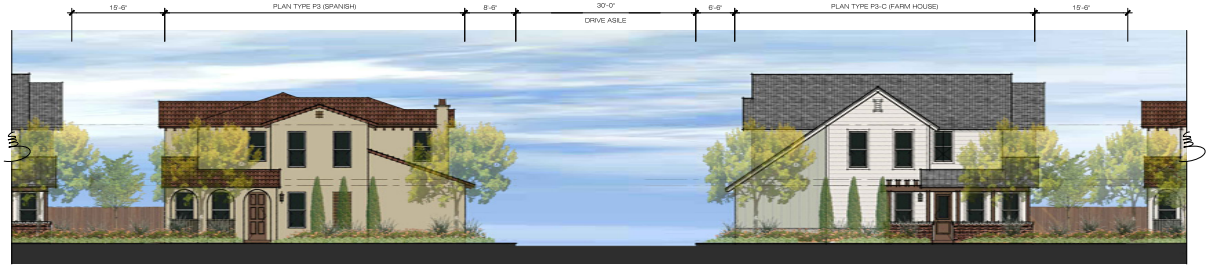
SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project
Floor Plans: Townhomes

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PASEO TIRADOR ELEVATION / SECTION - 1





LSA

FIGURE 3.9
Page 1 of 2

0 16 32
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SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project
Building Elevations: Single-Family Homes

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LSA

FIGURE 3.9
Page 2 of 2

0 16 32
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SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project
Building Elevations: Single-Family Homes

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LSA

FIGURE 3.10
Page 1 of 2

0 16 32
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SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project
Building Elevations: Townhomes

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SAN JUAN CREEK TRAIL ELEVATION / SITE SECTION -1





LSA

FIGURE 3.10
Page 2 of 2

0 16 32
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SOURCE: Withee Malcolm Architects, LLP

Tirador Residential Development Project
Building Elevations: Townhomes

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LSA

FIGURE 3.11

N

0 100 200

FEET

SOURCE: SMP

Tirador Residential Development Project

Conceptual Landscape Plan

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LSA

FIGURE 3.12

N

0 100 200
FEET

SOURCE: SMP

Tirador Residential Development Project
Conceptual Wall and Fence Plan

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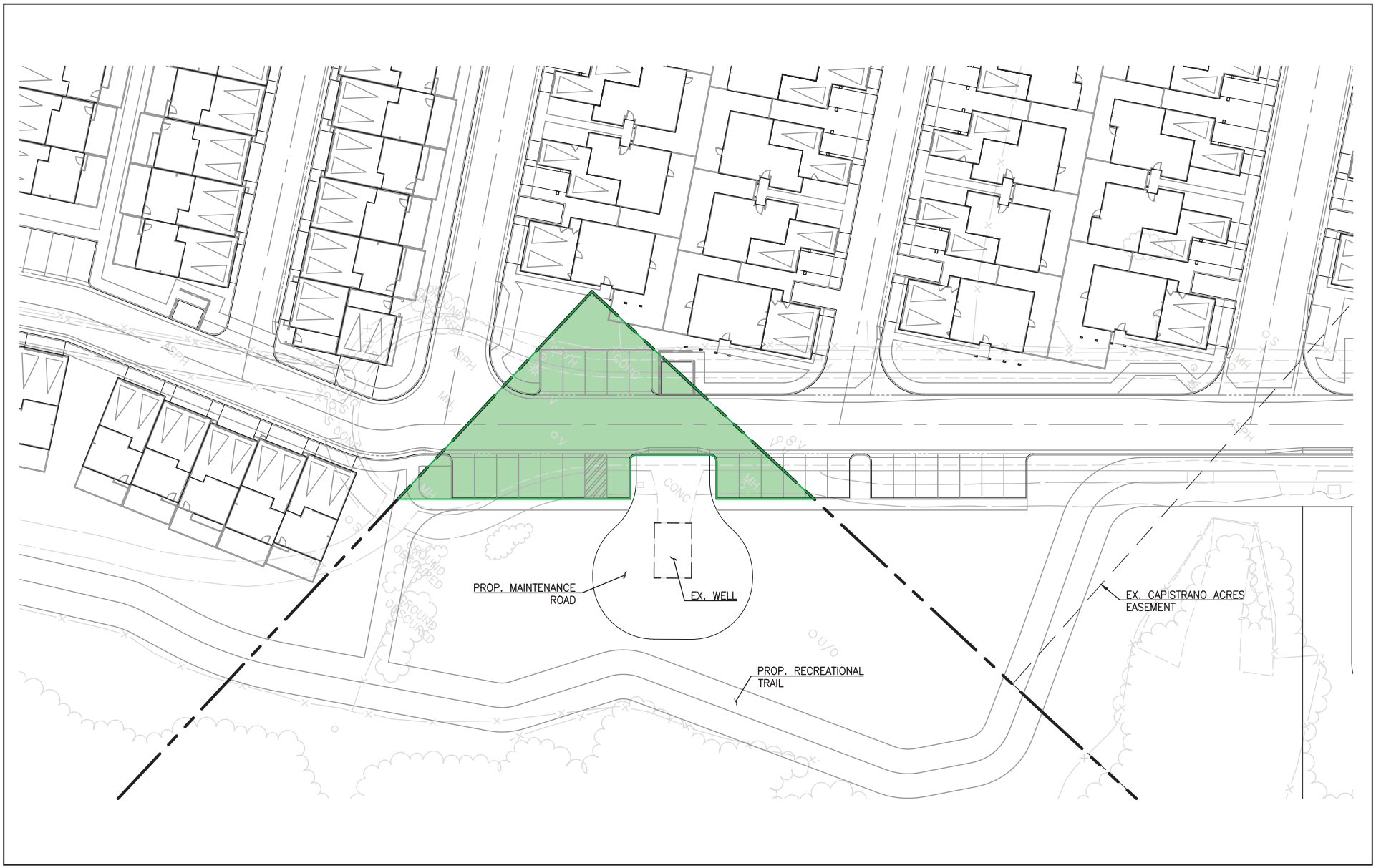


FIGURE 3.13

LSA

LEGEND

City Owned Land - 6,574SF (0.15AC)

N

0 20 40

FEET

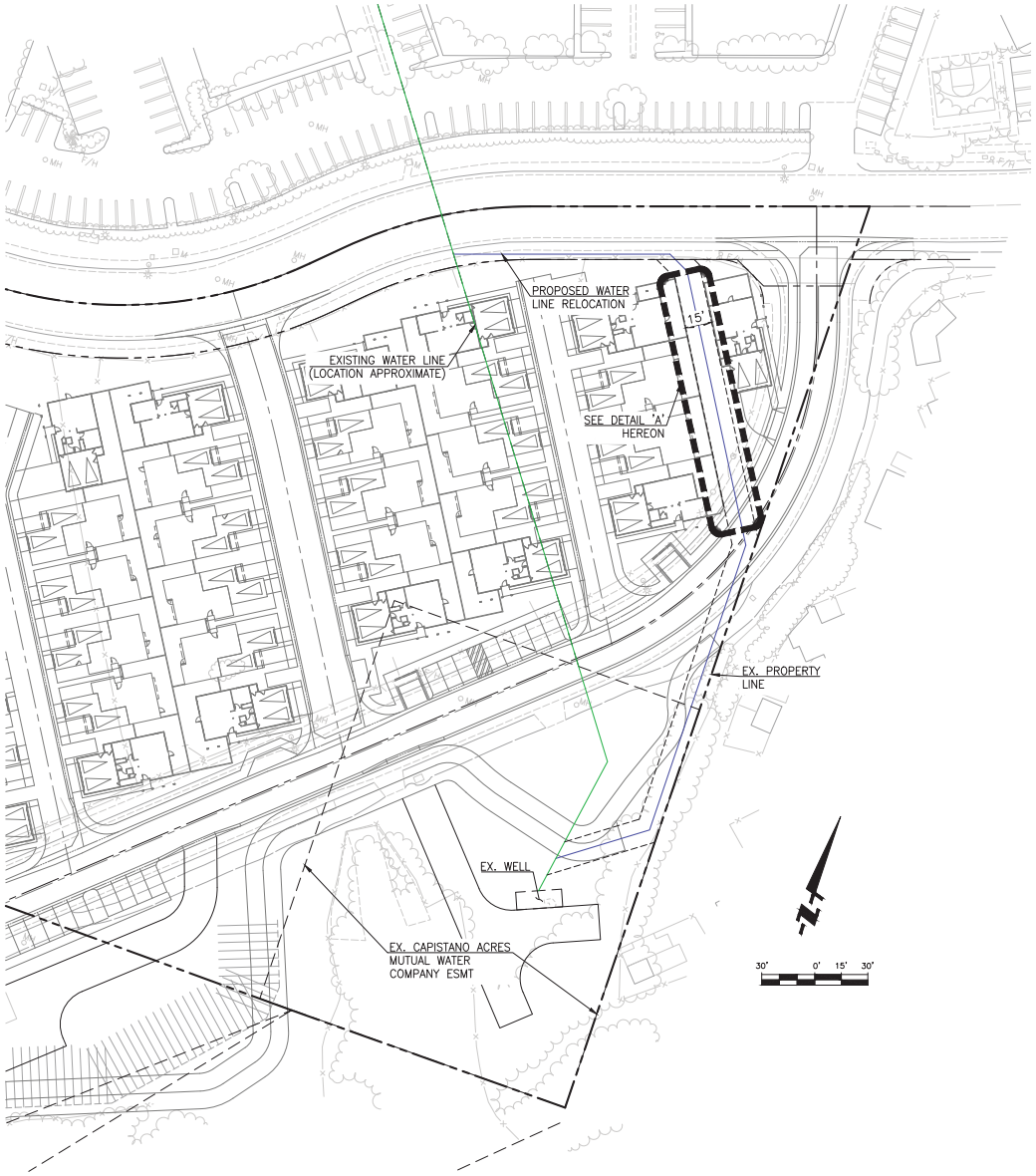
SOURCE: X Engineering & Consulting, Inc.

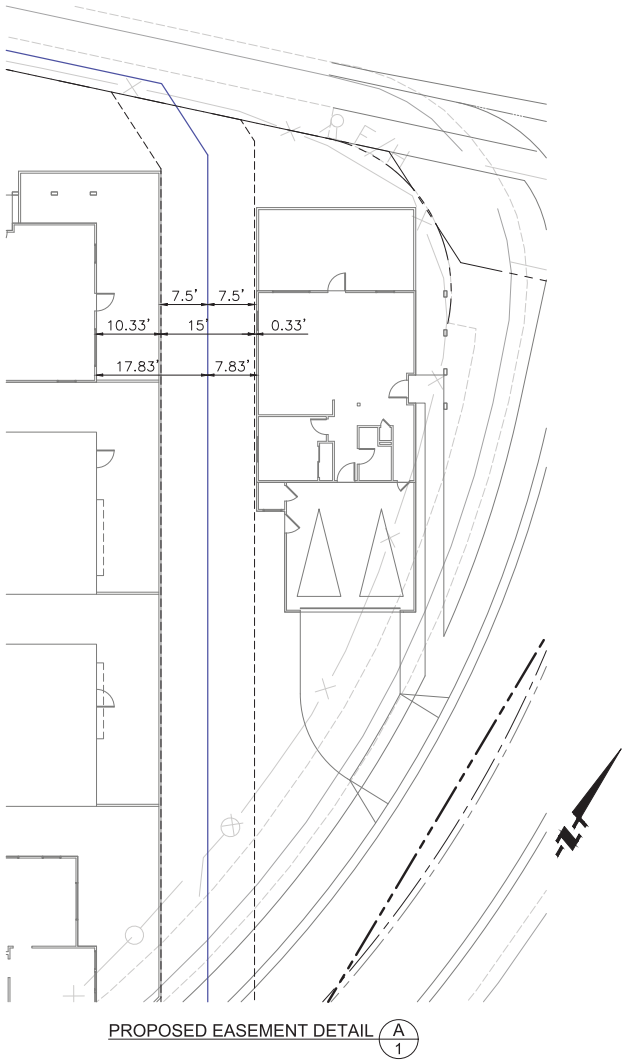
Tirador Residential Development Project

Agreement Affecting Real Property Land Exhibit

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LSA

FIGURE 3.14

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASMENT
- PROPOSED EASEMENT
- EXISTING WATER LINE
- PROPOSED RELOCATION

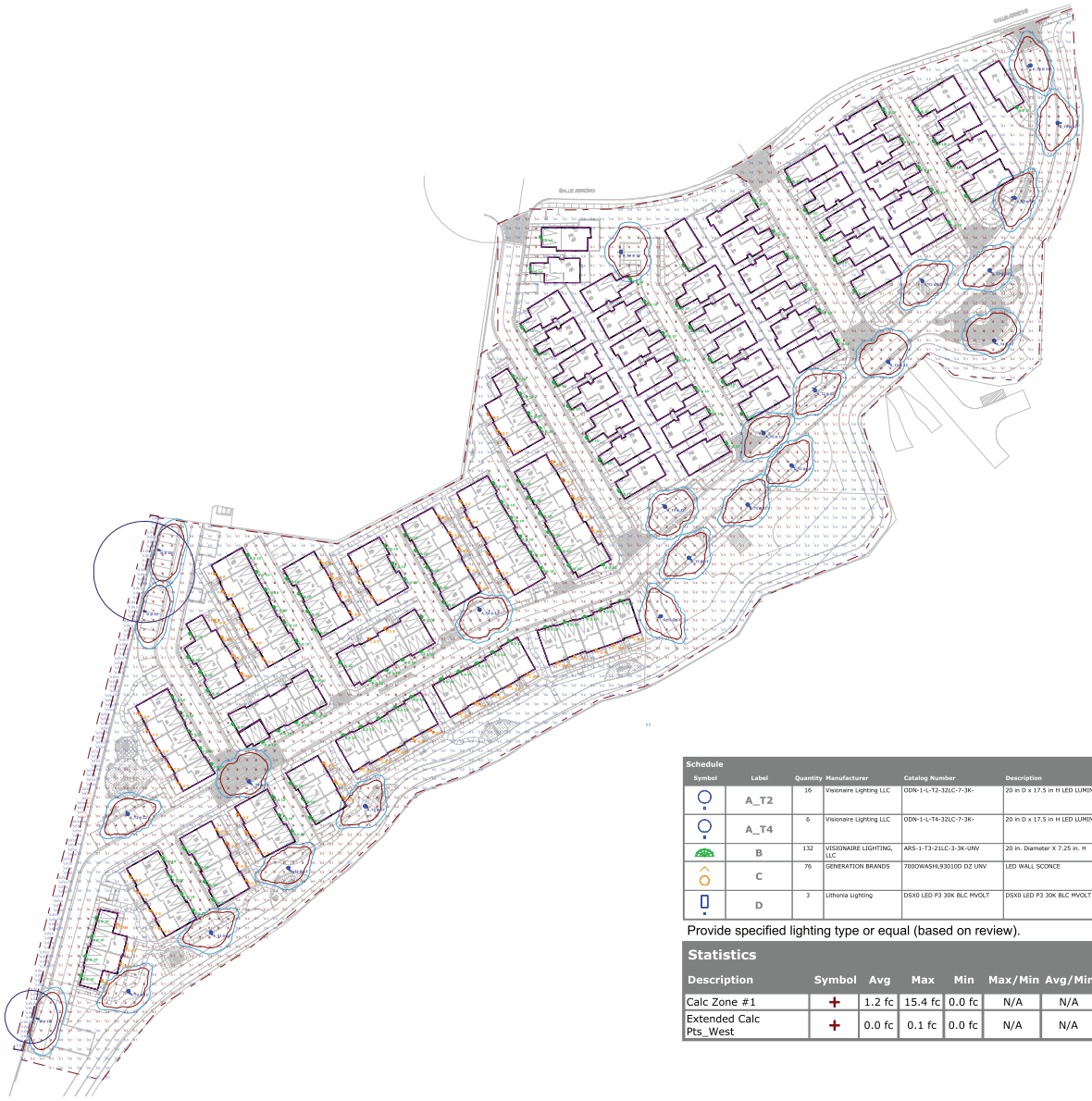
Tirador Residential Development Project

Proposed Easement Locations

SOURCE: X Engineering & Consulting, Inc.

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Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A_T2	16	Visionaire Lighting LLC	ODN-1-L-T2-32LC-7-3K-	20 in D x 17.5 in H LED LUMINAIRE		1	ODN-1-L_T2_32LC_7_3K.IES	8019	0.9	70
	A_T4	6	Visionaire Lighting LLC	ODN-1-L-T4-32LC-7-3K-	20 in D x 17.5 in H LED LUMINAIRE		1	ODN-1-L_T4_32LC_7_3K.IES	7649	0.9	70
	B	132	VISIONAIRE LIGHTING, LLC	ARS-1-T3-21LC-3-3K-UNV	20 in. Diameter X 7.25 in. H		1	ARS-1_T3_21LC_3_3K.IES	2764	0.9	25
	C	76	GENERATION BRANDS	700OWASHL93010D DZ UNV	LED WALL SCONCE	LED	1	1030176490HI-05K GB 700OWASHL93010DZUNV S.ies	371	0.9	8.1
	D	3	Lithonia Lighting	DSX0 LED P3 30K BLC MVOLT	DSX0 LED P3 30K BLC MVOLT	LED	1	DSX0_LED_P3_30K_BLC_MVOLT.ies	6428	0.9	71

Provide specified lighting type or equal (based on review).

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.2 fc	15.4 fc	0.0 fc	N/A	N/A
Extended Calc Pts_West	+	0.0 fc	0.1 fc	0.0 fc	N/A	N/A

LSA

FIGURE 3.15

N

0 100 200

FEET

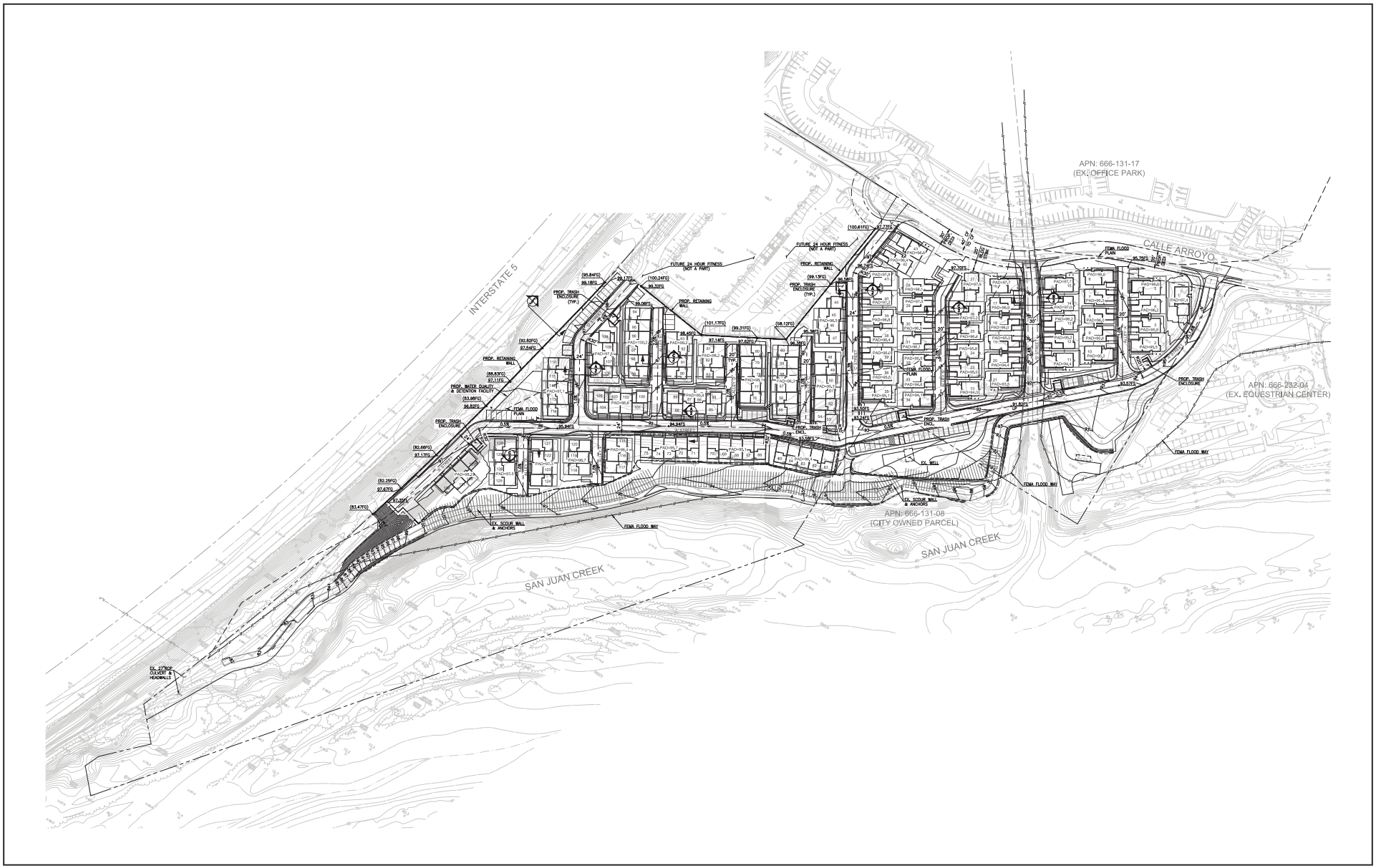
SOURCE: mor Engineers

Tirador Residential Development Project

Photometric Plan

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LSA

FIGURE 3.16

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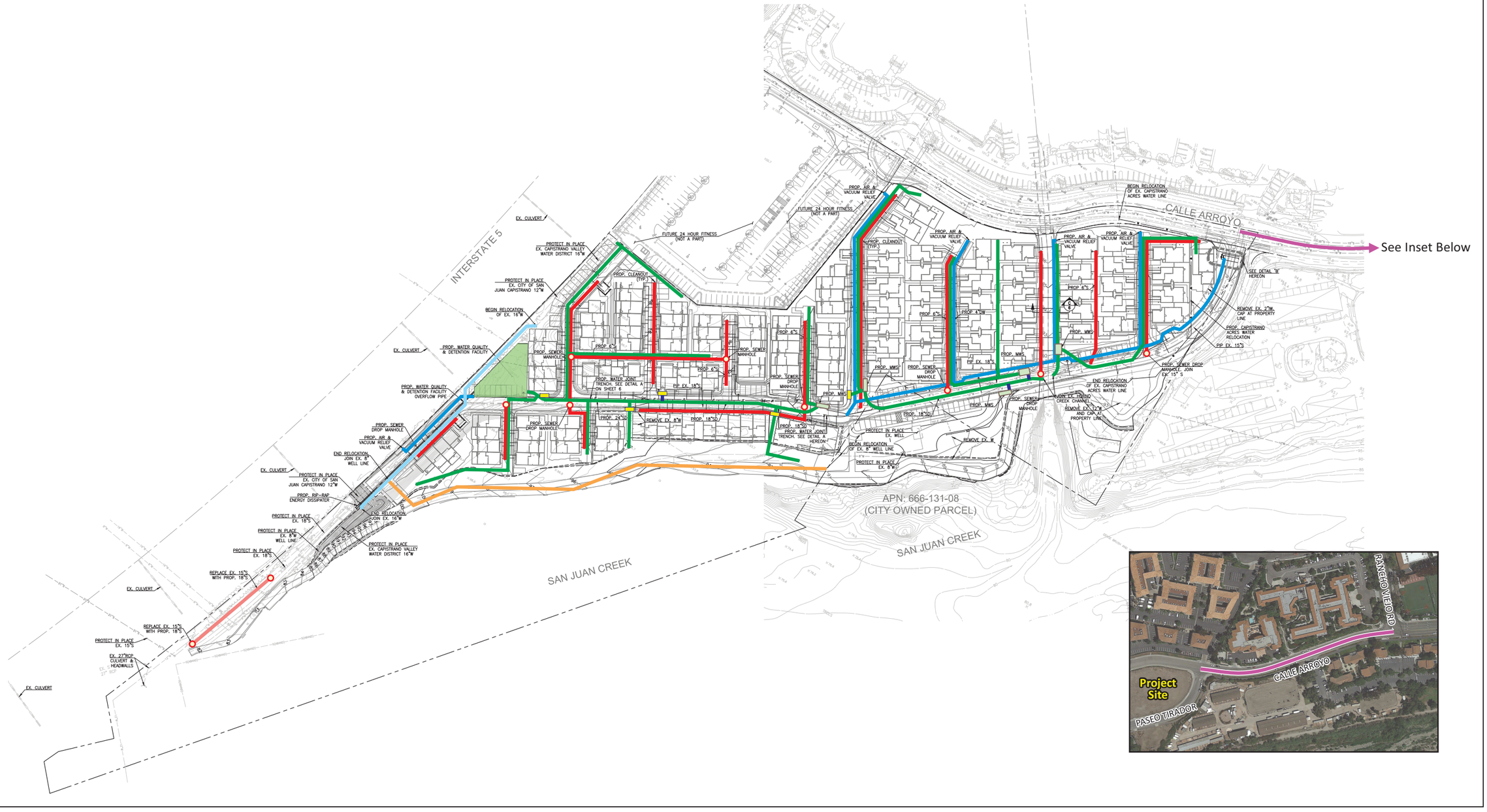
SOURCE: City of San Juan Capistrano, Department of Public Works & Utilities

Tirador Residential Development Project

Conceptual Grading Plan

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LSA

LEGEND

- Public Water Improvements
- Private Domestic Water Improvements
- Storm Drain Improvements
- Sewer System Improvements
- Upsize Sewer System (15 to 18-Inch)
- Well Line Improvements
- Public Recycled Water Off-Site Improvements (6-Inch)
- Sewer Drop Manhole
- Water Quality Detention Facility
- Modular Wetlands System
- Catch Basin

0 80 160
FEET

SOURCE: City of San Juan Capistrano, Department of Public Works & Utilities

I:\JCA1802\G\Utility Plan.cdr (2/4/2020)

FIGURE 3.17

Tirador Residential Development Project
Conceptual Utility Plan

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4.0 EXISTING ENVIRONMENTAL SETTING, ENVIRONMENTAL ANALYSIS, IMPACTS, AND MITIGATION MEASURES

The following chapter contains 12 sections, each of which addresses one environmental topic outlined in Appendix G of the Guidelines for the California Environmental Quality Act (*State CEQA Guidelines*) (California Code of Regulations [CCR] Title 14, Chapter 3, Sections 15000–15397).

For each environmental impact issue analyzed, the Draft Environmental Impact Report (EIR) includes a detailed explanation of the existing conditions, thresholds of significance that will be applied to determine whether the proposed Tirador Residential Development Project's (proposed project) impacts are significant, analysis of the environmental impacts, and a determination of whether the proposed project would have a significant impact if implemented. A "significant impact" or "significant effect" means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (14 CCR 15382). Each environmental topic section in Chapter 4.0 also includes a discussion of the cumulative effects of the project when considered in combination with other projects causing related impacts, as required by Section 15130 of the *State CEQA Guidelines*.

Each of the 12 sections is organized into subsections, as follows:

1. **Introduction** briefly describes the topics and issues covered in the section.

2. **Scoping Process** describes the comment letters received during the public review period of the Initial Study/Notice of Preparation (IS/NOP) that are related to the topic.

3. **Methodology** describes the approach and methods employed to complete the environmental analysis for the issue under investigation.

4. **Existing Environmental Setting** describes the physical conditions that existed at the time the Notice of Preparation was prepared and distributed that may influence or affect the issue under investigation. This section focuses on physical site characteristics that are relevant to the environmental topic being analyzed.

5. **Regulatory Setting** lists and discusses the laws, ordinances, regulations, and policies that relate to the specific environmental topic and how they apply to the proposed project.

6. **Thresholds of Significance** provides the thresholds that are the basis of the conclusions of significance, which are based on the criteria in Appendix G of the *State CEQA Guidelines* and the City of San Juan Capistrano's *Local Guidelines for Implementing the California Environmental Quality Act* (2019).

7. **Project Impacts** describes the potential environmental changes to the existing physical conditions that may occur if the proposed project is implemented. Evidence is presented to show the cause-and-effect relationship between the proposed project and potential changes in the environment. The exact magnitude, duration, extent, frequency, and range or other parameters of a potential impact are ascertained to the extent feasible to determine whether

impacts may be significant. In accordance with CEQA, potential project impacts, if any, are classified as follows for each of the environmental topics discussed in this Draft EIR.

a. **Significant Adverse Impact.** Significant adverse impacts are those that cannot be fully mitigated or avoided. If the project is approved, decision-makers are required to adopt a statement of overriding considerations pursuant to *State CEQA Guidelines* Section 15093 explaining why the project benefits outweigh the unavoidable adverse environmental effects caused by these significant adverse environmental impacts.

b. **Less than Significant Impact with Mitigation Incorporated.** This classification refers to significant environmental impacts that can be feasibly mitigated or avoided. If the project is approved, decision-makers are required to make findings pursuant to *State CEQA Guidelines* Section 15091 that adverse significant impacts have been mitigated to the maximum extent feasible through the implementation of mitigation measures.

c. **Less than Significant Impact.** Less than significant impacts are environmental impacts that have been identified but are not significant. No mitigation is required for less than significant impacts.

d. **No Impact.** A "no impact" determination is made when the proposed project is found to have no environmental impact.

8. **Level of Significance Prior to Mitigation** describes the significance of potential impacts prior to implementation of mitigation measures.

9. **Regulatory Compliance Measures** (RCMs) are specific standards imposed by the approving agency and are required of the proposed project to reduce its potential environmental effects. Because these features are regulatory, and therefore required, they do not constitute mitigation measures.

10. **Mitigation Measures** are project-specific measures that would be required for the project to avoid, minimize, rectify, reduce, eliminate, or compensate for a potentially significant adverse impact.

11. **Level of Significance after Mitigation** describes the significance of potential impacts after implementation of mitigation measures. Potential significant unavoidable impacts are clearly stated in this section.

12. **Cumulative Impacts** refers to potential environmental changes to the existing physical conditions that may occur as a result of project implementation together with all other reasonably foreseeable, planned, and approved future projects producing related impacts. Section 15355 of the *State CEQA Guidelines* defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts may result from individually minor but collectively significant projects taking place over a period of time. For each of the environmental topics considered in this Draft EIR, the geographic scope of the cumulative analysis is defined. For example, the geographic scope of the cumulative analysis for potential cumulative hydrology and water quality impacts includes all areas within the defined watershed.

4.1 AESTHETICS

This section provides a discussion of the existing visual and aesthetic resources on the project site and in the surrounding area, and evaluates the potential for changes in the visual character that could result from implementation of the Tirador Residential Development Project (proposed project). This section also evaluates the potential loss of existing visual resources, effects on public views, visual compatibility with existing uses, and light and glare impacts.

Information presented in this section is based on the City of San Juan Capistrano General Plan Community Design Element (1999, revised 2002); the Conservation and Open Space Element (1999, revised 2002); the Land Use Element (1999, updated September 2014); and the City Municipal Code (adopted 1980).

4.1.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this Environmental Impact Report (EIR). None of the comment letters included comments related to Aesthetics.

4.1.2 Methodology

The assessment of aesthetic impacts is subjective by nature. This analysis attempts to identify and objectively examine factors that contribute to the perception of aesthetic impacts that would be caused by implementation of the proposed project. The potential aesthetic impacts of the proposed project have been assessed based on consideration of several factors, including scale, mass, proportion, and the concepts described below.

- **Scenic Resources:** Scenic resources are defined as natural or man-made elements that contribute to an area's scenic value and are visually pleasing. Scenic resources include landforms, vegetation, water, or adjacent scenery and may include a cultural modification to the natural environment. The degree to which these resources are present in a community is clearly subject to personal and cultural interpretation. However, it is possible to qualify certain resources as having aesthetic characteristics and establish general guidelines for assessing the aesthetic impacts of new development.

- **Scenic Vista:** A scenic vista is a generally public viewpoint that provides expansive views of a highly valued landscape for the public's benefit. It is usually viewed from some distance away. Aesthetic components of a scenic vista include (1) scenic quality, (2) sensitivity level, and (3) view access. A scenic vista can be impacted in two ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or "vista" of the scenic resource. Important factors in determining whether a proposed project would block scenic vistas include the project's proposed height, mass, and location relative to surrounding land uses and travel corridors.

- **Sensitive Views:** Sensitive views are generally those associated with designated vantage points and public recreational uses, but the term can be more broadly applied to encompass any

valued public vantage point. Sensitivity level has to do with the (1) intensity of use of a visual resource; (2) visibility of a visual resource; and (3) importance of the visual resource to users.

- **Scenic Corridors:** Scenic corridors are channels that facilitate movement (primarily by automobile, transit, bicycle, or foot) from one location to another with expansive views of natural landscapes and/or visually attractive man-made development. Scenic corridors analyzed under the California Environmental Quality Act (CEQA) typically include State-designated scenic highways and locally designated scenic routes.

- **Scenic Quality:** The scenic quality of a streetscape, building, group of buildings, or other man-made or natural feature that creates an overall impression of an area within an urban context. For example, a scenic vista along the boundary of a community, a pleasing streetscape with trees, and well-kept residences and yards are scenic resources that create a pleasing impression of an area. In general, concepts of scenic quality can be organized around four basic elements: (1) site utilization, (2) buildings and structures, (3) landscaping, and (4) signage. Adverse scenic quality effects can include the loss of aesthetic features or the introduction of contrasting features that could contribute to a decline in overall scenic quality.

- **Glare:** A continuous or periodic intense light that may cause eye discomfort or be temporarily blinding to humans.

- **Light Sources:** A device that produces illumination, including incandescent bulbs, fluorescent and neon tubes, halogen and other vapor lamps, and reflecting surfaces or refractors incorporated into a lighting fixture. Any translucent enclosure of a light source is considered to be part of the light source.

- **Regulations Governing Scenic Quality.** Visual impacts have been evaluated based on the project's consistency with goals and policies established in the Land Use and Community Design Elements of the City's General Plan and development standards related to aesthetics in the City's Municipal Code.

The impact analysis focuses on aesthetic-related changes to the project site and surrounding area that may result from the approval of the proposed project.

4.1.3 Existing Environmental Setting

The 16.1-acre project site is irregular in shape and is currently undeveloped and vacant. As such, the existing project site is primarily characterized by dirt and scattered ruderal vegetation and is relatively flat with a slight slope to the east/southeast. The eastern portion of the project site, which is the lowest topographic area on site, is adjacent to San Juan Creek and El Horno Creek and associated trails and vegetation. In addition, there are two existing wells located on the project site. The undeveloped nature of the site allows for much of the site to be visible from vehicles, bicyclists, and pedestrians along Calle Arroyo. However, an existing chain-link fence currently surrounds the perimeter of the site, which restricts views of the property from the north, east, and south. The western portion of the project site is visible and accessible from the San Juan Creek Trail area.

The project site is bordered on the north by Calle Arroyo, with commercial and institutional uses located beyond. El Horno Creek (a tributary of San Juan Creek) and San Juan Creek are adjacent to the south of the project site; a portion of the San Juan Creek Trail is located along the southern portion of the project site. The San Juan Hills Golf Club and multi-family residential developments are located further south of the project site. Paseo Tirador is located along a portion of the eastern boundary of the project site with the Ortega Equestrian Center located further east. The I-5 freeway forms the western boundary of the project site with the Del Obispo Shopping Center located beyond (refer to Figure 3.2, Project Vicinity, in Chapter 3.0, Project Description).

According to the United States Census Bureau, the City of San Juan Capistrano is located within the Mission Viejo-Lake Forest-San Clemente, CA Urbanized Area,[1] which also includes the Cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Lake Forest, Mission Viejo, Rancho Santa Margarita, San Clemente, and the unincorporated communities of Coto de Caza, Ladera Ranch, and Las Flores. As described in the *State CEQA Guidelines* Section 15387 and defined by the United States Census Bureau, an "urbanized area" is a central city or a group of contiguous cities with a population of 50,000 or more people, together with adjacent densely populated areas having a population density of at least 1,000 people per square mile.[2] Because the City is located in an urbanized area, the project site is also located within an urbanized area. Further, surrounding land uses in the vicinity of the project site are representative of urban densities.

The project site has a General Plan land use designation of Planned Community. According to the City's General Plan Land Use Element (1991, revised 2014), the Planned Community land use designation denotes large areas of land under common ownership for the detailed planning and development of residential, commercial, industrial, institutional, recreational, or open space uses. There are also small portions of the project site designated as General Open Space and Community Park. The proposed land uses are consistent with these designations. Existing land uses surrounding the project site include office, commercial, and religious uses in the Ventanas Business Center to the north; Assisted Care Facilities and the Ortega Equestrian Center to the northeast and east; General Open Space and Open Space Recreational to the south and southeast; and General Commercial to the west (across I-5).

The project site is zoned as a Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP 78-01). The purpose of the Planned Community zone is to encourage the use of modern land planning and design techniques to create developments integrating a mixture of different types of land uses. Existing zoning classifications surrounding the project site include a Planned Community District (CDP 78-01) to the north and northeast (same zoning classification as the project site), Public and Institutional District and Office Commercial District to the south, General Open Space and Open Space Recreational to the south and southeast, and General Commercial to the west (across I-5).

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1 United States Census Bureau (Census Bureau). Mission Viejo-Lake Forest-San Clemente, CA Urbanized Area No. 57709. Website: https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua57709_mission_viejo--lake_forest--san_clemente_ca/DC10UA57709.pdf (accessed December 24, 2019).

2 Census Bureau. 2010 Census Urban Area FAQs. Website: https://www2.census.gov/geo/pdfs/reference/ua/2010ua_faqs.pdf?# (accessed December 24, 2019).

The proposed project is consistent with the existing General Plan land use and zoning designations.

4.1.4 Regulatory Setting

4.1.4.1 Federal Regulations

No federal policies or regulations pertaining to aesthetics are applicable to the proposed project.

4.1.4.2 State Regulations

Caltrans Scenic Highway Program. The California Department of Transportation (Caltrans) Scenic Highway Program protects the natural scenic beauty of the State's highways and corridors through its designated scenic highways throughout the State. Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Other considerations given to a scenic highway designation include how much of the natural landscape a traveler may see and the extent to which visual intrusions degrade the scenic corridor.

As described in Section 4.1, Aesthetics, of the IS/NOP (Appendix A of this EIR), no officially designated scenic highways are located in the vicinity of the project site.

4.1.4.3 Regional Regulations

No regional policies or regulations pertaining to aesthetics are applicable to the proposed project.

4.1.4.4 Local Regulations

City of San Juan Capistrano General Plan. The City of San Juan Capistrano General Plan was approved by the City Council in December 1999, with the exception of the Housing Element, which was updated and adopted by the City Council in January 2014. In May 2002, the City Council approved a General Plan Amendment, which included a variety of changes to several of the General Plan Elements.

The City's General Plan is the principal land use document guiding development within the City. The City's General Plan is a comprehensive plan that establishes goals, objectives, and policies intended to guide growth and development in the City. The General Plan also serves as a blueprint for development throughout the community and is the vehicle through which the community needs, desires, and aspirations are balanced. The San Juan Capistrano General Plan is the fundamental tool for influencing the quality of life in the City.

> ***Community Design Element.*** The Community Design Element (1999, revised 2002) addresses the conservation and enhancement of the visual quality of the City. The goals and policies in the Community Design Element aim to protect natural hillsides and features in the City (e.g., creeks and floodplains), preserve and enhance the historic character of the community, incorporate new development into existing developed neighborhoods, and maintain the community's "small-village" and "rural atmosphere."
>
> The following goals and policies applicable to the proposed project and related to aesthetics and scenic quality are presented in the Community Design Element:

Goal 1: Encourage and preserve a sense of place.

Policy 1.2: Encourage high-quality and human scale design in development to maintain the character of the City.

Goal 2: Preserve the historic character of the community.

Policy 2.1: Encourage development which complements the City's traditional, historic character through site design, architecture, and landscaping.

Goal 3: Preserve and enhance natural features.

Policy 3.1: Limit development of important natural characteristics such as ridgelines, unique hillside features and creeks.

Policy 3.3: Preserve and enhance scenic transportation corridors, including Interstate 5 and the railroad.

Policy 3.4: Preserve important viewsheds.

Conservation and Open Space Element. The Conservation and Open Space Element addresses the conservation and enhancement of the visual quality of the City. The goals and policies in the Community Design Element aim to protect natural hillsides and features in the City (e.g., creeks and floodplains), preserve and enhance the historic character of the community, incorporate new development into existing developed neighborhoods, and maintain the community's "small-village" and "rural atmosphere."

The following policies applicable to the proposed project and related to aesthetics and scenic quality are presented in the Community Design Element:

Policy 5.1: Encourage high-quality design in new development and redevelopment to maintain the low-density character of the City.

Policy 5.3: Ensure that no buildings will encroach upon any ridgeline designated for preservation.

Land Use Element. The Land Use Element (1999, revised 2014) presents goals and policies pertaining to how existing development is going to be maintained and enhanced and new development occur. The Land Use Element identifies the proposed distribution, location, and extent of land uses. The Land Use Element goals and policies directly affect the establishment and maintenance of existing neighborhoods, districts, corridors, and open spaces that distinguish and contribute to the City's livability, vitality, and image, while enhancing the City's existing setting through new development. A key ingredient to successful implementation of this vision is through the management and appropriate mix of land uses. To this end, a Land Use Map was adopted and included in the Land Use Element to guide future development decisions.

The following goals and policies applicable to the proposed project and related to aesthetics and scenic quality are presented in the Land Use Element:

Policy 2.2: Assure that new development is consistent and compatible with the existing character of the City.

Goal 7: Enhance and maintain the character of neighborhoods.

Policy 7.1: Preserve and enhance the quality of San Juan Capistrano neighborhoods by avoiding or abating the intrusion of non-conforming buildings and uses.

Policy 7.2: Ensure that new development is compatible with the physical characteristics of its site, surrounding land uses, and available public infrastructure.

San Juan Capistrano Municipal Code. The City's Municipal Code was adopted in 1980 and includes the following regulations related to aesthetics and scenic quality.

Zoning Code. The City of San Juan Capistrano Zoning Code, Title 9 of the Municipal Code, ensures consistency between the City's General Plan and proposed development. The Zoning Code identifies development standards for various land uses, which aim at regulating aesthetics and scenic quality.

Lighting Standards. Municipal Code Section 9-3.529 regulates lighting standards throughout the City. The purpose of the City's Lighting Standards is to maintain s small-village character while also providing for the safe movement of people and vehicles in the City. Recommended lighting levels are defined at minimum levels to allow for public safety and enhance buildings and landscaping to represent the desired atmosphere of the community.

4.1.5 Thresholds of Significance

The thresholds for aesthetics impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to aesthetics if it would:

Threshold 4.1.1: Have a substantial adverse effect on a scenic vista.

Threshold 4.1.2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

Threshold 4.1.3: 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?

Threshold 4.1.4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The Initial Study, provided as Appendix A, substantiates that there would be no impacts associated with Threshold 4.1.2 because no officially designated State Scenic Highways are located in the vicinity of the project site. In addition, the Initial Study substantiates that impacts associated with Thresholds 4.1.1 and 4.1.4 would be less than significant. The project would result in less than significant impacts on views of the surrounding hills from adjacent roadways and sidewalks due to a maximum proposed building height of approximately 40 feet (ft) and the prominence of surrounding hillsides. Additionally the proposed project would result in less than significant impacts related to light and glare because the project would not incorporate design features that would result in excessive lighting or the generation of glare on the site, and the project would comply with lighting standards established in Section 9-3-529 of the City's Municipal Code. These thresholds will not be addressed in the following analysis.

4.1.6 Project Impacts

Threshold 4.1.3: In non-urbanized areas, would the project 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?

Less Than Significant Impact. Construction of the proposed project would require excavation, grading, and construction activities. Construction activities would be visible to travelers along I-5 and Calle Arroyo, as well as visitors traveling along the San Juan Creek Trail. Construction activities would be short-term in nature, and all construction vehicles and equipment would be staged on the project site throughout the duration of the construction period. Visual impacts associated with construction would be temporary and would cease upon project completion. Therefore, construction impacts related to the degradation of the existing visual character of the project site would be less than significant, and no mitigation would be required.

The proposed project would allow for the development of the currently vacant project site with a residential community. All structures developed on the project site would be of either California Spanish or Farmhouse architectural styles. The architectural style and design of the proposed residences would be consistent with the visual character of the surrounding area, including the nearby 24 Hour Fitness facility, office uses, and senior apartments, which all have Spanish design elements such as red tile roofs.

The proposed project would incorporate ornamental landscaping along Calle Arroyo and Paseo Tirador, along the site's boundary with the shared 24 Hour Fitness, and along the southern boundary of the site. The project would also include decorative landscaping and a monument sign near the three proposed access points to the property. A variety of 24- and 36-inch box trees, shrubbery, and groundcover would be scattered throughout the site. The project would also include the installation of privacy walls to visually screen the project site from surrounding roadways and uses, including the adjacent 24 Hour Fitness facility. Privacy walls would also be installed within the interior of the site to visually screen private rear yards associated with on-site residences from Calle Arroyo and Paso Tirador as well as other on-site residences and open areas. The proposed project would be visible to pedestrians travelling along Calle Arroyo, the San Juan Creek Trail, the adjacent

24 Hour Fitness facility, and other nearby accessible areas. However, the installation of landscaping and privacy walls would help to partially screen the residential development from pedestrians in the project vicinity. The project site is also visible from the I-5 freeway. However, the finished grade of the project site will be approximately 7 ft lower than the freeway grade. Therefore, although the proposed project and any associated perimeter or sound walls will be visible, the proposed project would not substantially block views of the project site or more distant views from the I-5 freeway. Views of the Santa Ana Mountains beyond would be preserved. Overall, the architectural design features and landscaping proposed as part of the project would ensure that the site's visual character would not be degraded and impacts would be less than significant.

As discussed in detail below, project implementation would not conflict with applicable zoning and General Plan regulations governing scenic quality. Additionally, as discussed above, implementation of the proposed project would not degrade the existing visual character or quality of public views of the project site and its surroundings.

Zoning. The project site is currently zoned as a Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP 78-01). This zoning classification allows for the use of modern land planning and design techniques to create developments integrating a mixture of different types of land uses. The CDP 78-01 zone allows for Very High Density residential development (18.1–30.0 du/ac). The residential density of the proposed project would total 8.2 du/ac, which is substantially lower than the maximum of 30.0 du/ac allowed on the site under CDP 78-01. As such, implementation of the proposed project would not necessitate a zone change.

Because the project will include residential units restricted to households of moderate income, the Project Applicant will request incentives, concessions, and waivers from certain development standards. In total, 14 of the townhomes, or approximately 10.6 percent of the total units, would be designated as restricted affordable units. The project is therefore entitled to one incentive or concession under the State density bonus law and the City's affordable housing ordinance. The project is also entitled to waiver of development standards as necessary to prevent physical preclusion of the project to the extent those waivers do not have a specific adverse impact upon health, safety, the physical environment, or a designated historical resource. The concession requested by the Project Applicant would negate the requirement that the second-story floor area not exceed 80 percent of the first-story floor area.

Imposition of all of the design standards applicable to the project site would result in a significant reduction of the floor area and the number of units the project proposes to yield, making it infeasible to include restricted affordable units. Construction of the project, including the designated affordable units, would therefore be physically precluded if certain City development standards are applied. The Project Applicant will therefore request waiver of those standards as permitted by the State density bonus law and the City's affordable housing ordinance. The requested waivers will allow a building separation of 8 ft in lieu of the otherwise required 20 ft; a 0 ft setback from the property line between the site and Assessor's Parcel Number (APN) 666-131-08, where the City of San Juan Capistrano water well is located; a 10 ft setback from the property line between the site and the property to the north, which has been

developed with a 24 Hour Fitness, rather than 20 ft as required under the zoning code; and the elimination of recreational vehicle parking spaces.

Section 9-3.301 of the Municipal Code outlines permitted uses and minimum development standards allowed in residential zones. One purpose of these regulations is to ensure compliance with appropriate standards related to aesthetics and scenic quality. According to CDP 78-01, design standards for the project site are governed by Planning Sectors B-3 and C. Table 4.1.A shows the proposed project's consistency with development standards outlined in CDP 78-01.

Table 4.1.A: Ortega Planned Community Development Standards Consistency Analysis

Development Standards	Proposed Project Consistency
CDP 78-01 Planning Sector B-3	
Maximum Density: 30 du/ac	**Consistent.** The project proposes a density of 8.2 du/ac, which would not exceed the maximum allowable density of 30 du/ac. Therefore, the proposed project is consistent with the maximum density requirement in CDP 78-01 Planning Sector B-3.
Minimum Lot Area: 1 acre	**Consistent.** The project site is 16.09 acres in size, which exceeds the minimum required lot area of 1 acre. Therefore, the proposed project is consistent with the minimum lot area requirement in CDP 78-01 Planning Sector B-3.
Minimum Street Frontage: 150 ft	**Consistent.** The project proposes a street frontage of approximately 635 ft. Therefore, the proposed project would be consistent with the minimum street frontage requirement in CDP 78-01 Planning Sector B-3.
Two-Story Minimum Front Yard: 20 ft	**Consistent.** The proposed residential development would include a minimum of 20 ft front yard setbacks. Therefore, the proposed project is consistent with the minimum front yard requirement in CDP 78-01 Planning Sector B-3.
Two-Story Minimum Side Yard: 20 ft	**Consistent.** The proposed residential development would include a minimum of 20 ft side yard setbacks, with exception to two units that are proposed to be located 0 ft from APN 666-131-08, where the City of San Juan Capistrano water well is located, and a 10 ft setback from the property line between seven units on the site and the property to the north, which has been developed with a 24 Hour Fitness. Reducing the setbacks will allow adequate space for construction of the planned 14 restricted affordable units. Under the provisions of Government Code Section 65915(e)(1), the City must therefore approve the waiver requested in order to prevent the physical preclusion of including affordable units and applying derivative incentives. Therefore, the proposed project is consistent with the minimum side yard requirement in CDP 78-01 Planning Sector B-3.
Two-Story Minimum Rear Yard: 20 ft	**Consistent.** The proposed residential development would include a minimum of 20 ft rear yard setbacks. Therefore, the proposed project is consistent with the minimum rear yard requirement in CDP 78-01 Planning Sector B-3.
Two-Story Maximum Lot Coverage Ratio: 35%	**Consistent.** The proposed residential development would cover 13% of the lot, which does not exceed the maximum lot coverage ratio of 35%. Therefore, the proposed project is consistent with the maximum lot coverage requirement in CDP 78-01 Planning Sector B-3.
Two-Story Maximum Second-Floor/First-Floor Ratio: 80%	**Consistent.** The proposed project would be entitled to a FAR of 0.93:1 in lieu of the otherwise maximum permitted FAR of 0.80:1 if an adequate proportion of restricted affordable units is provided and a concession is warranted as a part of the project. In total, 14 of the townhomes, or approximately 10.6 percent of the total units, would be designated as restricted affordable units. The project is therefore entitled to one incentive or concession under the State density bonus law and the City's affordable housing ordinance. Therefore, upon project approval, the proposed project would be consistent with the maximum second-floor/first-floor ratio in CDP 78-01 Planning Sector B-3.

Table 4.1.A: Ortega Planned Community Development Standards Consistency Analysis

Development Standards	Proposed Project Consistency
Maximum Building Height: 35 ft	**Consistent.** The project proposes to build three-story townhomes with a maximum height of approximately 40 ft, which exceeds the maximum building height requirement of 35 ft. However, the areas that exceed the 35 ft height limit consist of roof gables and non-living attic space, which are solely included as articulation of the roofline. The City's Municipal Code permits architectural projections to encroach into the height limit, and the encroachment of roof gables 5 ft above the height limit is approvable, with 40 ft maximum building heights allowed. Furthermore, the project also proposes this standard to be considered a waiver under the Density Bonus regulations, which were found to be met. Therefore, the proposed project is consistent with the maximum building height requirements in CDP 78-01 Planning Sector B-3.
CDP 78-01 Planning Sector C	
Minimum Lot Size: 15,000 sf	**Consistent.** The project site is approximately 16.09 acres, or 700,880 sf, which exceeds the minimum lot size requirement of 15,000 sf. Therefore, the proposed project is consistent with the minimum lot size requirements in CDP 78-01 Planning Sector C.

Sources: City of San Juan Capistrano, Ortega Planned Community (CDP) 78-01, Planning Sectors B-3 and C;
City of San Juan Capistrano Municipal Code Sections 9-3.301 and 9-3.535.

APN = Assessor's Parcel Number
CDP = Comprehensive Development Plan
du/ac = dwelling units per acre
FAR = Floor Area Ratio
ft = foot/feet
sf = square foot/feet

As shown in Table 4.1.A, the proposed project would be consistent with development standards required by CDP 78-01 following approval of the waiver discussed above.

General Plan. According to the General Plan Land Use Element (1999, revised 2014), the project site currently has a General Plan land use designation of Planned Community. The Planned Community designation allows for flexibility in the design of a development and for the mixing of uses such as residential, commercial, industrial, public/institutional, recreation, and open space. There are also small portions of the project site designated as General Open Space and Community Park. The proposed land uses are consistent with these designations, and no General Plan Amendment would be required for the proposed residential development.

The City's General Plan includes goals and policies related to urban design. As shown in Table 4.1.B, below, the project would be consistent with applicable General Plan goals and policies related to aesthetics and scenic quality.

Table 4.1.B: General Plan Consistency Analysis

Goals and Policies	Proposed Project Consistency
Community Design Element	
Community Design Goal 1: Encourage and preserve a sense of place.	**Consistent.** The proposed residential development would be designed with California Spanish- and Farmhouse- style elevations for both the single-family residential units and townhomes. Incorporation of this architectural style would ensure the project would be visually and historically consistent with San Juan Capistrano's Mission and Spanish character and would preserve a sense of place. Additionally, the multi-use trail would allow equestrian use and would complement the City's equestrian heritage, thereby preserving a sense of place established in the City. Therefore, the proposed project would be consistent with Community Design Goal 1.
Community Design Policy 1.2: Encourage high-quality and human scale design in development to maintain the character of the City.	**Consistent.** The proposed residential development would be constructed using high-quality building materials. By incorporating both farmhouse style and a California Spanish architectural design, the project would be visually consistent with surrounding development and the general character of San Juan Capistrano. Further, the multi-use trail and associated recreation amenities proposed as part of the project would incorporate human-scale features, such as gathering areas, a climbing boulder, play areas, an equestrian hitching post, and exercise stations. Therefore, the proposed project would be consistent with Policy 1.2 in the Community Design Element.
Community Design Goal 2: Preserve the historic character of the community.	**Consistent.** The proposed residential development would be designed with California Spanish- and Farmhouse- style elevations for both the single-family residential units and townhomes. Incorporation of this architectural style would ensure the project would be visually and historically consistent with San Juan Capistrano's Mission and Spanish character. Additionally, the multi-use trail would allow equestrian use and would complement the City's equestrian heritage. Therefore, the proposed project would be consistent with Community Design Goal 2.
Community Design Policy 2.1: Encourage the development which complements the City's traditional, historic character through site design, architecture, and landscaping.	**Consistent.** The proposed residential development would be designed with California Spanish- and Farmhouse- style elevations for both the single-family residential units and townhomes. Incorporation of this architectural style would ensure the project would be visually and historically consistent with San Juan Capistrano's Mission and Spanish character. Additionally, proposed improvements to the San Juan Creek Trail would include a multi-use trail and associated recreation amenities. Recreation amenities and landscaping improvements proposed as part of the project would enhance the existing natural features of the adjacent San Juan Creek. Further, the multi-use trail would allow equestrian use and would complement the City's equestrian heritage. Therefore, the proposed project would be consistent with Community Design Policy 2.1.
Community Design Goal 3: Preserve and enhance natural features.	**Consistent.** The project site is located adjacent to San Juan Creek; however, the proposed residential development is located in a developed portion of San Juan Capistrano (directly north of the San Juan Creek) and would not infringe on the natural characteristics of the creek. Recreation amenities and landscaping improvements proposed as part of the project would preserve and enhance the existing natural features of San Juan Creek and would allow improved public access to the San Juan Creek area. Therefore, the proposed project would be consistent with Community Design Goal 3.

Table 4.1.B: General Plan Consistency Analysis

Goals and Policies	Proposed Project Consistency
Community Design Policy 3.1: Limit development of important natural characteristics such as ridgelines, unique hillside features and creeks.	**Consistent.** The existing project site is primarily characterized by dirt and scattered ruderal vegetation and is relatively flat with a slight slope to the east/southeast. Although the project site is located adjacent to San Juan Creek, the proposed residential development is located in a developed portion of San Juan Capistrano and would not infringe on the natural characteristics of the creek. As part of the project, proposed improvements to the San Juan Creek Trail would improve pedestrian, cyclist, and equestrian access and use of the trail. Further, proposed recreation amenities and landscaping improvements would enhance the existing natural features of San Juan Creek. Therefore, the proposed project would be consistent with Community Design Policy 3.1.
Community Design Policy 3.3: Preserve and enhance scenic transportation corridors, including Interstate 5 and the railroad.	**Consistent.** The project site is visible from I-5. Currently, views of the project site from I-5 consist of a vacant lot, as well as views of adjacent commercial uses and the Ortega Equestrian Center. Following project implementation, the finished grade of the project site will be approximately 7' lower than the freeway grade. Therefore, the project site, and any associated perimeter or sound walls, would be visible but would not significantly block views of the project site or more distant views from the freeway. Views of the Santa Ana Mountains beyond would be preserved. All structures developed on the project site would be of either California Spanish or Farmhouse architectural styles. As such, the architectural style and design of the proposed residences would be consistent with the visual character of the surrounding area, including the nearby 24 Hour Fitness facility and senior apartments. Further, improvements associated with the proposed project are anticipated to enhance views of the project site from I-5 and would serve to provide increased visual cohesion between the project site and the surrounding area. Therefore, the proposed project would be consistent with Community Design Policy 3.3.
Community Design Policy 3.4: Preserve important viewsheds.	**Consistent.** The project site contains scenic views of the Colinas Hills, Saddleback Mountain, and the Santa Ana Mountains, and is near public scenic corridors associated with San Juan Creek Road and La Novia Avenue. Implementation of the proposed project would not substantially affect viewsheds in the vicinity of the project due to the prominence of the surrounding hillsides. Further, landscaping proposed throughout the project site would enhance and frame important viewsheds. Therefore, the proposed project would be consistent with Community Design Policy 3.4.
Conservation & Open Space Element	
Conservation & Open Space Policy 5.1: Encourage high-quality design in new development and redevelopment to maintain the low-density character of the City.	**Consistent.** The proposed residential development would be constructed using high-quality building materials. The project would be designed with California Spanish- and Farmhouse-style architectural influences, and both designs would feature contemporary architectural elements, multi-level rooflines, and a complementary color scheme. The California Spanish-style units would feature tile roofs and accents, wrought-iron window planters, painted exteriors, steel garage doors, and a cement plaster exterior finish. The Farmhouse-style units would feature asphalt shingle roofing, wooden window planters and trim, horizontal siding, steel garage doors, and a cement plaster exterior finish. Further, the proposed project includes open space and recreation amenities, such as a multi-use trail, gathering areas, a climbing boulder, play areas, an equestrian hitching post, and exercise stations, which are representative of the low-density and equestrian character of San Juan Capistrano. Therefore, the proposed project would be consistent with Conservation & Open Space Policy 5.1.

Table 4.1.B: General Plan Consistency Analysis

Goals and Policies	Proposed Project Consistency
Conservation & Open Space Policy 5.3: Ensure that no buildings will encroach upon any ridgeline designated for preservation.	**Consistent.** According to Figure COS-2, Major Ridgelines, in the Conservation & Open Space Element, there are no major ridgelines in the vicinity of the project site. Therefore, the proposed project would be consistent with Conservation & Open Space Policy 5.3.
Land Use Element	
Land Use Policy 2.2: Assure that new development is consistent and compatible with the existing character of the City.	**Consistent.** The proposed residential development would be designed with California Spanish- and Farmhouse- style designs, which would be visually consistent with existing Mission and Spanish character of San Juan Capistrano. Further, the styles are cohesive and would provide for consistent design throughout the project site. Therefore, the proposed project would be consistent with Land Use Policy 2.2.
Land Use Goal 7: Enhance and maintain the character of neighborhoods.	**Consistent.** The proposed project is surrounded by a variety of residential, commercial, recreational, and open space land uses. The proposed project would allow for the development of up to 132 residential units and recreational amenities on the project site. Additionally, the project would include a 20 ft wide multi-use trail along the southern boundary of the site, which would connect recreational amenities on the site (i.e., the gathering areas, climbing boulder, play areas, equestrian hitching post, and exercise stations) to off-site amenities (e.g., the Ortega Equestrian Center and Cook La Novia Park). As such, the development of the proposed project would enhance and maintain the quality of the City's neighborhoods because it would be compatible with surrounding land uses. Therefore, the proposed project would be consistent with Land Use Goal 7.
Land Use Policy 7.1: Preserve and enhance the quality of San Juan Capistrano neighborhoods by avoiding or abating the intrusion of non-conforming buildings and uses.	**Consistent.** The proposed project is surrounded by a variety of residential, commercial, recreational, and open space land uses. The proposed project would allow for the development of up to 132 residential units and recreational amenities on the project site. Additionally, the project would include a 20 ft wide multi-use trail along the southern boundary of the site, which would connect recreational amenities on the site (i.e., the gathering areas, climbing boulder, play areas, equestrian hitching post, and exercise stations) to off-site amenities (e.g., the Ortega Equestrian Center and Cook La Novia Park). Further, the proposed project would be consistent with the site's General Plan land use designations, and would also be consistent with development standards required by CDP 78-01 following approval of a concession and waivers related to affordable housing incentives. As discussed in Table 4.1.A, above, the proposed concession and waivers would ensure the project's consistency with development standards required by CDP 78-01. The concession and waivers would not result in the intrusion of non-conforming buildings and uses. For the reasons stated above, the development of the proposed project would preserve and enhance the quality of the City's neighborhoods because it would not introduce incompatible land uses. Therefore, the proposed project would be consistent with Land Use Policy 7.1.
Land Use Policy 7.2: Ensure that new development is compatible with the physical characteristics of its site, surrounding land uses, and available public infrastructure.	**Consistent.** The existing project site is primarily characterized by dirt and scattered ruderal vegetation and is relatively flat with a slight slope to the east/southeast. The proposed project is surrounded by a variety of residential, commercial, recreational, and open space land uses. The proposed project would allow for the development of up to 132 residential units and recreational amenities on the project site. Additionally, the project would include a 20 ft wide multi-use trail along the southern boundary of the site, which would connect recreational amenities on the site (i.e., the gathering areas, climbing boulder, play areas, equestrian hitching post, and exercise stations) to off-site amenities (e.g., the Ortega Equestrian Center and Cook La Novia Park). Further, the project site receives domestic water service, sewer service, and storm drain service from the City of San Juan Capistrano Utilities Department. As part of the project, several utilities line improvements (including water, private recycled

Table 4.1.B: General Plan Consistency Analysis

Goals and Policies	Proposed Project Consistency
	water, well water, sewer, and storm drains) would be installed on the project site; however, the project site would be compatible with the available public infrastructure because project implementation would not result in significant impacts to utilities and service systems (as discussed in Section 4.19 of the IS/NOP [provided as Appendix A of this EIR]). For the reasons stated above, development of the proposed project would be compatible with the physical characteristics of its site, surrounding land uses, and available public infrastructure. Therefore, the proposed project would be consistent with Land Use Policy 7.2.

Sources: San Juan Capistrano General Plan Community Design Element (1999, revised 2002); Conservation and Open Space Element (1999, revised 2002); and Land Use Element (1999, revised 2014).
CDP = Comprehensive Development Plan
ft = foot/feet
I-5 = Interstate 5
IS/NOP = Initial Study/Notice of Preparation

As shown in Table 4.1.B, the project would be consistent with the General Plan goals and policies related to aesthetics and scenic quality.

Summary. The proposed project would not degrade the character or quality of the project site, nor would the proposed project contribute to an overall degradation of the visual character or quality of the surrounding area. Further, the proposed residential development is consistent with all applicable General Plan goals and policies governing aesthetics and scenic quality.

Upon approval of the waivers requested as part of the project, the proposed residential development would be consistent with all applicable zoning regulations governing aesthetics and scenic quality on the property. Therefore, the proposed project would not substantially degrade the visual character of the project site nor conflict with applicable zoning and other regulations governing scenic quality, and no mitigation would be required.

4.1.7 Level of Significance Prior to Mitigation

There would be no potentially significant impacts related to aesthetics.

4.1.8 Regulatory Compliance Measures and Mitigation Measures

4.1.8.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the proposed project.

4.1.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.1.9 Level of Significance after Mitigation

There would be no significant unavoidable adverse impacts of the proposed project related to aesthetics. No mitigation would be required.

4.1.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for aesthetics. The cumulative impact area for aesthetics related to the proposed project is the City of San Juan Capistrano. Several residential and commercial development projects are approved and/or pending within the City. Each of these projects, as well as all proposed development in the City, would be subject to its own consistency analysis for policies and regulations governing scenic quality and would be reviewed for consistency with General Plan goals and policies and Zoning Code development standards applicable to each site.

For the reasons outlined above in Section 4.1.6, Project Impacts, implementation of the proposed project would not result in a significant cumulative impact related to aesthetics. The proposed project and all related projects are required to adhere to City and State regulations designed to reduce and/or avoid impacts related to aesthetics. With compliance with these regulations, impacts related to aesthetics would be less than cumulatively significant. Therefore, implementation of the proposed project would not result in a significant cumulative impact related to aesthetics.

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4.2 AIR QUALITY

This section discusses existing air quality, summarizes existing air quality regulations, and evaluates potential air quality impacts associated with the proposed Tirador Residential Development Project (proposed project). This section summarizes the pertinent information and findings provided in the *Air Quality and Greenhouse Gas Emissions Assessment* (LSA 2020) that was prepared for the project. The *Air Quality and Greenhouse Gas Emissions Assessment* is provided in Appendix B of this Draft Environmental Impact Report (EIR).

4.2.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. One of the comment letters included comments related to Air Quality.

The letter from South Coast Air Quality Management District (SCAQMD) received on December 3, 2019, recommends the use of SCAQMD's *CEQA Air Quality Handbook* (1993, currently being revised), the latest version of California Emissions Estimator Model (CalEEMod), and SCAQMD's regional and localized significance thresholds in the air quality analysis; recommends the preparation of a mobile health risk assessment (HRA) if the proposed project would generate or attract vehicular trips, especially heavy-duty diesel-fueled vehicles; and suggests potential mitigation measures that could be applied if potentially significant air quality impacts are identified.

4.2.2 Methodology

The *Air Quality and Greenhouse Gas Emissions Assessment* (LSA 2020) was prepared for the proposed project. Air emissions from construction and operation of the proposed project were evaluated in accordance with methodologies recommended by the California Air Resources Board (CARB) and the SCAQMD. The latest version of CalEEMod (v2016.3.2), which was released by the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air quality districts on October 17, 2017, was used to determine construction and operational air quality emissions of the proposed project. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were primarily calculated using CalEEMod model defaults for Orange County. However, the length of construction is based on estimates provided by the Project Applicant; construction of the proposed project is anticipated to start in 2021 and is estimated to last approximately 20 months. Operational air pollutant emissions were based on area source and energy use emissions as well as the estimated traffic trip generation rates from the *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (TIA) (LSA 2019) (Appendix H), which account for project-related vehicle emissions. Project-related emissions were modeled under the assumption that construction of the proposed project would occur in 11 phases (as shown in Table E of the *Air Quality and Greenhouse Gas Emissions Assessment*). The construction equipment list (as shown in Table F of the *Air Quality and Greenhouse Gas Emissions Assessment*) is used in the CalEEMod model to calculate on-site emissions for each construction phase.

4.2.3 Existing Environmental Setting

San Juan Capistrano, which includes the project site, is within the 6,745-square-mile (sq mi) South Coast Air Basin (Basin), which is under SCAQMD jurisdiction. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The air quality in the region is influenced by many factors, including topography, meteorology, and existing air pollutant sources. Ambient air quality is typically characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The Basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following discussion describes the characteristics of the Basin and local air quality conditions in the vicinity of the project site.

4.2.3.1 Regional Climate

Climate in the Basin is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the Basin, which lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a climate that is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted; however, periods of extremely hot weather, winter storms, or Santa Ana wind conditions do occur.

The annual average temperatures range from the low 60s to the high 80s, measured in degrees Fahrenheit (°F). Coastal areas have less variability in annual minimum and maximum temperatures as compared to inland areas. January is typically the coldest month, and August is typically the warmest month in this area of the Basin.

Rainfall in the Basin varies by season and year. Most rainfall occurs between November and April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains.

Although the climate of the Basin can be characterized as semi-arid climate, the air near the land surface is typically moist due to the presence of a marine layer, or a shallow layer of sea air. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore 6 miles per hour (mph) daytime breeze and an offshore 3 mph nighttime breeze. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly (Santa Ana) winds from the mountains and deserts northeast of the Basin. Summer wind flow patterns represent worst-case conditions because this is the period of higher temperatures and more sunlight, which result in ozone (O_3) formation.

Temperature normally decreases with altitude, and a reversal of this atmospheric state, where temperature increases with altitude, is called an inversion. The height from the Earth to the inversion base is known as the mixing height. Persistent low inversions and cool coastal air tend to create morning fog and low stratus clouds. Cloudy days are less likely in the eastern portions of the Basin and are about 25 percent more likely along the coast. The vertical dispersion of air pollutants in the Basin is limited by temperature inversions in the atmosphere close to the Earth's surface.

Inversions are generally lower in the nighttime when the ground is cooler than during daylight hours when the sun warms the ground and, in turn, the surface air layer. As this heating process continues, the temperature of the surface air layer approaches the temperature of the inversion base, causing heating along its lower edge. If enough warming takes place, the inversion layer becomes weak and opens up to allow the surface air layers to mix upward. This can be seen in the middle-to-late afternoon on a hot summer day when the smog appears to clear up suddenly. Winter inversions typically break earlier in the day, preventing excessive smog buildup.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversions or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problem is the accumulation of carbon monoxide (CO) and nitrogen oxides (NOx) due to extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NOx to form photochemical smog.

4.2.3.2 Criteria Air Pollutants

Certain air pollutants have been recognized as causing notable health problems and consequential damage to the environment either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Criteria pollutants are regulated through the development of human health-based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are discussed below.

- **Carbon Monoxide (CO):** CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels (e.g., gasoline or wood). CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Health effects of CO exposure include chest pain with exercise and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin. Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

- **Sulfur Dioxide (SO_2):** SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere primarily from the burning of high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as oxides of sulfur (SO_X). A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, an increase in resistance to air flow as well as

a reduction in breathing capacity leading to severe breathing difficulties are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2.

- **Oxides of Nitrogen (NO_X):** NO_X consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from 1 to 7 days for NO and NO_2 and to 170 years for N_2O. NO_X are typically created during combustion processes and are major contributors to smog formation and acid deposition. Of the seven types of NO_X compounds, NO_2 is the most abundant in the atmosphere. NO_2 absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Because ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors. An increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves that are higher than ambient levels found in Southern California. An increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy individuals. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) because they are more susceptible to NO_2 effects than healthy individuals.

- **Ozone (O_3):** O_3 is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and NO_X, both of which are byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Individuals exercising outdoors, children, and people with preexisting lung disease (e.g., asthma and chronic pulmonary lung disease) are the most susceptible to O_3 effects.

- **Particulate Matter Less Than 10 Microns in Size (PM_{10}):** PM_{10} consists of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inch or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM_{10} also causes visibility reduction. A consistent correlation between elevated ambient coarse particulate matter levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks, and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. The elderly, people with pre-existing respiratory or cardiovascular disease, and children are more susceptible than adults to the effects of high levels of PM_{10}.

- **Particulate Matter Less Than 2.5 Microns in Size ($PM_{2.5}$):** $PM_{2.5}$ consists of tiny solid or liquid particles that are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates formed from

NO_X release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. In addition to the health effects of PM_{10}, discussed above, daily fluctuations in $PM_{2.5}$ concentration levels have been related to hospital admissions for acute respiratory conditions in children, school and kindergarten absences, decreased lung growth and respiratory volumes in children, and increased medication use in children and adults with asthma. The elderly, people with pre-existing respiratory or cardiovascular disease, and children are more susceptible to the effects of high levels of $PM_{2.5}$.

- **Lead (Pb):** Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence. Lead can be stored in the bone from early-age environmental exposure, and elevated lead levels in blood can occur due to a breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland), and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of their mothers being previously exposed to lead. In adults, increased lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death; however, it appears that lead has no direct effect on the respiratory system.

- **Volatile Organic Compounds (VOCs) and Reactive Organic Gases (ROG):** VOCs are hydrocarbon compounds (i.e., any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity (i.e., they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes). VOCs often have an odor (e.g., gasoline, alcohol, and the solvents used in paints). Exceptions to the VOC designation include: CO, carbon dioxide (CO_2), carbonic acid, metallic carbides or carbonates, and ammonium carbonate. Similar to VOCs, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROGs and NO_X react in the presence of sunlight. The SCAQMD uses the terms VOC and ROG interchangeably. VOCs and ROGs are considered criteria pollutants since they are a precursor to O_3, which is a criteria pollutant. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, the VOCs and ROGs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

4.2.3.3 Regional Air Quality

The CARB coordinates and oversees both State and federal air pollution control programs in the State. The CARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the United States Environmental Protection Agency (USEPA) and local air quality districts. CARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by CARB and the USEPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent three calendar years compared with the ambient air quality standards (AAQS). As discussed in further detail in Section 4.2.4, Regulatory Setting, the federal government and the State of California have both established health-based AAQS for the criteria air pollutants. Areas that meet the AAQS are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas.

Attainment areas may be:

- Attainment/unclassified ("unclassifiable" in some lists), which have never violated the air quality standard of interest or do not have enough monitoring data to establish attainment or nonattainment status;

- Attainment/maintenance (National Ambient Air Quality Standards [NAAQS] only), which violated an NAAQS that is currently in use (was nonattainment) in or after 1990, but now attains the standard and is officially re-designated as attainment by the USEPA with a maintenance State Implementation Plan (SIP); or

- Attainment (usually only for California Ambient Air Quality Standards [CAAQS], but sometimes for NAAQS), which have adequate monitoring data to show attainment, have never been nonattainment, or, for NAAQS, have completed the official maintenance period.

Additional restrictions are imposed on nonattainment areas as required by the USEPA. The air quality data collected from monitoring stations are also used to monitor progress in attaining air quality standards. Table 4.2.A lists the attainment status for the criteria pollutants in the Basin.

4.2.3.4 Local Air Quality

The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the Mission Viejo station, which monitors air pollutant data for ozone, CO, nitrogen dioxide (NO_2), and SO_2, PM_{10} and $PM_{2.5}$. Nitrogen dioxide and SO_2 data were obtained from the Costa Mesa Monitoring Station. The air quality trends from these two stations are used to represent the ambient air quality in the vicinity of the project site.

Table 4.2.A: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1-hour	Nonattainment	N/A
O_3 8-hour	Nonattainment	Extreme Nonattainment[1]
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Unclassified/Attainment (1-hour) Attainment/Maintenance (Annual)
SO_2	Attainment	Unclassified/Attainment
Lead	Attainment[2]	Unclassified/Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB. Air Quality Standards and Area Designations. Website: http://www.arb.ca.gov/desig/desig.htm (accessed November 2019).

[1] Area has a design value of 0.175 ppm and above.

[2] Except in Los Angeles County.

CARB = California Air Resources Board
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ppm = parts per million
SO_2 = sulfur dioxide

Between 2016 and 2018, the ambient air quality data indicate that CO, PM_{10}, $PM_{2.5}$, NO_2, and SO_2 levels are consistently below the relevant State and federal standards. The State 1-hour O_3 standard was exceeded between 2 and 5 times and the State 8-hour O_3 standard was exceeded between 8 and 27 times between 2016 and 2018. The Federal 8-hour O_3 standard was exceeded between 9 and 25 times between 2016 and 2018. The State 24-hour and annual PM_{10} standards were exceeded at least once between 2017 and 2018.

4.2.3.5 Sensitive Receptors

Certain land uses are considered sensitive to air quality. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The closest off-site sensitive receptors are the residential and school land uses located northeast of the proposed project site. The nearest existing residential units (i.e., assisted living residences) are approximately 220 feet (ft) northeast of proposed project boundary. The nearest school to the project site is St. Margaret's Episcopal School, which is located 1,000 ft northeast of the project site.

4.2.3.6 Existing Project Site Emissions

The project site is currently undeveloped and vacant. The existing project site is characterized by dirt and scattered ruderal vegetation, is irregular in shape, and is relatively flat with a slight slope to the east/southeast. There are no current emissions associated with the undeveloped site.

4.2.4 Regulatory Setting

4.2.4.1 Federal Regulations

Clean Air Act. The USEPA is responsible for implementing the federal Clean Air Act (CAA). The federal CAA was first enacted in 1955, and has been amended numerous times in subsequent years (i.e., 1963, 1965, 1967, 1970, 1977, and 1990). The CAA authorizes the federal government to set federal air quality standards for pollutant emissions. The CAA also specifies future dates for achieving compliance with the NAAQS. Pursuant to the federal CAA, the USEPA is responsible for setting and enforcing the NAAQS for six major pollutants (O_3, CO, NO_X, SO_2, PM_{10}, $PM_{2.5}$, and lead), which are termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt an NAAQS for $PM_{2.5}$. All air basins have been formally designated as attainment or non-attainment for each NAAQS. The NAAQS attainment status for the Basin was previously summarized in Table 4.2.A, above.

4.2.4.2 State Regulations

California Clean Air Act. Assembly Bill (AB) 2595, the California Clean Air Act (CCAA), was signed into law in 1988 and requires all areas of the State to achieve and maintain the CAAQS. The CCAA mandates achievement of the maximum degree of emission reductions possible from vehicular and other mobile sources in order to attain the CAAQS by the earliest practical date. The CARB, which became part of the California Environmental Protection Agency (Cal/EPA) in 1991, is responsible for ensuring implementation of the CCAA and federal CAA and for regulating emissions from consumer products and motor vehicles within California. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the Basin because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS. All air basins have been formally designated as attainment or non-attainment for each CAAQS.

Non-attainment areas are required to prepare Air Quality Management Plans (AQMPs) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;

- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;

- Significant use of low emission vehicles by fleet operators; and

- Sufficient control strategies to achieve a 5 percent or more annual reduction in emissions or 15 percent or more in a period of 3 years for ROGs, NO_X, CO, and PM_{10}. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5 percent per year under certain circumstances.

California State Implementation Plan. The CAA mandates that each state submit and implement State Implementation Plans (SIPs). States containing areas violating the national ambient air quality standards are required to revise their SIPs to include additional control measures aimed at reducing air pollution. The SIP is required to include strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA reviews all SIPs to determine conformance with the CAA.

State law mandates CARB to serve as the lead agency for all purposes related to SIPs, which are prepared by local air quality districts and other agencies and submitted to CARB for review and approval. Subsequently, CARB forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The 2016 Air Quality Management Plan (AQMP) is the SIP for the Basin and is a regional blueprint for implementing air quality standards within areas under the SCAQMD jurisdiction, which is discussed further below.

4.2.4.3 Regional Regulations

South Coast Air Quality Management District. The SCAQMD is the air pollution control agency for Orange County, as well as the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the Basin. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects within the Basin are subject to SCAQMD rules and regulations in effect at the time of construction.

As stated previously, the AQMP is the SIP for the Basin. The AQMP is a regional blueprint for implementing air quality standards within the Basin and some portions of the Salton Sea Air Basin that are under SCAQMD's jurisdiction. The AQMP asserts that the most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. Additionally, the AQMP relies on partnerships between governmental agencies at the federal, state, regional, and local level. These agencies, which are comprised of USEPA, CARB, local governments, Southern California Association of Governments (SCAG) and the SCAQMD, are the primary agencies that implement the AQMP programs. The AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest Regional Transportation Plan/Sustainable Communities

Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts, as well as includes integrated strategies and measures to meet the NAAQS.

The SCAQMD has established regional and localized significance thresholds for regulated pollutants, which are discussed below.

- **Regional Significance Thresholds:** The SCAQMD regional significance thresholds for regulated pollutants are shown in Table 4.2.B. Pursuant to SCAQMD guidelines, these thresholds of significance are used to assess the impacts of project-related construction and operational emissions on regional and local ambient air quality. According to SCAQMD guidelines, any projects with daily emissions that exceed the regional thresholds of significance should be considered as having an individually and cumulatively significant air quality impact.

Table 4.2.B: SCAQMD Regional Significance Thresholds

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

Source: *Air Quality and Greenhouse Gas Emissions Analysis* (LSA 2020).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gas
SO_2 = sulfur dioxide

- **Localized Significance Thresholds (LSTs):** The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008 (SCAQMD 2008a) recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors from emissions of CO, NOx, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that would not be expected to result in an exceedance of the NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the project's Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA is Capistrano Valley (SRA 21). Sensitive receptors near the project site include existing residential homes located approximately 220 ft northeast of the project boundary.

  Based on the SCAQMD recommended methodology[1] and the construction equipment planned, no more than 5 acres[1] would be disturbed on any one day; thus, the 5-acre LSTs have been used

[1] SCAQMD. *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*. Website: www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf (accessed April 2018).

for construction emissions. On-site operational emissions would occur from stationary and mobile sources. On-site vehicle emissions are the largest source of emissions and it is assumed that the on-site travel routes for the proposed project would occupy up to 5 acres of the surface area. Therefore, the 5-acre thresholds would apply during project operations.

Table 4.2.C shows the LSTs for a 5-acre project site in SRA 21 with sensitive receptors located within 25 meters of the project site.[2]

Table 4.2.C: SCAQMD Local Significance Thresholds

Project Size	Emissions Threshold (lbs/day) Construction / Operations			
	NO_X	CO	PM_{10}	$PM_{2.5}$
5 acre	193 / 193	2,327 / 2,327	41 / 10	13 / 3.3

Source: *Air Quality and Greenhouse Gas Emissions Analysis* (LSA 2020).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

4.2.4.4 Local Regulations

City of San Juan Capistrano General Plan. The City of San Juan Capistrano General Plan was approved by the City Council in December 1999, with the exception of the Housing Element, which was updated and adopted by the City Council in January 2014 and further revised in September 2017. In May 2002, the City Council approved a General Plan Amendment, which included a variety of changes to several of the General Plan Elements.

The City's General Plan is the principal land use document guiding development within the City. The City's General Plan is a comprehensive plan that establishes goals, objectives, and policies intended to guide growth and development in the City. The General Plan also serves as a blueprint for development throughout the community and is the vehicle through which the community needs, desires, and aspirations are balanced. The San Juan Capistrano General Plan is the fundamental tool for influencing the quality of life in the City.

Conservation and Open Space Element. While air quality is not a State-mandated element of a general plan, the AQMP requires air quality to be addressed in general plans. Air quality is included within the Conservation and Open Space Element (1999) of the City's General Plan to fulfill AQMP requirements. The Conservation and Open Space Element contains the following goals and policies aimed at improving air quality within the City through proper planning for land use, transportation, and energy use.

1 A maximum disturbance of 1.95 acres would occur during the grading phase from the use of one rubber-tired dozer, and one grader for 8 hours per day.

2 Since development projects typically result in negligible construction and long-term operation SO emissions, SCAQMD does not provide an LST for this pollutant.

Goal 6.0: Improve air quality.

Policy 6.1: Cooperate with the South Coast Air Quality Management District and Southern California Association of Governments in their efforts to implement the regional Air Quality Management Plan.

Policy 6.2: Cooperate and participate in regional air quality management planning, programs and enforcement measures.

Policy 6.3: Implement City-wide traffic flow improvements.

Policy 6.4: Achieve a greater balance between jobs and housing in San Juan Capistrano.

Policy 6.5: Integrate air quality planning with land use and transportation planning.

Policy 6.6: Promote energy conservation and recycling by the public and private sectors.

4.2.5 Thresholds of Significance

The thresholds for air quality impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to air quality if it would:

Threshold 4.2.1: Conflict with or obstruct implementation of the applicable air quality plan.

Threshold 4.2.2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Threshold 4.2.3: Expose sensitive receptors to substantial pollutant concentrations.

Threshold 4.2.4: Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

The Initial Study, included as Appendix A, substantiates that impacts associated with Threshold 4.2.4 would be less than significant because implementation of the proposed project involves the development of a residential community, and as such, is not anticipated to produce emissions that could lead to objectionable odors affecting a substantial number of people. Therefore, this threshold will not be addressed in the following analysis.

4.2.6 Project Impacts

Threshold 4.2.1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. Projects are considered consistent with, and would not conflict with or obstruct implementation of the AQMP, if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP. The future emissions forecasts are primarily based on demographic and economic growth projections provided by SCAG. Thus, demographic growth forecasts for various socioeconomic categories (e.g., population, housing, and employment by industry) developed by SCAG for its 2016 Regional Transportation Plan (SCAG 2016) were used to estimate future emissions in the Final 2016 AQMP (SCAQMD 2016).

Chapter 12, Sections 12.2 and 12.3 of the SCAQMD *CEQA Air Quality Handbook* (1993) outlines two criteria for determining consistency with the 2016 AQMP. A project would be consistent with the AQMP if the project (1) would not increase the frequency or severity of an existing air quality violation or cause or contribute to new a new violation or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP, and (2) would not exceed the growth assumptions in the AQMP based on the year of project build out, would be consistent with land use planning strategies set forth by SCAQMD, and would implement all feasible air quality mitigation measures.

Criterion 1. The proposed project would result in short-term construction and long-term operational pollutant emissions that are all less than the CEQA significance emissions thresholds established by the SCAQMD, as demonstrated below under Threshold 4.2.2; therefore, the proposed project would not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation. Pollutant emissions generated during project construction and operation 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. Therefore, the proposed project would be consistent with the AQMP under the first criterion.

Criterion 2. The SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Project consistency with population, housing, and employment assumptions that were used in the development of SCAQMD air quality plans ensures a project is consistent with regional air quality planning efforts. The *CEQA Air Quality Handbook* (1993) indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as a significant project. The project site currently has a General Plan Land Use designation of Planned Community, along with smaller portions designated General Open Space and Community Park. Development of the project site would not require any General Plan Amendment as proposed uses within each designated area are consistent with the applicable General Plan designations. As such, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the Basin.

In order to further reduce emissions, the project would comply with SCAQMD emission reduction measures including SCAQMD Rules 402, 403, and 1113. SCAQMD Rule 402 prohibits the discharge, from any source, air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public, or that endanger the comfort, repose, health, or safety of the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. Rule 403 is intended to reduce PM_{10} emissions from transportation, handling, construction, or storage activities that have the potential to generate fugitive dust. SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce reactive organic gas (ROG) emissions from the use of architectural coatings. The project is required to comply with these emission reduction measures during construction as outlined in Regulatory Compliance Measures AQ-1 through AQ-3 (refer to Section 4.2.8, Regulatory Compliance Measures and Mitigation Measures, below). For the reasons stated above, the proposed project is considered to be consistent with the second criterion.

Summary. The proposed project would not conflict with or obstruct implementation of the 2016 AQMP because (1) the project's construction and operational emissions would not exceed the SCAQMD regional significance thresholds, and (2) the proposed project is consistent with the current General Plan land use designations on the project site and would not exceed the growth assumptions in the AQMP, is consistent with land use planning strategies set forth by SCAQMD, and includes implementation of all feasible air quality rules to reduce emissions. Therefore, impacts related to the conflict with or obstruction of implementation of the applicable air quality plan would be less than significant, and no mitigation is required.

Threshold 4.2.2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact.

Construction. Construction related emissions are temporary and short-term. Project-related construction emissions include those from operation of construction vehicles (i.e., excavators, trenchers, and dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities, which can release VOCs. Construction emissions would vary daily depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. During construction, approximately 10.45 acres of the 16.1-acre project site will be developed for residential use. Therefore, the construction activity would disturb approximately 10.45 acres of soil. Based on SCAQMD guidance for localized significant threshold analysis, the maximum daily site grading of 1.95 acres would occur per day.

As specified in Regulatory Compliance Measures AQ-1 through AQ-3 (refer to Section 4.2.8, Regulatory Compliance Measures and Mitigation Measures), construction of the proposed project would comply with SCAQMD standard conditions, including Rule 402 (Nuisance) to control nuisance emissions, Rule 403 (Fugitive Dust) to control fugitive dust, and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Compliance with SCAQMD standard conditions are regulatory requirements and were considered in the analysis of construction emissions. Table 4.2.D presents the worst-case construction emissions based on the construction schedule (Table E of the *Air Quality and Greenhouse Gas Emissions Assessment*) and construction equipment (Table F of the *Air Quality and Greenhouse Gas Emissions Assessment*) anticipated for project construction.

As previously discussed, the portion of the Basin in which the project site is located is in nonattainment of the NAAQS for O_3 and $PM_{2.5}$. The Basin is in nonattainment of the CAAQS for O_3, $PM_{2.5}$, and PM_{10}. Table 4.2.D shows that construction equipment/vehicle emissions during construction periods would not exceed any of the SCAQMD established daily emissions thresholds for which the project region is nonattainment under the CAAQS or NAAQS. Therefore, the proposed project would not exceed the SCAQMD construction emissions thresholds and short-term (construction) air quality impacts would be less than significant. No mitigation is required.

Operation. Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. Project-related operations would result in the long-term emission of ROG, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$ primarily associated with motor vehicle use. Vehicle trips to and from the project site would generate mobile source emissions. Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust and tire wear particulates. Mobile source emissions are dependent on both overall daily vehicle trip generation and the effect of the project on peak-hour traffic volumes and traffic operations in the vicinity of the project site. Project-related stationary-source emissions would come from area and energy sources.

Operational emissions associated with the proposed project (including energy use for appliances, landscaping equipment, use of consumer products, and motor vehicles) were calculated using CalEEMod. Based on the CalEEMod default values for vehicle trip generation, the model estimated that 132 residential units would generate approximately 890 trips per weekday, which is consistent with the trip generation estimates developed in the project's TIA (LSA 2019).

Table 4.2.D: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)							
	VOC	NO_X	CO	SO_2	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Site Preparation	3.96	40.54	21.70	0.04	7.25	2.05	3.93	1.88
Existing Utility Relocation	3.96	40.54	21.70	0.04	7.25	2.05	3.93	1.88
Grading	4.82	65.69	36.92	0.12	4.93	2.05	1.82	1.89
Backbone Infrastructure	1.07	9.71	9.86	0.01	0.15	0.65	0.04	0.60
Building Construction Model Phase 1	2.59	21.33	21.86	0.05	1.83	0.98	0.49	0.92
Building Construction (Phase 2)	2.59	21.33	21.86	0.05	1.83	0.98	0.49	0.92
Building Construction (Phase 3)	2.36	19.29	21.32	0.05	1.83	0.83	0.49	0.78
Paving (Phase 1)	1.47	11.16	15.01	0.02	0.17	0.57	0.04	0.52
Architectural Coating (Phase 1)	54.43	1.47	2.61	0.01	0.31	0.83	0.08	0.78
Building Construction (Phase 4)	2.36	19.29	21.32	0.05	1.83	0.57	0.49	0.52
Paving (Phase 2)	1.47	11.16	15.01	0.02	0.17	0.08	0.04	0.08
Architectural Coating (Phase 2)	54.43	1.47	2.54	0.01	0.31	0.83	0.08	0.78
Paving (Phase 3)	1.47	11.16	14.97	0.02	0.17	0.57	0.04	0.52
Architectural Coating (Phase 3)	54.43	1.47	2.54	0.01	0.31	0.08	0.08	0.08
Paving (Phase 4)	1.47	11.16	14.97	0.02	0.17	0.57	0.04	0.52
Architectural Coating (Phase 4)	54.43	1.47	2.61	0.01	0.31	0.08	0.08	0.08
Peak Daily Emissions	**54.43**	**65.69**	**36.92**	**0.12**	**9.29**		**5.81**	
SCAQMD Thresholds	**75.00**	**100.00**	**550.00**	**150.00**	**150.00**		**55.00**	
Exceedance?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: Compiled by LSA Associates, Inc. (January 2020).
Note: Column totals may not add due to rounding from the model results.

CO = carbon monoxide
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
SO_2 = sulfur dioxide
lbs/day = pounds per day
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
VOC = volatile organic compounds

As previously discussed, the portion of the Basin in which the project site is located is in nonattainment of the NAAQS for O_3 and $PM_{2.5}$. The Basin is in nonattainment of the CAAQS for O_3, $PM_{2.5}$, and PM_{10}. Table 4.2.E summarizes the project's maximum daily emissions during operation. As shown in Table 4.2.E, while the project would result in the increased emissions of criteria pollutants, emissions during operation of the proposed project would not exceed the thresholds of significance for any criteria pollutants for which the project region is nonattainment under the CAAQS or NAAQS. No mitigation is required.

Table 4.2.E: Regional Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	NOx	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	4.19	1.99	11.73	0.01	0.21	0.21
Energy	0.08	0.68	0.29	<0.01	0.05	0.05
Mobile	1.38	5.69	18.87	0.07	6.80	1.85
Total Emissions	**5.65**	**8.35**	**30.89**	**0.09**	**7.07**	**2.12**
SCAQMD Thresholds	**55.00**	**55.00**	**550.00**	**150.00**	**150.00**	**55.00**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (January 2020).
Note: Column totals may not add due to rounding from the model results.

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SOx = sulfur oxides
VOC = volatile organic compounds

Threshold 4.2.3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact.

Construction. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. As previously described, the SCAQMD has issued guidance on applying CalEEMod modeling to LSTs for projects greater than five acres. Further, CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment. Based on SCAQMD guidance for localized significant threshold analysis, the maximum daily site grading of 1.95 acres would occur per day. Table 4.2.F shows the maximum on-site construction emissions of CO, NOx, PM_{10}, and $PM_{2.5}$ during construction when measured against LST thresholds. As shown in Table 4.2.F, the proposed project would not exceed the LSTs for construction emissions. Therefore, impacts from localized construction-related emissions would be less than significant and no mitigation is required.

Table 4.2.F: Summary of On-Site Construction Emissions, Localized Significance

Construction	Emission Rates (lbs/day)			
	NOx	CO	PM_{10}[1]	$PM_{2.5}$[1]
On-Site Construction Emissions	46	31	9.1	5.2
Localized Significance Threshold	**193**	**2,327**	**41**	**13.0**
Exceedance?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (January 2020).
Notes: On-site emissions represent maximum daily construction emissions.
SRA – Capistrano Valley Area, 5 acres, receptors at 67 meters

[1] Total PM_{10} and $PM_{2.5}$ daily emissions with fugitive dust mitigation measures implemented.

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SRA = source receptor area

Table 4.2.G shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. For a worst-case scenario assessment, the emissions shown in Table 4.2.G include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that would occur on site.

Table 4.2.G: Long-Term Operational Localized Impacts Analysis

Emissions Sources	Pollutant Emissions (lbs/day)			
	NOx	**CO**	**PM_{10}**	**$PM_{2.5}$**
Total On-Site Emissions	2.3	13	0.6	0.3
LST Thresholds	**193**	**2,327**	**10.0**	**3.3**
Exceedance?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (January 2020).
Notes: Column totals may not add due to rounding from the model results.
SRA – Capistrano Valley Area, 5 acres, receptors at 67 meters.
CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance thresholds
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

Table 4.2.G shows that the operational emission rates would not exceed the LSTs for the residential homes located 220 ft (67 meters) to the northeast of the project site. Therefore, impacts from localized operation-related emissions would be less than significant and no mitigation is required.

CO Hot Spot. CO hot spots are caused by vehicular emissions, primarily when idling at congested intersections. Based on the analysis presented below, a CO "hot-spot" analysis is not needed to determine whether a change in the level of service (LOS) of an intersection in the vicinity of the project site would have the potential to result in exceedance of either the CAAQS or NAAQS.

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the vicinity of the proposed project site. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, it disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (residents, schoolchildren, the elderly, and hospital patients, etc.).

Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high

ambient background CO concentrations, modeling is recommended, to determine a project's effect on local CO levels.

When the SCAQMD *CEQA Air Quality Handbook* (1993) was published, the Basin was designated nonattainment under the CAAQS and NAAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Basin have steadily declined. In 2007, the Basin was re-designated as attainment for CO under both the CAAQS and NAAQS. As identified within SCAQMD's 2003 AQMP (SCAQMD 2005a), peak carbon monoxide concentrations in the Basin were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. All areas of the Basin have continued to remain below the federal standards (35 ppm 1-hour and 9 ppm 8-hour standards) since 2003 (SCAQMD 2016).

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Anaheim Monitoring Station showed a highest recorded 1-hour concentration of 1.4 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 0.8 ppm (the State standard is 9 ppm) during the past 3 years. The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis. Reduced speeds and vehicular congestion at intersections result in increased CO emissions. Given the extremely low level of CO concentrations in the project area and the lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly to CO concentrations exceeding the State or federal CO standards. Because no CO hot spot would occur, as identified in the proposed project, there would be no project-related impacts on CO concentrations.

Mobile Health Risk Assessment. The IS/NOP comment letter submitted by the SCAQMD recommends the preparation of a mobile health risk assessment (HRA) if the proposed project would generate or attract vehicular trips, especially heavy-duty diesel-fueled vehicles. While this project would result in the generation of vehicular trips (890 average daily trips), a mobile HRA was not performed because the proposed residential project would not generate or attract heavy-duty diesel-fueled vehicles. Further, under CEQA, lead agencies are generally not required to consider the effect that the existing environment (such as existing freeways) will have on sensitive receptors (refer to *California Building Industry Association v. Bay Area Air Quality Management District* [No. S213478, Decided December 17, 2015]).[1] The proposed project would not affect the number of heavy-duty diesel-fueled vehicles traveling along the I-5 and would not exacerbate air quality associated with such vehicles. The effect of the heavy-duty diesel-fueled vehicles traveling along I-5 on the proposed project is therefore outside of the scope of environmental review pursuant to CEQA, and no mobile health risk assessment is required.

[1] *California Building Industry Association v. Bay Area Air Quality Management District* [No. S213478, Decided December 17, 2015]). Website: https://caselaw.findlaw.com/ca-supreme-court/1721100.html (accessed February 2020).

4.2.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would result in less than significant impacts. However, the following regulatory compliance measures are existing SCAQMD regulations that are applicable to the proposed project and are considered in the analysis of potential impacts related to air quality. The City of San Juan Capistrano considers these requirements to be mandatory; therefore, they are not mitigation measures.

4.2.8 Regulatory Compliance Measures and Mitigation Measures

4.2.8.1 Regulatory Compliance Measures

The proposed project would comply with the following Regulatory Compliance Measures. The City considers these to be mandatory; therefore, they are not considered mitigation.

Regulatory Compliance Measure AQ-1

South Coast Air Quality Management District (SCAQMD) Rule 402, Nuisance. Prohibits the discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or 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. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Regulatory Compliance Measure AQ-2

South Coast Air Quality Management District (SCAQMD) Rule 403, Fugitive Dust. The Project Applicant shall ensure the construction contractor implements fugitive dust control measures in compliance with SCAQMD Rule 403. The Project Applicant shall include the following fugitive dust control measures for SCAQMD Rule 403 compliance in the project plans and specifications:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
- The construction contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project site are watered, with complete coverage of disturbed areas, at least three (3) times daily during dry weather and preferably mid-

morning, afternoon, and after work is done for the day.

- The contractor shall ensure that traffic speeds on unpaved roads and project site areas are reduced to 15 mph or less.

Regulatory Compliance Measure AQ-3

SCAQMD Rule 1113. The Project Applicant shall ensure the construction contractor implements measures to control volatile organic compound (VOC) emissions from architectural coatings in compliance with SCAQMD Rule 1113. The Project Applicant shall include the following control measures for SCAQMD Rule 1113 compliance in the project plans and specifications:

- Only "Low-Volatile Organic Compounds" paints (no more than 50 grams/liter of VOC) shall be used.

4.2.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.2.9 Level of Significance after Mitigation

Implementation of Regulatory Compliance Measures AQ-1 through AQ-3 would further reduce less than significant project-related air quality impacts. No significant unavoidable impacts related to air quality would occur with implementation of these standard measures. All anticipated impacts related to air quality would be considered less than significant, and no mitigation is required.

4.2.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for air quality. The cumulative impact area for air quality related to the proposed project is the Basin.

Air pollution is inherently a cumulative impact measured across an air basin. The discussion under Threshold 4.2.2, above, includes an analysis of the proposed project's contribution to cumulative air impacts. To summarize the conclusion with respect to that analysis, the incremental effect of projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively considerable per SCAQMD guidelines. The proposed project's construction- and operation-related regional daily emissions are less than the SCAQMD significance thresholds for all criteria pollutants. In addition, adherence to SCAQMD rules and regulations on a project-by-project basis would substantially reduce potential impacts associated with the related cumulative projects and basin-wide air pollutant emissions. Therefore, the proposed project would not have a cumulatively considerable increase in emissions, and the proposed project's cumulative air quality impacts would be less than significant. No mitigation is required.

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4.3 BIOLOGICAL RESOURCES

This section provides a discussion of the existing biological resources within the boundaries of the project site and provides an analysis of potential impacts to biological resources from implementation of the Tirador Residential Development Project (proposed project). Where impacts are identified, mitigation measures pursuant to the California Environmental Quality Act (CEQA), the State and federal Endangered Species Act (CESA and FESA respectively), and other pertinent regulations are recommended. The biological resources section is based on the information and findings of the *Final Biological Resources Assessment Tirador Residential Development Project* (Biological Resources Assessment) (LSA, January 2020), which is provided in Appendix C of this Environmental Impact Report (EIR).

4.3.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. One comment letter included comments related to Biological Resources.

The letter from the California Department of Fish and Wildlife (CDFW) received on December 10, 2019 recommended that the biological resources analysis include potential project-related impacts to steelhead and other sensitive aquatic species, least Bell's vireo habitat, riparian and wetland habitats, flora and fauna with special emphasis upon identifying threatened, sensitive, and locally unique species and sensitive habitats, and wildlife corridor/movement areas. Recommendations were also made to analyze the efficacy of Low Impact Development (LID) options to minimize stormwater impacts, how changes in land use would affect habitat edges, and how fuel modification zones would impact biological resources. Suggestions were made to incorporate mitigation measures related to the protection of rare natural communities, sensitive plants, animals, and habitats, habitats targeted for preservation and/or restoration, nesting birds; preparation of planting plans related to restoration and revegetation; and protection against shot hole borers.

4.3.2 Methodology

4.3.2.1 Literature Review and Records Search

LSA biologists conducted a literature review and records search in January 2019 to identify the existence and potential for occurrence of sensitive or special-status[1] plant and animal species in the vicinity of the project site. Federal and State lists of sensitive species were also examined. Current electronic database records reviewed included the following:

[1] For the purposed of this report, the term "special-status species" refers to those species that are listed or proposed for listing under the CESA and/or FESA, California Fully Protected Species, California Species of Special Concern, and species covered under the County of Orange Southern Subregion Habitat Conservation Plan. It should be noted that "Species of Special Concern" is an administrative designation made by the CDFW and carries no formal legal protection status. However, Section 15380 of the *State CEQA Guidelines* indicates that these species should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.

- **California Natural Diversity Data Base information (CNDDB – RareFind 5)**, which is administered by the California Department of Fish and Wildlife (CDFW), formerly known as the California Department of Fish and Game (CDFG). This database covers sensitive plant and animal species as well as sensitive natural communities that occur in California. Records from four USGS quadrangles surrounding the project site (*Dana Point*, *San Juan Capistrano*, *San Clemente*, and *Canada Gobernadora*) were obtained from this database to inform the field survey.

- **California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants**, which utilizes four specific categories or "lists" of sensitive plant species to assist with the conservation of rare or endangered botanical resources. All of the plants constituting California Rare Plant Ranks 1A, 1B, 2A, and 2B are intended to meet the status definitions of "threatened" or "endangered" in CESA and the California Department of Fish and Game Code, and are considered by CNPS to be eligible for State listing. At the discretion of the CEQA Lead Agency, impacts to these species may be analyzed as such, pursuant to the *State CEQA Guidelines* Sections 15125(c) and 15380. Plants in Rank 3 (limited information; review list), Rank 4 (limited distribution; watch list), or that are considered Locally Unusual and Significant may be analyzed under CEQA if there is sufficient information to assess potential significant impacts. Records from the four USGS quadrangles surrounding the project site were obtained from this database to inform the field survey.

- **United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) Online System**, which lists all proposed, candidate, threatened, and endangered species managed by the Endangered Species Program of the USFWS that have the potential to occur on or near a particular site. This database also lists all known critical habitats, national wildlife refuges, and migratory birds that could potentially be impacted by activities from a proposed project. An IPaC Trust Resource Report (USFWS 2019a) was generated for the project site.

- **The USFWS Critical Habitat Mapper** was reviewed to determine whether critical habitat has been designated within or in the vicinity of the project site (USFWS 2019b).

- **The USFWS National Wetlands Inventory** was reviewed to determine whether any wetlands or surface waters of the United States have been previously identified in the survey area (USFWS 2019c).

In addition to the databases listed above, historic and current aerial imagery, existing environmental reports for developments in the project vicinity (including a 2007 Biological Resources Assessment prepared for the subject project property [Glenn Lukos Associates 2007]), and regional habitat conservation plans and local land use policies related to biological resources were reviewed.

4.3.2.2 Biological Field Surveys

A general biological survey of the project site was conducted on January 18, 2019. The entire project site was surveyed on foot, and all biological resources were noted and mapped. Suitable habitat for any species of interest or concern was duly noted, and general site conditions were photographed (provided in Appendix C to this EIR).

4.3.3 Existing Environmental Setting

4.3.3.1 Existing Project Site

The project site is undeveloped and vacant, with two water well facilities present on-site. The project site is bordered on the north by Calle Arroyo, with commercial and institutional uses located beyond. El Horno Creek (a tributary of San Juan Creek) and San Juan Creek are adjacent to the south of the project site; a portion of the San Juan Creek Trail is located along the southern portion of the project site. The project site is located outside of the banks and associated riparian vegetation of San Juan Creek and El Horno Creek.

Ruderal nonnative grassland vegetation existing on the site appears to be regularly maintained. Much of the soil and vegetation within the project site is disturbed from the recently constructed 24 Hour Fitness located to the northwest of the project site, off-highway vehicles, and human foot traffic.

Habitat in the project site is considered low quality with respect to most of the special-status animal species identified during the literature review and is not expected to support any special-status plant species.

Further details regarding biological resources currently present on the site are provided in the following subsections.

4.3.3.2 Vegetation Communities and Land Cover Types

The project site is upland in nature with dominant vegetation consisting of disturbed, ruderal grassland with patches of mixed herbaceous invasive species and bare ground. Several scattered native shrubs are also found within portions of the project site, particularly in the southeastern corner near El Horno Creek. Specifically, there are several patches of mulefat (Baccharis salicifolia) along the southeastern project boundary. Other land cover types on the project site consist of developed areas including paved roads and sidewalks, the paved San Juan Creek Trail, two water well facilities, and an associated parking area lined with gravel.

A total of 61 vascular plant species were identified within and immediately adjacent to the project site during the field survey on January 18, 2019. A total of 40 (approximately 66 percent) of these plant species represent nonnative taxa, reflecting a high level of disturbance within the project site.

The acreages of each vegetation community and land cover type occurring in the project area are shown in Table 4.3.A and are described further below.

Figure 4.3.1, Vegetation Map, provides a map of vegetation and land cover types within the project site disturbance limits. As indicated in Table 4.3.A, approximately 5.55 acres in the project area will be dedicated for conservation. This conservation area will not be disturbed and is not considered part of the “project site” as discussed in the following sections.

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LSA

LEGEND

Project Development Boundary

Vegetation and Land Cover Types

- 4.6 - Ruderal Grassland
- 7.3 - Mulefat Scrub (Upland)
- 15.0 - Developed
- 16.1 - Disturbed/Barren

Proposed Conservation Area (Willow Riparian Woodland)

0 75 150
FEET

SOURCE: Bing Maps (2015)

I:\JCA1802\GIS\MXD\Vegetation.mxd (2/8/2019)

FIGURE 4.3.1

Tirador Residential Development Project

Vegetation

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Table 4.3.A: Vegetation and Land Cover Types Within the Project Area

Vegetation / Land Cover Type	Acreage[1]
Ruderal Grassland	6.41
Disturbed / Barren	3.07
Developed (Paseo Tirador, sidewalks, San Juan Creek Trail, & well facilities)	1.80
Mulefat Scrub (Upland)	0.03
Total Project Disturbance Area	**11.31**
Willow Riparian Forest (area to be dedicated for permanent conservation)	5.55
Total Project Area	**16.86**

Source: Biological Resources Assessment (LSA, January 2020)
[1] All presented acreages are approximate and based on geographic information system measurements.

Ruderal Grassland. Areas classified as ruderal grassland within the project site consist of regularly disturbed areas dominated by weedy or pioneering plant species including red-stemmed filaree (*Erodium cicutarium*), Russian thistle (*Salsola tragus*), shortpod mustard (*Hirschfeldia incana*), black mustard (*Brassica nigra*), garland chrysanthemum (*Glebionis coronaria*), spotted spurge (*Euphorbia maculata*), nonnative grasses (*Bromus* spp., *Avena* sp., etc.), and telegraph weed (*Heterotheca grandiflora*), among many others. Several nonnative, ornamental species are also present in these areas, such as hottentot fig (*Carpobrotus edulis*) and crystalline ice plant (*Mesembryanthemum crystallinum*). Ruderal grassland in the project area is regularly maintained.

Disturbed or Barren. Disturbed or barren areas lack vegetation or exhibit a sparse cover of ruderal vegetation. A large portion of the project site is barren due to ground disturbance associated with the recently constructed 24 Hour Fitness northwest of the site. A dirt road that roughly parallels the paved San Juan Creek Trail was also mapped as disturbed/barren. Weedy or pioneering plant species occurring in these areas include Russian thistle, shortpod mustard (*Hirschfeldia incana*), nonnative brome grasses (*Bromus* spp.), and red-stemmed filaree (*Erodium cicutarium*). The project site is regularly maintained for vegetation control and has existed entirely as disturbed or barren land over the last 20 years.

Developed. The project site includes the street Paseo Tirador and associated sidewalks, the paved San Juan Creek Trail, and two existing water well facilities. These areas are mostly paved or contain the well structures, lack vegetation, and are mapped as developed.

Mulefat Scrub – Upland. Several small patches of mulefat are present in the southeastern portion of the project site. These patches are not associated with any streambed within or adjacent to the project site (and are therefore not considered riparian habitat that would fall under CDFW jurisdiction). There are no native co-dominant species, and there is no native understory present. Hottentot fig and poison hemlock (*Conium maculatum*), among many other nonnative species, are present in these areas.

4.3.3.3 Soils

According to the NRCS online soil survey of Orange County, three soil units belonging to two soil series occur within the project site. The soil types include: *Corralitos loamy san, Sorrento clay loam, and Sorrento loam*.

Corralitos Series. The Corralitos series consists of deep, well-drained soils that formed in recent sandy alluvium derived from acid sandstone and related rocks. These soils are typically used for range, dryland crops, urban development, and for growing truck crops, alfalfa, citrus, and other fruits under irrigation. Uncultivated and undisturbed areas typically support annual grasses, forbs, coyote brush (*Baccharis pilularis*) and other shrubs, and occasionally oak trees. *Corralitos loamy sand* occurs on the eastern and western edges of the project site.

Sorrento Series. The Sorrento series consists of very deep, well-drained soils that formed in alluvium mostly from sedimentary rocks. Sorrento soils are on alluvial fans and stabilized floodplains. These soils are typically used for growing irrigated fruit, nut, field, forage, and truck crops, and some dry grain. Uncultivated and undisturbed areas typically support annual grasses and forbs with sycamore along drainages. *Sorrento clay loam* occurs in the north-central portion of the project site, whereas *Sorrento loam* is the primary soil type that underlays the project site.

4.3.3.4 Special-Status Biological Resources

San Juan Capistrano supports various special-status natural communities, plants, and animals. The following provides specific discussions for special-status natural communities, plant and animal species, and habitats of concern (including critical habitat, jurisdictional aquatic resources, wildlife movement corridors, and regional and local habitat conservation plans) in the project area.

The literature review conducted for the project site included occurrence records from four USGS topographic quadrangles surrounding the site. A four USGS quadrangle search covers a large, geographic area containing numerous habitat types not found within or around the project site. As such, many of the species identified in the literature search are not anticipated to occur on the project site due to historic and ongoing anthropogenic disturbances and/or the lack of suitable habitat.

Special-Status Natural Communities. The CNDDB search identified occurrences of eight special-status natural (i.e., plant) communities within the search area: Southern Coast Live Oak Riparian Forest, Southern Coastal Salt Marsh, Southern Cottonwood Willow Riparian Forest, Southern Dune Scrub, Southern Foredunes, Southern Mixed Riparian Forest, Southern Sycamore Alder Riparian Woodland, and Valley Needlegrass Grassland.

While mature riparian woodland associated with San Juan Creek is located to the south of the project site, there are no special-status natural communities within the direct disturbance limits of the project.

Special-Status Plants. The literature review identified 32 special-status plant species that are known to occur within the vicinity of the project site. The majority of the rare plant species that were

identified have specialized habitat requirements (i.e., they occur on predominantly alkaline soils, woodland, riparian, or wetland habitats, etc.) that do not occur within the project site.

Historic anthropogenic disturbances on the site have greatly altered the site and have eliminated or greatly impacted the pre-settlement habitats needed to support the special-status plant species previously identified on the site. As such, the specific habitats, soil substrates or "micro-climates" necessary for special-status plant species to occur are absent within the boundaries of the project site. Based on site observations coupled with the habitat suitability analysis, no special-status plant species are expected to occur within the project site.

Special-Status Animals. Historic and ongoing anthropogenic disturbances on the project site and adjacent parcels have greatly altered, eliminated, or impacted the habitats needed to support most of the special-status animal species identified on the site during the literature review. There are no known occurrences of any special-status animal species on the project site, and none were observed during the field survey.

While no special-status species are expected to occur on the project site, the following species are known to occur within 5 miles of the project site, and suitable habitat is present adjacent to, but not within, the project site (e.g. within and/or associated with San Juan Creek):

- **Fish:** tidewater goby (*Eucyclogobius newberryi*), arroyo chub (*Gila orcutti*), and Southern California steelhead – distinct population segment (DPS) (*Oncorhynchus mykiss irideus*)

- **Amphibians:** western spadefoot (*Spea hammondii*), arroyo toad (*Anaxyrus californicus*), and California newt (*Taricha torosa*)

- **Reptiles:** two-striped gartersnake (*Thamnophis hammondii*), red-diamond rattlesnake (*Crotalus ruber*), and western pond turtle (*Emys marmorata*)

- **Birds:** white tailed kite (*Elanus leucurus*), least Bell's vireo (*Vireo bellii pusillus*), and loggerhead shrike (*Lanius ludovicianus*)

The project site contains foraging habitat for common and special-status raptors such as white-tailed kite (*Elanus leucurus*); however, due to the lack of perennial shrubs and mature trees in the project site, potential raptor nesting habitat is absent in the project site. Suitable avian nesting habitat in the project site is limited to that which supports ground-nesting species such as California horned lark (*Eremophila alpestris actia*) and other birds that may nest in the annual herbaceous cover. Suitable nesting habitat for a variety of common and special-status bird species occurs adjacent to the site within the mature riparian woodland associated with San Juan Creek, as well as ornamental trees to the west of the project site.

Critical Habitat. Critical habitat areas, as designated by the USFWS for specific federally listed species, are considered essential to the conservation of such species and may need special management or protection. Critical habitat is designed to protect the essential physical and biological features (PBFs) of a landscape and essential areas in the appropriate quantity and spatial arrangement that a species needs to survive and reproduce and ultimately be conserved.

Most of the project site is located within Revised Final Designated Critical Habitat for the arroyo toad (*Anaxyrus californicus*), as defined by the USFWS under the FESA. The PBFs of arroyo critical habitat include: (1) rivers or streams with hydrologic regimes that supply water to provide space, food, and cover needed to sustain eggs, tadpoles, metamorphosing juveniles, and adult breeding toads; (2) riparian habitats for breeding and rearing of tadpoles and juveniles and adjacent uplands including areas of loose soil where toads can burrow underground that provide foraging and living areas for juvenile and adult arroyo toads; (3) a natural flooding regime; and (4) stream channels and adjacent upland habitats that allow for movement to breeding pools, foraging areas, overwintering sites, upstream and downstream dispersal, and connectivity to areas that contain suitable habitat. While the portion of San Juan Creek adjacent to the southern project site boundaries contains several of these PBFs, the project site does not contain any of these PBFs. In addition, habitats and land cover types within the project site are not suitable for arroyo toad breeding, foraging, dispersal, or estivation. Lands within the proposed 5.55-acre conservation area contain PBFs and are located within designated arroyo toad critical habitat.

Jurisdictional Aquatic Resources. The project site is located entirely outside of the streambeds, banks, and riparian habitat associated with San Juan Creek and El Horno Creek. Soils on site are well-drained and there are no wetlands or other potentially jurisdictional aquatic resources within the project site.

4.3.4 Regulatory Setting

4.3.4.1 Federal Regulations

United States Fish and Wildlife Service. The United States Fish and Wildlife Service (USFWS), pursuant to the Federal Endangered Species Act (FESA), protects endangered and threatened species. FESA defines an endangered species as a species in danger of extinction throughout all or a significant part of its range and a threatened species as one that is likely to become endangered in the foreseeable future. USFWS also identifies species proposed for listing as endangered or threatened. Other than for federal actions, there is no formal protection for candidate species under FESA. However, consultation with USFWS regarding species proposed for listing can prevent project delays that could occur if a species is listed prior to project completion.

United States Army Corps of Engineers. USACE regulates discharges of dredged or fill material into waters of the United States, which are defined as wetlands and nonwetland waters that meet specific criteria. The USACE regulatory jurisdiction, pursuant to Section 404 of the federal CWA, is founded on a connection, or nexus, between a water body and interstate commerce that may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or indirect (through a connection identified in the USACE regulations).

Section 401 of the Clean Water Act. The California Regional Water Quality Control Board (RWQCB) administers Section 401 of the CWA, which is implemented through the issuance of a Section 401 Certification for Section 404 permits issued by USACE. Areas subject to RWQCB jurisdiction typically coincide with those of USACE (i.e., waters of the United States, including any wetlands). The RWQCB also asserts authority over waters of the State under waste discharge requirements pursuant to the

California Porter-Cologne Water Quality Control Act, but this mechanism is typically not invoked in cases where USACE asserts permitting authority pursuant to the CWA.

Federal Migratory Bird Treaty Act. The federal Migratory Bird Treaty Act (MBTA) governs take, possession, import, export, transport, selling, purchasing, or bartering of migratory birds and their eggs, parts, and nests, except as authorized under a valid permit. Section 704 of the MBTA states that the Secretary of the Interior is authorized and directed to determine if, and by what means, the take of migratory birds should be allowed and to adopt suitable regulations permitting and governing take while ensuring that take is compatible with protection of the species. Most bird species are protected under the MBTA.

In addition, under the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy any bird or the nests or eggs of any bird species except as otherwise provided in the California Fish and Game Code and its regulations. This code also specifically protects raptors, including owls. The CDFW considers a disturbance that results in nest abandonment or loss of reproductive effort to be considered as take. Disturbances of active nesting territories should be avoided during the nesting season.

4.3.4.2 State Regulations

California Environmental Quality Act. The California Environmental Quality Act (CEQA) is intended to ensure that the potential effects of proposed projects are identified and disclosed prior to project approval. If a project has the potential to result in one or more significant impacts, mitigation to lessen or avoid the identified impacts is required. Section 15382 of the *State CEQA Guidelines* defines a significant effect on the environment as "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

Section 15380 of the *State CEQA Guidelines* defines a rare or endangered species for the purposes of CEQA as a species or subspecies of animal or plant or a variety of plant "...already listed by a government agency (CDFW and/or USFWS) as being rare, threatened, or endangered…" A plant or animal may also be treated as rare or endangered for the purposes of CEQA even if it has not been listed by a government agency, if it can be shown that the species meets the criteria for such listing.

California Endangered Species Act. The CDFW, through provisions of the California Administrative Code and policies formulated by the California Fish and Game Commission (Commission), regulates plant and animal species in danger of, or threatened with, extinction based on the list of endangered, threatened, and candidate species developed by the Commission. Endangered species are native species or subspecies of plants and animals that are in serious danger of becoming extinct throughout all or a significant part of their range. Threatened species are those species that, although not presently threatened with extinction, are likely to become endangered in the foreseeable future without special protection and management. Candidate species are species the Commission has formally noticed as being under review for addition to the list of endangered or threatened species or as a species proposed for listing.

Streambed Alteration Regulations. The CDFW, through provisions of the California Administrative Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected by a proposed project. Streams and rivers are defined by the presence of a channel bed and banks and at least a periodic flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW. The CDFW also includes nonwetland riparian communities associated with rivers and streams as part of jurisdictional waters of the State. These areas may extend beyond jurisdictional waters of the United States.

California Natural Diversity Database. The CDFW administers the CNDDB, which comprises lists of special-status plants, animals, and natural communities, including species listed under CESA and FESA, California Species of Special Concern, and USFWS Birds of Conservation Concern. Additional species, natural communities, and habitat types are designated as being of special interest because of their rarity (e.g., very localized distribution, few scattered occurrences) and/or threats to their existence, although there is no specific regulatory protection afforded to those species by listing in the CNDDB.

California Native Plant Society. The CNPS is a nonprofit organization that promotes the preservation of native California plants. The CNPS created and maintains an Online Inventory of Rare and Endangered Plants of California, which identifies four specific designations, or Lists, of special-interest plant species.

4.3.4.3 Regional Regulations

Orange County Southern Subregion Habitat Conservation Plan (OCSSHCP). The Southern Subregion Natural Communities Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP) was prepared in July 2006 (County of Orange 2006) and the associated Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was approved by the United States Army Corps of Engineers (USACE) and USFWS, and was certified by the County of Orange. However, CDFW did not sign the Implementation Agreement for the NCCP portion of the plan. Henceforth in this document, the approved document will be referred to as the MSAA/HCP. The MSAA/HCP designates a preservation area totaling 32,818 acres and provides a conservation strategy for 10 sensitive vegetation communities and 7 federally listed species known to occur in the region, including least Bell's vireo and arroyo toad.

The project site is located within lands covered under the MSAA/HCP. Most of the project site (10.19 acres) was mapped as developed within the MSAA/HCP Planning Area. A 1.12-acre portion of the site is mapped as Supplemental Open Space (SOS) under the HCP.

4.3.4.4 Local Regulations

San Juan Capistrano Municipal Code. The City's Municipal Code (Section 9-2.349(c)(1)) Tree Removal Permit) allows tree removals associated with a development project that is subject to other discretionary land use approvals, to be permitted in conjunction with the other discretionary approvals by the reviewing authority for those approvals. Tree removals are subject to the reviewing authority making the required findings in Section 9-2.349(e) and adding conditions of approval for

replacement trees and landscaping in accordance with the intent of Section 9-2.349(c)(1) and as deemed appropriate by the reviewing authority.

San Juan Capistrano General Plan. The Conservation & Open Space Element (2002) of the City of San Juan Capistrano General Plan contains goals and policies to preserve important ecological and biological resources for future generations, and to preserve the quality of life in the community that these resources contribute. The following goal and policy of the Conservation & Open Space Element is applicable to the proposed project:

> **Goal 2:** Protect and preserve important ecological and biological resources.
>
> > **Policy 2.1:** Use proper land use planning to reduce the impact of urban development on important ecological and biological resources.

4.3.5 Thresholds of Significance

The thresholds for biological resources impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to biological resources if it would:

Threshold 4.3.1: **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

Threshold 4.3.2: **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

Threshold 4.3.3: **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.**

Threshold 4.3.4: **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.**

Threshold 4.3.5: **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Threshold 4.3.6: **Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.**

The Initial Study, included as Appendix A, substantiates that impacts associated with Threshold 4.3.5 would be less than significant because the proposed project is not expected to require or result in the removal of any on-site trees. Additionally, the Project Applicant would comply with local policies and ordinances protecting biological resources, including the City's tree preservation policy, specified in the City's Municipal Code (Section 9-2.349(c)(1), New Development Projects). This threshold will not be addressed in the following analysis.

4.3.6 Project Impacts

Threshold 4.3.1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant with Mitigation Incorporated. The project is located in close proximity to San Juan Creek and El Horno Creek, which contains habitat for several regional special-status species. However, according to the Biological Resources Assessment, no special-status natural communities, or special-status plants are present on the project site. While special-status plant species are not expected, Mitigation Measure BIO-1 would require a springtime botanical survey during the typical springtime blooming season (April through May 2020) to confirm the absence of annual special-status plant species that bloom during this period. Implementation of Mitigation Measure BIO-1 would result in avoidance of impacts to special-status plant species by confirming their absence. Should special-status plant species be identified as present on the project site, specific procedures would be implemented to avoid or compensate for impacts to such species, where applicable. Therefore, with implementation of Mitigation Measure BIO-1, impacts to special-status plant species would be less than significant.

According to the Biological Resources Assessment, no special-status animal species are known or observed to occur on the project site, and would therefore not be directly affected by the proposed project. However, several special-status animal species are known to occur within 5 miles of the project site, and therefore have the potential to be indirectly affected during construction activities through increased noise, vibration, lighting, and dust. Such indirect disturbance has the potential to affect foraging patterns and disorient special-status species occurring in adjacent habitat areas. To ensure that such species are not indirectly impacted by project construction activities, Mitigation Measure BIO-2 is proposed and requires Worker Environmental Awareness Training to be conducted by a qualified biologist prior to initial groundbreaking to educate all construction personnel on the relevant federal, state, and local laws related to regional special-status species known to occur in adjacent habitat types, particularly habitat associated with San Juan Creek. Training construction crews on special-status species identification and applicable standards and regulations would help avoid impacts to special-status species that are known to occur in habitats adjacent to the project site by identifying those areas where special-status species have potential to be present and specifying procedures that would be implemented to avoid impacts to such species. Mitigation Measure BIO-3 is also proposed and outlines best practices/construction housekeeping measures to minimize impacts on habitat subject to construction disturbances and other types of ongoing project-related disturbance activities. Construction site housekeeping measures included in

Mitigation Measure BIO-3 would effectively minimize temporary construction effects on sensitive biological resources by limiting construction equipment and personnel from entering areas where special-status species may be impacted, limiting the potential for fuel or chemical spills that could adversely impact water quality and adjacent aquatic habitats, minimizing the disturbance area needed for construction access and related effects (i.e., dust, noise, and vibration, etc.), reducing the likelihood of attracting or introducing predators of special-status species, and by preventing the primary or secondary poisoning of wildlife in the project vicinity. Therefore, with implementation of Mitigation Measures BIO-2 and BIO-3, impacts to special-status animal species during construction would be less than significant.

Construction activities also have the potential to result in temporary indirect effects to water quality during construction, which could lead to habitat degradation and associated impacts to special-status species. Such effects include a potential increase in erosion and sediment transport into adjacent or downstream aquatic areas. Chemical spills or leaks of fuel, transmission fluid, lubricating oil, or motor oil from construction equipment could also contaminate waters and degrade their quality. These potential indirect effects to hydrology and water quality would be avoided or substantially minimized through the implementation of best management practices (BMPs), project design features, and a Water Quality Management Plan (WQMP), as discussed in more detail in Section 4.8, Hydrology and Water Quality. Additionally, implementation of Mitigation Measure BIO-4 is required to reduce indirect impacts to San Juan Creek and El Horno Creek during project construction. Mitigation Measure BIO-4 requires grading and construction resulting in ground disturbance to occur within the typical dry season, as feasible, to avoid erosion and sedimentation impacts to nearby creeks and water quality. The Project Contractor would also be required to install adequate erosion and sedimentation barriers prior to ground disturbance to prevent any sediment-laden runoff or debris from entering adjacent waterways or the Pacific Ocean during the wet season or periods of rain. The erosion and sedimentation barriers would have the added benefit of minimizing the potential for special-status amphibians and other wildlife from entering work areas during construction. Therefore, implementation of Mitigation Measure BIO-4 would reduce the potential for habitat degradation through temporary indirect effects to water quality during construction to less than significant levels.

Though the project site does not include highly suitable nesting habitat for raptors or other tree-nesting species, the site does contain suitable nesting habitat for ground-nesting birds and for other birds that are protected while nesting under the California Fish and Game Code. According to the Biological Resources Assessment, riparian woodland adjacent to the project site serves as suitable nesting habitat for various common and special-status bird species, including least Bell's vireo. Therefore, construction activities that occur during the nesting bird season (January 1 through September 15) have the potential to result in the direct or indirect take of nesting birds. Because listed and protected species have the potential to occur adjacent to the project site, a longer, more conservative nesting period has been recommended. Mitigation Measure BIO-5 requires a qualified biologist to conduct a preconstruction nesting bird survey no more than 3 days prior to the start of construction activities that would occur during active nesting bird season. Successful avoidance of direct and indirect disturbance to nesting birds during construction would ensure compliance with applicable provisions of the California Fish and Game Code, the Migratory Bird Treaty Act, and other State and federal regulations that afford protections to nesting birds (including species listed under

CESA and FESA, such as least Bell's vireo). Therefore, with implementation of Mitigation Measure BIO-5, potential impacts to nesting birds would be less than significant.

Mitigation Measure BIO-6 requires that temporary fencing be installed along San Juan Creek, restricting access into the creek and adjacent habitats during construction. Mitigation Measure BIO-6 also requires that the Homeowner's Association (HOA) install signage that includes references to the environmentally sensitive nature of the creek and adjacent habitats. Fencing and signage of environmentally sensitive areas would effectively avoid or minimize edge effects on San Juan Creek and adjacent habitats. Implementation of Mitigation Measure BIO-6 would result in an improvement over existing conditions, given that there is a high degree of anthropogenic disturbance (homeless encampments, litter, and existing trails) currently occurring in this area. Therefore, with implementation of Mitigation Measure BIO-6, impacts to special-status animal species during construction and operation would be less than significant.

Increased anthropogenic disturbance and waste during and following project construction could attract predators of special-status species to the project vicinity and could also result in edge effects. Anthropogenic disturbances beyond urban boundaries into habitat are defined as edge effects. Such effects may have negative impacts on sensitive biological resources. However, given that the project is situated at a higher grade than the aquatic habitats associated with San Juan Creek and El Horno Creek, that there is spatial separation between proposed structures and existing riparian habitat, that the project is sited in close proximity to existing developments, and because the project lighting plan is designed to have minimal spill into adjacent habitats, long-term significant indirect effects to special-status species are not anticipated. Additionally, 5.55 acres along the riparian corridor would be dedicated as conservation areas.

The polyphagous shot hole borer and Kuroshio shot hole borer (ISHB) are invasive wood-boring beetles that attack dozens of tree species in Southern California, including common landscape trees and native species in urban and wildland environments. ISHB spreads a disease called Fusarium Dieback caused by pathogenic fungi. Trees that are susceptible may experience branch dieback, canopy loss, and, in some cases, tree mortality. The proposed project includes installation of landscape trees and the potential trimming of existing trees. Implementation of Mitigation Measure BIO-7 would eliminate the spread of ISHB and its effects through avoiding the installation of infected trees. With the implementation of Mitigation Measure BIO-7, potential impacts resulting from the spread of ISHB would be avoided.

The project proposes a 20-foot-wide equestrian trail, and equestrian use is often associated with brown-headed cowbirds (*Molothrus ater*), a brood parasite (a species that it lays its eggs in nests of other species). Brown-headed cowbirds are considered a threat to some regional special-status bird species. However, the proposed project is not an equestrian community, and the only aspect related to equine uses is the proposed multi-use trail. The proposed multi-use trail would accommodate existing equestrian activity that already occurs in the project area, but would not, itself, increase the level of horse activity or horse keeping in the community. Given that the site is adjacent to horse stables and existing equestrian uses, and pursuant to Section 9-4.505, Bicycle and Equestrian Trails, of the City's Municipal Code (as stated in Regulatory Compliance Measure BIO-1), requiring that the HOA provide regular maintenance of the proposed trail, including the removal of horse manure, pet waste, and debris, the proposed project is not expected to substantially increase the amount of

brown-headed cowbird in the area. Additionally, because there is already a high degree of equestrian use along San Juan Creek, impacts to water quality from fecal contamination greater than existing conditions in the community are not anticipated. Therefore, with implementation of Regulatory Compliance Measure BIO-1, potential impacts associated with brown-headed cowbirds would remain less than significant.

Summary. The project is located in close proximity to San Juan Creek, which contains habitat for several regional special-status species. Although no special-status species are known to occur on the project site, and while there is very low potential for any of these special-status species to be directly affected by the project due to the lack of suitable habitat on the project site, the project could indirectly affect special-status wildlife species through the attraction of predators and increased levels of noise, vibration, lighting, and dust during construction activities. There is also the potential for temporary indirect effects to water quality during construction, which could lead to habitat degradation. Implementation of Regulatory Compliance Measure BIO-1 and Mitigation Measures BIO-1 through BIO-7 would effectively mitigate potential impacts on special-status wildlife plant and animal species to less than significant levels. With implementation of Regulatory Compliance Measure BIO-1 and Mitigation Measures BIO-1 through BIO-7, potential impacts to candidate, sensitive, or special-status species would be less than significant.

Threshold 4.3.2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant with Mitigation Incorporated. While mature riparian woodland associated with San Juan Creek is located to the south of the project site, no sensitive natural communities are present on the project site. Further, the proposed project does not include the removal of any sensitive natural communities, and therefore, no direct impacts to sensitive natural communities would occur as a result of project implementation. However, the proposed project has the potential to result in indirect impacts to riparian habitat within San Juan Creek and El Horno Creek as a result of construction activities. As discussed under Threshold 4.3.1, Mitigation Measures BIO-2 through BIO-4 and BIO-6 would mitigate indirect impacts to San Juan Creek and El Horno Creek during project construction and operation. Mitigation Measure BIO-2 requires Worker Environmental Awareness Training to be conducted to educate all construction personnel on the relevant federal, state, and local laws related to regional special-status species known to occur in adjacent habitat types, particularly habitat associated with San Juan Creek. Mitigation Measure BIO-3 includes measures to minimize impacts on habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities. Mitigation Measure BIO-4 requires grading and construction resulting in ground disturbance to occur within the typical dry season, as feasible, to avoid erosion and sedimentation impacts to nearby creeks and water quality and also requires the installation of adequate erosion and sedimentation barriers to mitigate the potential for indirect effects to water to result in habitat degradation. Mitigation Measure BIO-6 requires the fencing and signage of environmentally sensitive areas, which would effectively avoid or minimize edge effects on San Juan Creek and adjacent habitats during construction and operation

of the proposed project. Therefore, with implementation of Mitigation Measures BIO-2 through BIO-4 and BIO-6, indirect impacts to sensitive riparian habitat would be less than significant.

Threshold 4.3.3: Would the project 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?

Less Than Significant with Mitigation Incorporated. According to the National Wetlands Inventory managed by USFWS, the project site does not contain federally protected wetlands. The project site is located entirely outside of the streambeds, banks, and riparian habitat associated with San Juan Creek and El Horno Creek. Soils on site are well-drained, and there are no depressional wetlands or other potentially aquatic resources within the project site. However, the San Juan Creek Channel, located immediately south of the project site, contains wetlands classified as Freshwater Forested/Shrub Wetland and Riverine.[1] Due to the proximity of the San Juan Creek Channel, project construction and operation could have potential indirect impacts on off-site federally protected wetlands and waters of the United States as defined by Section 404 of the Clean Water Act (CWA).

Although construction activities have the potential to result in temporary indirect effects to water quality including a potential increase in erosion and sediment transport into adjacent or downstream aquatic areas and the contamination of waters from construction equipment, these potential indirect effects to hydrology and water quality would be avoided or substantially minimized through the implementation of BMPs, project design features, and preparation of a WQMP, as discussed in Section 4.8, Hydrology and Water Quality. Additionally, as discussed in Threshold 4.3.1, Mitigation Measure BIO-4 requires grading and construction resulting in ground disturbance to occur within the typical dry season, as feasible, to avoid erosion and sedimentation impacts to nearby creeks and water quality. The Project Contractor would also be required to install adequate erosion and sedimentation barriers prior to ground disturbance to prevent any sediment-laden runoff or debris from entering adjacent waterways or the Pacific Ocean during the wet season or periods of rain. Therefore, with implementation of Mitigation Measure BIO-4, impacts on state or federally protected wetlands would be less than significant.

Threshold 4.3.4: Would the project 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?

Less Than Significant with Mitigation Incorporated. According to the Biological Resources Assessment, there are no wildlife corridors or wildlife nurseries on the project site where development is proposed. San Juan Creek, which is a known wildlife movement corridor, is located to the south of the project site and would not be directly affected by the project. Given the isolated and disturbed nature of the project site, it is unlikely that the site serves as an important corridor for animals moving locally, regionally, or in broader migrations. Migratory bird species may utilize the project site for foraging; however, the usage is likely transient and limited to species that forage

[1] United States Fish and Wildlife Service (USFWS). National Wetland Inventory. Website: https://www.fws.gov/wetlands/Data/Mapper.html (accessed December 6, 2019).

over open grassland areas. Additionally, the project site does not possess any characteristics that would indicate a locally significant stopover point for migratory species including raptors or waterfowl. No known wildlife movement corridors occur within the project site.

The wildlife species that occur in the project vicinity and utilize San Juan Creek as a movement corridor are adapted to the urban-wildland interface, and the project would not introduce new affects to the area. The noise, vibration, light, dust, or human disturbance within construction areas would only temporarily deter wildlife from using areas in the immediate vicinity of construction activities. These indirect effects could temporarily alter migration behaviors, territories, or foraging habitats in select areas. However, because these are temporary effects, it is likely that wildlife already living and moving in close proximity to urban development would alter their normal functions for the duration of the project construction and then re-establish these functions once all temporary construction effects have been removed.

Following construction, there is potential for increased long-term indirect effects to wildlife movement within San Juan Creek due to increased noise, lighting, and other anthropogenic disturbance. However, such affects are not expected to substantially change the level of wildlife movement within San Juan Creek given that the project is situated at a higher grade than the aquatic habitats associated with San Juan Creek, there is spatial separation between proposed structures and existing riparian habitat, the project is sited in close proximity to existing developments, the project lighting plan is designed to have minimal spill into adjacent habitats, and areas adjacent to San Juan Creek in the project vicinity already experience a high degree of human visitation and associated disturbance. Furthermore, the proposed project would not place any permanent barriers within any known wildlife movement corridors or interfere with habitat connectivity.

Nevertheless, as described under Threshold 4.3.1, the project site contains suitable nesting habitat for ground-nesting birds and for other birds that are protected under the California Fish and Game Code. The proposed project has the potential to impact active native bird nests if construction or demolition activities occur during the nesting season (January 1 through September 15). Therefore, project implementation must be accomplished in a manner that avoids impacts to active nests during the nesting season. Mitigation Measure BIO-5 requires a qualified biologist to conduct nesting bird surveys and the implementation of active nest avoidance measures as deemed necessary. With implementation of Mitigation Measure BIO-5, potential impacts to nesting birds would be less than significant. Therefore, impacts to the movement of any native resident or migratory fish or wildlife species and wildlife corridors would be less than significant with the implementation of mitigation.

Threshold 4.3.6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less Than Significant Impact. According to the Biological Resources Assessment, the project site is located within lands covered under the MSAA/HCP. A 1.12-acre portion of the site is mapped as Supplemental Open Space (SOS) under the HCP. However, the SOS area within the project site was mapped based on local General Plan and zoning designations. It should be noted that the proposed

project is consistent with the existing General Plan land use designations currently designated on the project site, and no General Plan Amendment would be required for project implementation. According to the MSAA/HCP, SOS lands in this category are subject to future decisions by local jurisdictions that could change their designation and result in impacts to the open space. Accordingly, the General Plan SOS areas are not considered permanently protected and do not receive regulatory coverage under the MSAA/HCP. Therefore, the proposed project would conflict with the adopted MSAA or HCP. Additionally, the project includes the dedication of 5.5 acres within portions of San Juan Creek and El Horno Creek for conservation; these 5.5 acres are not currently protected under the MSAA/HCP. This would contribute to the conservation of resources covered under the MSAA/HCP and permanently conserve important portions of the MSAA/HCP Planning Area that are currently subject to impacts based on decisions by local jurisdictions. As such, the proposed project would not conflict with local ordinances or the adopted MSAA, HCP, or other approved local, regional or State HCP. Therefore, project impacts related to conflicts with local ordinances or the adopted MSAA, HCP, or other approved local, regional or State HCP would be less than significant, and no mitigation is required.

4.3.7 Level of Significance Prior to Mitigation

Potential indirect adverse impacts to biological resources, including special-status species, nesting birds, San Juan Creek, and El Horno Creek, could occur, and mitigation is required.

4.3.8 Regulatory Compliance Measures and Mitigation Measures

4.3.8.1 Regulatory Compliance Measures

The proposed project would comply with the following Regulatory Compliance Measure. The City considers this to be mandatory; therefore, it is not considered mitigation.

Regulatory Compliance Measure BIO-1 **Trail Maintenance.** As required by Section 9-4.505, Bicycle and Equestrian Trails, of the City of San Juan Capistrano's (City) Municipal Code, the Homeowner's Association (HOA) (or equivalent body) associated with the proposed development on the site would be required to provide regular maintenance of the proposed trail, including the removal of horse manure, pet waste, and debris.

4.3.8.2 Mitigation Measures

The proposed project is required to implement the following Mitigation Measures to reduce potential impacts to biological resources.

Mitigation Measure BIO-1 **Springtime Botanical Survey**. Prior to any project-related ground disturbance, the Project Applicant shall retain a qualified biologist/botanist to conduct a botanical survey during the typical springtime blooming season (April through May 2020) to confirm the absence of annual special-status plant species that bloom during this

period. The results of the survey shall be documented and submitted to the Director of the City of San Juan Capistrano (City) Development Services Department, or designee. Should special-status plant species be found within the project disturbance limits, a compensatory mitigation plan must be prepared and approved by the City Development Services Department, or designee, prior to project-related ground disturbance. If listed special-status plant species are found, the compensatory mitigation plan must also be approved by the United States Fish and Wildlife Service or California Department of Fish and Wildlife, as applicable.

Mitigation Measure BIO-2

Worker Environmental Awareness Training. Prior to initial groundbreaking, the Director of the City of San Juan Capistrano Development Services Department, or designee, shall confirm that a Worker Environmental Awareness Training shall be conducted by a qualified biologist to educate all construction personnel on the relevant federal, state, and local laws related to regional special-status species known to occur in adjacent habitat types, particularly habitat associated with San Juan Creek. The training session shall include training on identification of species that may be found on or adjacent to the project site, the status of those species, and any legal protection afforded to those species. Measures that are being implemented to protect those species shall also be explained. Personnel shall be advised to report any special-status species promptly to the construction manager. The training session shall also include information regarding invasive shot hole borers (ISHB), how to recognize signs of infestation, and where to report observations. A fact sheet conveying this information shall be prepared for display or for distribution to anyone who may enter the project site.

Mitigation Measure BIO-3

Construction Site Housekeeping. Impacts to habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities shall be minimized by adhering to the following measures for the duration of construction activities:

- The project disturbance limits shall be clearly marked with construction fencing (or other highly visible

material), and construction/materials staging and vehicle/equipment maintenance and fueling areas shall be located at least 200 feet away from riparian habitat associated with San Juan Creek and El Horno Creek, where feasible.

- To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, and other designated areas.

- Project-related vehicles shall observe a daytime speed limit of 20 miles per hour (mph) throughout the site in all project sites, except on county roads and State and federal highways. Night-time construction shall be minimized to the extent possible. However if it does occur, then the speed limit shall be reduced to 10 mph. Off-road traffic outside of designated project sites shall be prohibited.

- To prevent inadvertent entrapment of animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape.

- For the duration of construction activities, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least daily from the construction site.

- Pets, such as dogs or cats, shall not be permitted on the project site during construction to prevent harassment, injury, or death of wildlife in the project vicinity.

- Use of rodenticides and herbicides in project sites shall be restricted to prevent primary or secondary poisoning of predators and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, the California Department of Food and Agriculture, and other State and federal legislation.

Mitigation Measure BIO-4

Erosion Control and Amphibian Exclusionary Fencing. Grading and construction resulting in ground disturbance shall occur within the typical dry season (April 15 through October 15), as feasible, to avoid erosion and sedimentation impacts to nearby creeks and water quality. The Director of the City of San Juan Capistrano Development Services Department, or designee, shall verify that project plans require the Project Contractor to install adequate erosion and sedimentation barriers (e.g., silt fencing, as described below) prior to ground disturbance to prevent any sediment-laden runoff or debris from entering adjacent waterways or the Pacific Ocean during the wet season or periods of rain. This silt fencing shall also serve as a temporary barrier to further minimize the potential for special-status amphibians and other wildlife from entering work areas during construction. The barriers shall consist of 3-foot-tall silt fencing buried to a depth of at least 6 inches below the soil surface along the outer limits of all work areas (or as otherwise required by the storm water pollution and prevention plan). These barriers shall be inspected daily by construction personnel and maintained and repaired as necessary for the duration of construction to ensure that they are functional and are not a hazard to wildlife on the outer side of the fence. A qualified biologist shall monitor all fence installation. All barriers shall be removed following completion of construction.

Mitigation Measure BIO-5

Nesting Bird Surveys. If vegetation removal, construction, or grading activities are planned to occur within the active nesting bird season (January 1 through September 15), the Director of the City of San Juan Capistrano Development Services Department, or designee, shall confirm that the Project Applicant has retained a qualified biologist who shall conduct a preconstruction nesting bird survey no more than 3 days

prior to the start of such activities. If construction activities using heavy equipment (i.e., graders, bulldozers, and excavators, etc.) continue through the nesting season, weekly nesting bird surveys shall be conducted. Each nesting bird survey shall include the work area and areas adjacent to the site (within 500 feet, as feasible) that could potentially be affected by project-related activities such as noise, vibration, increased human activity, and dust, etc. For any active nest(s) identified, the qualified biologist shall establish an appropriate buffer zone around the active nest(s). The appropriate buffer shall be determined by the qualified biologist based on species, location, and the nature of the proposed activities. Project activities shall be avoided within the buffer zone until the nest is deemed no longer active, as determined by the qualified biologist.

Mitigation Measure BIO-6

Delineation of Environmentally Sensitive Areas. During the construction period, the Director of the City of San Juan Capistrano Development Services Department, or designee, shall confirm that construction plans require that temporary fencing be installed along San Juan Creek that restricts access into the creek and adjacent habitats. Prior to issuance of occupancy permits, the Director of the City's Development Services Department, or designee, shall confirm that permanent signage has been installed that includes references to the environmentally sensitive nature of the creek and adjacent habitats. The Homeowner's Association (HOA) shall fund annual signage monitoring and repairs, as needed.

Mitigation Measure BIO-7

Invasive Shot Hole Borers. To prevent the spread of Invasive Shot Hole Borers (ISHB), the Project Applicant shall not install any ISHB-infected trees for landscaping, and installed trees shall be monitored once every 3 years for up to 9 years by an International Society of Arboriculture (ISA) certified arborist. The Worker Environmental Awareness Training, described in Mitigation Measure BIO-2, shall include a component to educate crews about ISHB and how to recognize signs of this species. A designated biologist familiar with the signs of ISHBs shall survey trees on the project site that are designated for removal or trimming. Surveys shall be conducted at least 30 days prior to removal or trimming activities. If any tree is determined to be infested/

infected by ISHB, a control plan shall be prepared and submitted to the California Department of Fish and Wildlife (CDFW) for review and approval. At a minimum, the control plan shall include methods of control, removal, and appropriate disposal techniques to prevent the spread of ISHB. The results of the tree survey, and if warranted, a copy of the CDFW-approved control plan shall be submitted to the City's Development Services Director, or designee, prior to issuance of grading permits.

4.3.9 Level of Significance after Mitigation

Potential impacts to biological resources from the proposed project would be mitigated to a less than significant level with implementation of Mitigation Measures BIO-1 through BIO-7. Therefore, the project would have no significant and unavoidable adverse impacts related to biological resources.

4.3.10 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for biological resources. The project site is undeveloped and is located in the City of San Juan Capistrano; therefore, the cumulative area for biological impacts is the City. The project site is located within lands covered by the MSAA/HCP, which designates a preservation area totaling 32,818 acres. The project site is has designations of Developed and Supplemental Open Space, which are land use categories not considered permanently protected and which do not receive regulatory coverage under the MSAA/HCP. Additionally, the project site is not located within a designated habitat reserve, and therefore, the proposed project would not contribute to the loss of natural habitat in the City. The development of the proposed project would not result in the removal of any sensitive habitat species identified in the MSAA/HCP. Additionally, as part of the proposed project, portions of San Juan Creek and El Horno Creek (5.55 acres) within the MSAA/HCP Planning Area that are not currently protected under the MSAA/HCP would be dedicated as conservation lands as part of the project. This would contribute to the conservation of resources covered under the MSAA/HCP and permanently conserve important portions of the MSAA/HCP Planning Area that are currently subject to impacts based on decisions by local jurisdictions. Therefore, the proposed project would not contribute to the cumulative loss of biological resources, and impacts on biological resources would be less than cumulatively significant. No mitigation would be required.

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4.4 CULTURAL RESOURCES

This section evaluates the potential for the Tirador Residential Development Project to impact cultural resources. Cultural resources are sites, buildings, structures, objects, and districts over 50 years old that may have traditional or cultural value for the historical significance they possess. The information and analysis presented in this section are based on the City of San Juan Capistrano (City) General Plan Cultural Resources Element (1999) and Section 4.8, Cultural/Scientific Resources, of the City's *Ventanas Business Center Environmental Impact Report* (2007). The Ventanas Business Center Project was proposed for a 19.43-acre site that included the current project site in its entirety.

The term "site" is used in two contexts in this section:

- "Project site" should be interpreted to mean the approximately 16.1-acre site currently proposed for development under the Tirador Residential Development Project.

- "Cultural resources site" should be interpreted to mean the specific locations of documented cultural materials or artifacts.

4.4.1 Scoping Process

The City of San Juan Capistrano received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this Environmental Impact Report (EIR). None of the comment letters included comments related to Cultural Resources.

4.4.2 Methodology

A cultural resources assessment was conducted on the project site in 2007 in conjunction with the City's *Ventanas Business Center Environmental Impact Report.* The study included a record search at the South Central Coastal Information Center (SCCIC), a pedestrian survey, and archaeological testing. The purpose of the 2007 records search at the SCCIC was to determine the extent of previous cultural resources investigations within a 0.25-mile radius of the project site, and whether any previously recorded archaeological sites or other historic resources exist within or near the project site. Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and the San Juan Capistrano *Inventory of Historic and Cultural Landmarks* (updated October 2018).

Subsequent to the record search, a field survey was conducted on the project site in August 2007. Modern debris was observed, including trash piles, sod piles, a guard rail, asphalt, concrete, and aluminum cans. A single prehistoric deposit was identified on the property during the pedestrian survey, which was recorded at the SCCIC as site CA-ORA-1672. This site consisted of a small scatter (4 x 4 meters) of chipped stone (chert flake tool, argillite flake, and possible schist ground stone fragment) and marine shell (chione and pecten). Because the significance of the site could not be

determined by the field survey, additional archaeological testing was conducted at the cultural resources site in October of 2007.

In addition to the previous cultural resources assessment, a recent search of the Sacred Lands File (SLF) was requested and conducted by the Native American Heritage Commission (NAHC) and provided on December 28, 2018, in conjunction with the currently proposed project. The 2018 SLF search was requested to determine whether there are sensitive or sacred Native American resources in the vicinity of the project area that could be affected by the proposed project.

4.4.2.1 Results

Results of the August 9, 2007, SCCIC records search indicated that a total of 9 cultural resources occur in the project vicinity (i.e., within 0.25 mile of the 2007 Ventanas Business Center project boundary). These known cultural resources in the project vicinity include two significant historic properties that are listed on the National Register that occur within 0.25 mile of the currently proposed project site: Mission San Juan Capistrano and the Frank Forster Mansion. However, no historic period cultural resources were revealed in the literature search within the currently proposed project site.

Additional archaeological testing was conducted in 2007 at CA-ORA-1672. Although the site had been heavily disturbed through prior development activities, the testing produced a few stone (or lithic) artifacts and a small sample of ecofacts. A total of 18 artifacts and ecofacts were recovered at the site. The recovered artifacts were limited both in number (n=15) and type (one lithic tool, 14 waste flakes). They provide no data to answer important research questions in prehistory, such as regional or local chronology, settlement and subsistence patterns, technological change, or social interactions. The ecofacts present at the site were shell. The amount of recovered shellfish was very small (n=3) and fragmentary, with only two species represented. Such a small and limited sample does not provide data to answer important research questions in prehistory, such as procurement patterns, seasons of exploitation, or climate/ecosystem changes in the region. The site was also found to lack integrity; specifically, the small scatter of lithic artifacts and shell fragments was embedded in a completely disturbed context (i.e., fill dirt and asphalt debris). Therefore, archaeological testing at CA-ORA-1672 concluded that the site did not appear to qualify as a significant cultural resource due to its lack of integrity and the absence of data to answer important research questions in prehistory.

Finally, an SLF search was requested from the NAHC to determine whether there are sensitive or sacred Native American resources on or near the site that could be affected by the proposed project. The NAHC responded on December 28, 2018, to say that the SLF search was positive for the project area. However, no responses were received from Native American representatives with regard to Assembly Bill (AB) 52 consultation and outreach. Please refer to Section 4.12, Tribal Cultural Resources, of this EIR, for more detail regarding tribal consultation results.

4.4.3 Existing Environmental Setting

The project site is currently undeveloped and vacant. The project site is located in the City east of Interstate 5 (I-5), south of Calle Arroyo, west of the Ortega Equestrian Center, and north of the San Juan Creek. A floodplain associated with San Juan Creek, the primary regional drainage,

encompasses a portion of the project site. The existing project site is primarily characterized by dirt and scattered ruderal vegetation, is irregular in shape, and is relatively flat with a slight slope to the east/southeast. In 2007, it was noted that some minor improvements along Calle Arroyo were present including a paved bicycle path. In addition, the 2007 pedestrian survey associated with the Ventanas EIR cultural resources assessment noted that debris of modern origin occurred on the project site.

4.4.4 Regulatory Setting

This section includes applicable federal, State, regional, and City regulations.

4.4.4.1 Federal Regulations

There are no federal regulations that are applicable to cultural resources relevant to the proposed project.

4.4.4.2 State Regulations

California Environmental Quality Act Requirements. CEQA defines a "historical resource" as a resource that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register; (2) listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's Lead Agency (PRC Section 21084.1 and *State CEQA Guidelines* Section 15064.5(a)). A historical resource consists of:

> "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…. Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" *State CEQA Guidelines* Section 15064.5(a)(3).

In accordance with *State CEQA Guidelines* Section 15064.5(b), a substantial adverse change in the significance of a historical resource is a significant effect on the environment.

CEQA requires a Lead Agency to determine whether an archaeological cultural resource meets the definition of a historical resource, a unique archaeological resource, or neither (*State CEQA Guidelines* Section 15064.5(c)). Prior to considering potential impacts, the Lead Agency must determine whether an archaeological cultural resource meets the definition of a historical resource in *State CEQA Guidelines* Section 15064.5(c)(1). If the archaeological cultural resource meets the definition of a historical resource, it is treated like any other type of historical resource in accordance with *State CEQA Guidelines* Section 15126.4. If the archaeological cultural resource does not meet the definition of a historical resource, then the Lead Agency determines whether it meets the definition of a unique archaeological resource as defined in *State CEQA Guidelines* Section 21083.2(g). In practice, however, most archaeological sites that meet the definition of a unique

archaeological resource will also meet the definition of a historical resource. Should the archaeological cultural resource meet the definition of a unique archaeological resource, it must be treated in accordance with *State CEQA Guidelines* Section 21083.2. If the archaeological cultural resource does not meet the definition of a historical resource or an archaeological resource, the effects to the resource are not considered significant effects on the environment (*State CEQA Guidelines* Section 15064.5(c)(4)).

CEQA also requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (*State CEQA Guidelines* Appendix G (v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (California Code of Regulations [CCR] Title 14(3) Section 15126.4 (a)(1)).

California Public Resources Code Section 5097.5. PRC Section 5097.5 provides for the protection of cultural and paleontological resources and prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of State or local authorities.

California Health and Safety Code Section 7050.5. California Health and Safety Code (HSC) Section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

California Register of Historical Resources (PRC Section 5020 et seq.) State law also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources in CEQA documents. A cultural resource is an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the *State CEQA Guidelines*. These criteria are nearly identical to those of the National Register.

The State Historic Preservation Officer (SHPO) maintains the California Register. Properties listed, or formally designated eligible for listing, on the National Register are nominated to the California Register and then selected to be listed on the California Register, as are the State Landmarks and Points of Interest.

4.4.4.3 Regional Regulations

There are no regional or county regulations applicable to cultural resources relevant to the proposed project.

4.4.4.4 Local Regulations

City of San Juan Capistrano General Plan. The City's General Plan Cultural Resources Element (1999) addresses the protection and sustainability of the City's historic, archaeologic, and

paleontologic resources. Goals and policies presented within the Cultural Resources Element are intended to encourage the conservation, and protection of cultural resources. The following goal related to cultural resources is presented in the Cultural Resources Element and is applicable to the proposed project:

Goal 1: Preserve and protect historical, archaeological, and paleontological resources.

City of San Juan Capistrano Historical and Cultural Landmarks Ordinance. The City has adopted the Historical and Cultural Landmarks Ordinance, which prohibits the damage of any resource listed in the City's Inventory of Historical and Cultural Landmarks without first obtaining approval from the City. Applications to remove such a resource are reported to the Cultural Heritage Commission, which must then make a decision within 30 days. Decisions made by the Cultural Heritage Commission can subsequently be appealed to the City Council.

City of San Juan Capistrano Historic Preservation Ordinance. The City has adopted the Historic Preservation Ordinance that establishes permitting and conditional uses of properties located within a designated historic district. This ordinance also prohibits the damaging of any designated historic resource in any way.

City of San Juan Capistrano Historical, Archaeological, and Paleontological Resource Management Guidelines. In 1997, the City revised City Council Policy 601 and renamed this policy, "Historical, Archaeological, and Paleontological Resource Management Guidelines." These guidelines aim to ensure that cultural resource evaluations for projects within the City are conducted by qualified individuals. The policy also establishes procedures for reviewing these reports and mitigation measures to address potential impacts to previously unknown cultural resources during construction activities. In the event cultural resources are discovered, these guidelines require that the locations of all significant historic resources within the City be recorded.

City of San Juan Capistrano Municipal Code. Article 3, Development Review Procedures, establishes regulations for the conservation of historic resources and requires City approval for any construction or alteration of designated historic structures.

4.4.5 Thresholds of Significance

The thresholds for cultural resources impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to cultural resources if it would:

Threshold 4.4.1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of CEQA.

Threshold 4.4.2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of CEQA.

Threshold 4.4.3: Disturb any human remains, including those interred outside of formal cemeteries.

The Initial Study, provided in Appendix A, substantiates that there would be no impact associated with Threshold 4.4.1 because the Office of Historic Preservation and the City's Inventory of Historic and Cultural Landmarks indicate that there are no historic buildings or structures on the project site.[1] Therefore, the proposed project would not result in any impacts related to historical resources, and no mitigation would be required. This threshold will not be addressed in the following analysis.

4.4.6 Project Impacts

Threshold 4.4.2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of CEQA?

Less Than Significant with Mitigation Incorporated. As indicated previously, the project site is located in an area of the City of San Juan Capistrano that is archaeologically sensitive for cultural resources. Implementation of the proposed project will necessitate project site preparation and grading that would result in the destruction of one known, prehistoric archaeological site (CA-ORA-1672) that was identified during the 2007 cultural resources assessment. However, as concluded in the 2007 *Ventanas Business Center Environmental Impact Report,* prehistoric site CA-ORA-1672 neither possesses significant cultural materials nor represents a significant cultural resource. The previous recordation, analysis, and collection of the artifacts and ecofacts contained within CA-ORA-1672 adequately removed the potential impacts posed by implementation of the current project; further, the archaeological testing at CA-ORA-1627 concluded that the prehistoric site neither possesses significant cultural materials nor represents a significant cultural resource. Therefore, the project would not cause a substantial adverse change in the significance of a cultural resource pursuant to Section 15064.5 of the *State CEQA Guidelines.* However, it is possible that potentially significant prehistoric deposits and/or cultural artifacts could be encountered during construction because the project site is located within an area that is archaeologically sensitive. As a result, it remains possible that buried, previously unrecorded cultural resources could be present in native soils on the project site and disturbed during project construction.

In order to address the discovery of unknown and unrecorded cultural resources, Mitigation Measure CUL-1 is proposed and requires monitoring by both a qualified archaeologist and a Native American monitor. The measure includes procedures for recovering any significant or unique archaeological resource and for preparation of a report that documents any cultural resource recovery at the current project site. All procedures conducted as part of Mitigation Measure CUL-1 would comply with the applicable provisions for the management of historic, archaeological, and paleontological resources as described in City Council Policy 601. With implementation of Mitigation Measure CUL-1, impacts to previously unrecorded cultural resources would be less than significant.

Threshold 4.4.3: Would the project disturb any human remains, including those interred outside of formal cemeteries?

[1] City of San Juan Capistrano. 1999. General Plan Cultural Resources Element. Figure CR-1, Locations of Historic Buildings and Structures. December.

Less Than Significant with Mitigation Incorporated. Although no human remains are known to be on the project site or are anticipated to be discovered during project construction, the archaeological sensitivity of the project site is high. There is always a possibility of encountering unanticipated cultural resources, including human remains. Precautionary mitigation is required to ensure that the proposed project does not impact or disturb any human remains.

Mitigation Measure CUL-2 requires compliance with CCR Section 15064.5(e) in the unlikely event that human remains are encountered during project grading. Upon discovery of the remains, the Orange County (County) Coroner would be notified immediately, and no further disturbance would occur until the County Coroner makes a determination of origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be Native American, the County Coroner would notify the NAHC, which would then determine and notify the MLD. With permission from the City, the MLD would complete inspection within 48 hours of notification by the NAHC. Implementation of Mitigation Measure CUL-2 would reduce potential impacts related to the discovery of human remains on the project site to a less than significant level.

4.4.7 Level of Significance Prior to Mitigation

No impacts to historical resources would occur. Prior to mitigation, the proposed project has the potential to result in significant impacts to archaeological resources and previously undiscovered buried human remains.

4.4.8 Regulatory Compliance Measures and Mitigation Measures

4.4.8.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the proposed project.

4.4.8.2 Mitigation Measures

The proposed project is required to implement the following mitigation measures to reduce potential impacts to cultural resources.

Mitigation Measure CUL-1 **Cultural Resources Monitoring and Accidental Discovery.** Prior to the issuance of grading permits, the Project Applicant shall retain, with approval of the City of San Juan Capistrano (City) Development Services Director, or designee, a qualified archaeological monitor. A monitoring plan should be prepared by the archaeologist and implemented upon approval by the City. Prior to issuance of grading permits, the Project Applicant, with City approval, shall also retain a Native American monitor after consultation with interested tribal and Native American representatives. Both monitors shall be present on the project site during ground-disturbing activities to monitor rough and finish grading, excavation, and other ground-disturbing activities in the native soils. Because cultural resources were previously identified on the project site, both monitors are required to be present on a full-time basis during initial site preparation and initial ground-disturbing activities. Further, each

monitor shall spot check any ground-disturbing activities (e.g., finish grading) to ensure that no cultural resources are impacted during construction activities.

If cultural materials are discovered during site preparation, grading, or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing on the California Register of Historical Resources. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to: excavation of the deposit in accordance with a data recovery plan (see California Code of Regulations [CCR] Title 14(3) Section 15126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.

Mitigation Measure CUL-2

Human Remains. Consistent with the requirements of CCR Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the project site, the construction contractor shall halt work within 25 feet of the discovery; all work within 25 feet of the discovery shall be redirected and the Orange County (County) Coroner notified immediately. No further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will

determine and notify a Most Likely Descendant (MLD). With the permission of the City, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City shall consult with the MLD identified by the NAHC to develop an agreement for the treatment and disposition of the remains.

Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report shall be submitted to the City Development Services Director, or designee, and the South Central Coastal Information Center. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.

4.4.9 Level of Significance after Mitigation

No impacts to cultural resources would occur. Mitigation Measures CUL-1 and CUL-2 would reduce potential impacts to archaeological resources and previously undiscovered buried human remains to a less than significant level. No significant unavoidable impacts to archaeological resources or human remains would occur with implementation of these measures. After mitigation has been implemented, all anticipated impacts to cultural resources would be considered less than significant.

4.4.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for cultural resources. The cumulative impact area for cultural resources for the proposed project is the City of San Juan Capistrano.

Potential impacts of the proposed project to unknown cultural resources, when combined with the impacts of past, present, and reasonably foreseeable projects in the City of San Juan Capistrano, could contribute to a cumulatively significant impact due to the overall loss of archaeological artifacts and cultural remains unique to the region. However, each development proposal received by the City is required to undergo environmental review pursuant to CEQA. If there were any potential for significant impacts to archaeological resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. When resources are assessed and/or protected as they are discovered, impacts to these resources are less than significant.

As such, implementation of Mitigation Measures CUL-1 and CUL-2 would ensure that the proposed project, together with cumulative projects, would not result in a significant cumulative impact to unique archaeological resources and previously undiscovered buried human remains.

4.5 ENERGY

This section discusses energy use resulting from implementation of the Tirador Residential Development Project (proposed project) and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency. The energy use analysis in this section is based on information from the California Emissions Estimator Model™ (CalEEMod™) v2016.3.2 modeling results in the *Air Quality and Greenhouse Gas Emissions Analysis* (LSA, December 2019), which is contained in Appendix B of this Environmental Impact Report (EIR).

4.5.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. None of the comment letters included comments related to Energy.

4.5.2 Methodology

The analysis of electricity/natural gas usage is based on the CalEEMod modeling conducted by LSA (LSA 2019), which quantifies energy use for project operations. Fuel consumption (diesel fuel and gasoline) from vehicle trips during operation was estimated for the opening year (2022) of the proposed project based on trip estimates from the CalEEMod model and the project's Traffic Impact Analysis (TIA)[1] and fuel efficiencies from the California Air Resources Board (CARB) EMFAC2017 model. Estimates of fuel consumption (diesel fuel and gasoline) from construction trucks and construction worker vehicles was based on trip estimates from the CalEEMod model and the TIA and fuel efficiencies from the CARB EMFAC2017 model.

The analysis focuses on the four sources of energy that would be utilized by the proposed project: electricity, natural gas, the equipment and vehicle fuel necessary for project construction, and vehicle fuel necessary for project operations. For the purposes of this analysis, the amount of electricity, natural gas, construction fuel, and fuel use from operations are quantified and compared to that consumed by residential land uses in Orange County. The electricity/natural gas use of the proposed project is analyzed as a whole on an annual scale.

4.5.3 Existing Environmental Setting

4.5.3.1 Electricity

Electricity is a man-made resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, or nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).[2]

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1 LSA Associates, Inc. 2019. *Traffic Impact Analysis, Tirador Residential Development Project*. December.

2 United States Energy Information Administration (EIA). 2019b. Electricity Explained-. Website: https://www.eia.gov/energyexplained/electricity/ (accessed December 26, 2019).

According to the most recent data available, in 2017, California's electricity was generated primarily by natural gas (33.67 percent), coal (4.13 percent), large hydroelectric (14.72 percent), nuclear (9.08 percent), and renewable sources (29 percent). Total electric generation in California in 2017 was 292,039 gigawatt-hours (GWh), up 0.5 percent from the 2016 total generation of 290,567 GWh. In 2017, California produced approximately 70.7 percent and imported 29.3 percent of the electricity it used.[1]

The project site is within the service territory of San Diego Gas and Electric Company (SDG&E). SDG&E supplies power to a population of 1.4 million business and residential accounts in a 4,100 square-mile service area spanning 2 counties and 25 communities.[2] According to the California Energy Commission (CEC), total electricity consumption in the SDG&E service area in 2018 was 18,767.0 GWh (6,359.0 GWh for the residential sector).[3] Total electricity consumption in Orange County in 2018 was 19,858.2 GWh (6,814.1 GWh for the residential sector).[4]

4.5.3.2 Natural Gas

Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).[5]

Natural gas consumed in California is used for electricity generation (35 percent), residential uses (17 percent), industrial uses (33 percent), commercial uses (12 percent), and transportation uses (3 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.[6]

The SDG&E is the natural gas service provider for the project site. According to the California Energy Commission (CEC), total natural gas consumption in the SDG&E service area in 2018 was 482.5 million therms (264.5 million therms for the residential sector).[7] Total natural gas

1 California Energy Commission (CEC). 2019e. Notice of Request for Public Comments on the Draft Scoping Order for the 2019 Integrated Energy Policy Report. Docket No. 19-IEPR-01.

2 San Diego Gas and Electric Company (SDG&E). 1998-2016. Our Service Area. Website: https://web archive.sdge.com/our-company/about-us/our-service-territory (accessed January 3, 2020).

3 CEC. 2019b. Electricity Consumption by Entity. Website: https:// ecdms.energy.ca.gov/elecby util.aspx (accessed December 26, 2019)

4 CEC. 2019a. Electricity Consumption by County. Website: https://ecdms.energy.ca.gov/elecbycounty.aspx (accessed December 26, 2019).

5 EIA. 2019c. Natural Gas Explained- Use of Natural Gas. https://www.eia.gov/energyexplained/index. php?page=natural_gas_use (accessed December 26, 2019).

6 CEC. 2019f. Supply and Demand of Natural Gas in California. Website: https://ww2.energy.ca.gov/ almanac/naturalgas_data/overview.html (accessed December 26, 2019).

7 CEC. 2019d. Gas Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed December 26, 2019).

consumption in Orange County in 2018 was 575.1 million therms (339.0 million therms for the residential sector).[1]

4.5.3.3 Petroleum/Transportation Energy

Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil and gasoline.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, in 2017, total gasoline consumption in California was 366,820 thousand barrels (15.4 billion gallons) or 1,853.5 trillion British Thermal Units (BTU).[2] Of the total gasoline consumption, 350,604 thousand barrels (14.7 billion gallons) or 1,771.6 trillion BTU were consumed for transportation.[3] Based on fuel consumption obtained from EMFAC2017, 160.5 million gallons of diesel and 1.3 billion gallons of gasoline were consumed from vehicle trips in Orange County in 2018.

4.5.4 Regulatory Setting

4.5.4.1 Federal Regulations

Corporate Average Fuel Economy (CAFE). Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. CAFE standards are federal regulations that are set to reduce energy consumed by on-road motor vehicles. The National Highway Traffic Safety Administration (NHTSA) regulates the standards and the United States Environmental Protection Agency (EPA) measures vehicle fuel efficiency. The standards specify minimum fuel consumption efficiency standards for new automobiles sold in the United States. The law has become more stringent over time. The current standard is 27.5 miles per gallon (mpg) for passenger cars and 20.7 mpg for light-duty trucks.

On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the United States Department of Transportation's (USDOT) NHTSA announced a joint final rule establishing a national program that would reduce greenhouse gas (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 for model years 2012 through 2016. This phase required these vehicles to meet a fuel economy standard of 35.5 mpg. The second phase applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles for

1 CEC. 2019c. Gas Consumption by County. Website: https://ecdms.energy.ca.gov/gasbycounty.aspx (accessed December 26, 2019).

2 A British Thermal Unit (BTU) is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

3 EIA. 2019a. California State Profile and Energy Estimates. Table F3: Motor gasoline consumption, price, and expenditure estimates, 2017. Website: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed December 26, 2019).

model years 2017 through 2025. This phase required these vehicles to meet an estimated fuel economy standard of 54.5 mpg.[1]

On September 15, 2011, the EPA and USDOT issued a final rule for the first national standards to improve fuel efficiency of medium- and heavy-duty trucks and buses, model years 2014 through 2018. For combination tractors, the agencies proposed engine and vehicle standards that would achieve up to a 20 percent reduction in fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies proposed separate gasoline and diesel truck standards, which would achieve up to a 10 percent reduction for gasoline vehicles and a 15 percent reduction for diesel vehicles (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 (EPA 2019a). On October 25, 2016, the EPA and USDOT issued Phase 2 of the national standards to improve fuel efficiency standards for medium- and heavy-duty trucks and buses for model years 2021 through 2027 to achieve vehicle fuel savings as high as 25 percent, depending on the vehicle category (EPA 2019a).

Safer Affordable Fuel-Efficient Vehicles Rule. On August 2, 2018, the current Administration released a notice of proposed rulemaking, *The Safer Affordable Fuel-Efficient* (SAFE) *Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule) to amend the CAFE and GHG emission standards established in 2012 for model years 2021 through 2026. The SAFE Vehicles Rule would decrease fuel economy and would withdraw the California Waiver for the California Advanced Clean Car program, Zero Emissions Vehicle mandate, and GHG emission standards for model years 2021 through 2026. Final rulemaking on the SAFE Vehicles Rule is pending.[2] However, although litigation between California and the Administration is pending, several automobile manufacturers have stated their intentions to adhere to the California emissions standards in future production years.

4.5.4.2 State Regulations

Assembly Bill 1575, Warren-Alquist Act. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require EIRs to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result

[1] National Highway Traffic Safety Administration (NHTSA). 2019a. Corporate Average Fuel Economy. Website: https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy (accessed December 26, 2019).

[2] NHTSA. 2019b. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. Website: https://www.nhtsa.gov/corporate-average-fuel-economy/safe (accessed December 26, 2019).

in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting. In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an *Integrated Energy Policy Report* every 2 years and an update every other year. The most recently adopted reports include the *2017 Integrated Energy Policy Report*[1] and the *2018 Integrated Energy Policy Report Update*[2]. The *2017 Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The *2017 Integrated Energy Policy Report* covers a broad range of topics, including implementation of SB 350, integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency, transportation electrification, barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas, updates on Southern California electricity reliability, natural gas outlook, and climate adaptation and resiliency. The *2018 Integrated Energy Policy Report Update* included a review of the implementation of California's energy policies and updated the 2017 California energy demand forecasts that were adopted as part of the *2017 Integrated Energy Policy Report* proceedings.

The CEC circulated the 2019 Integrated Energy Policy Report for public review in February 2019 and is anticipated to approve the report in February 2020.[3]

Renewable Portfolio Standards. SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In

1 CEC. 2018a. *2017 Integrated Energy Policy Report*. California Energy Commission. Publication Number: CEC-100-2017-001-CMF. February.

2 CEC. 2018b. *2018 Integrated Energy Policy Report Update*. California Energy Commission. Publication Number: CEC-100-2018-001-VI. February.

3 CEC. 2019e. Notice of Request for Public Comments on the Draft Scoping Order for the 2019 Integrated Energy Policy Report. Docket No. 19-IEPR-01.

2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all State's electricity to come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[1]

Title 24, California Building Code. Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, and the current 2016 CBC went into effect on January 1, 2017. The next update is anticipated to become effective on January 1, 2020. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

California Green Building Standards Code (CALGreen Code). In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011, is updated on a regular basis, and the 2019 CALGreen Code standards became effective on January 1, 2020. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce GHG emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan. On September 18, 2008, the California Public Utilities Commission (CPUC) adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California.[2] The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The Plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.

[1] California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard (RPS) Program. Website: https://www.cpuc.ca.gov/rps/ (accessed December 26, 2019).

[2] CPUC. 2008. *California Long-Term Energy Efficiency Strategic Plan*. September. Website: https://www.cpuc.ca.gov/General.aspx?id=4125 (accessed December 26, 2019).

- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofit to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

4.5.4.3 Regional Regulations

There are no regional energy regulations that apply to the proposed project.

4.5.4.4 Local Regulations

The City of San Juan Capistrano has adopted the 2019 California Green Building Standards Code (CALGreen Code) and incorporated the CALGreen Code by reference into the City Municipal Code (Title 8, Building Regulations, Chapter 16: California Green Building Standards Code).

4.5.5 Thresholds of Significance

The thresholds for energy impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to energy if it would:

Threshold 4.5.1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Threshold 4.5.2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.5.6 Project Impacts

Threshold 4.5.1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact.

Construction. Construction of the proposed project is anticipated to last approximately 20 months, and would require energy for activities such as the manufacture and transportation of building materials, demolition and grading activities, and building construction. Construction of the proposed project would require electricity to power construction-related equipment. Construction of the proposed project would not involve the consumption of natural gas. The construction-related equipment would not be powered by natural gas, and no natural gas demand is anticipated during construction.

Transportation energy represents the largest energy use during construction and would occur from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption.

Construction trucks and vendor trucks hauling materials to and from the project site would be anticipated to use diesel fuel, whereas construction workers traveling to and from the project site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and travel mode.

As indicated in Table 4.5.A, the project would consume approximately 70,705 gallons of diesel fuel and approximately 50,760 gallons of gasoline during construction, which would increase the annual construction generated diesel fuel use in Orange County by approximately 0.04 percent and would increase the annual construction generated gasoline use in Orange County by less than 0.01 percent. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Orange County's overall use of the State's available energy sources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State.

Table 4.5.A: Proposed Project Energy Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Project Construction		
Diesel Fuel (total gallons)	70,705 gallons	0.04%
Gasoline (total gallons)	50,760 gallons	<0.01%
Project Operation		
Electricity Consumption (kWh/year)	810,045 kWh	0.01%
Natural Gas Consumption (therms/year)	106,328 therms	0.03%
Automotive Fuel Consumption		
Gasoline (gallons/year)	98,833 gallons	0.01%
Diesel Fuel (gallons/year)	8,748 gallons	0.01%

Source: Compiled by LSA (December 2019).
kWh = kilowatt-hours

For these reasons, fuel consumption during construction would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature, and impacts would be less than significant. No mitigation is required.

Operation. Energy use consumed by the proposed project would be associated with natural gas use, electricity consumption, and fuel used for vehicle trips associated with the project. As shown in Table 4.5.A, the estimated potential increase in electricity demand associated with the operation of the proposed project is 810,045 kWh per year. Total electricity demand for the residential sector in Orange County in 2018 was approximately 6,814,131,321 kWh.[1] Therefore, operation of the proposed project would increase the annual residential electricity consumption in Orange County by approximately 0.01 percent.

[1] CEC. 2019a. Electricity Consumption by County. Website: https://ecdms.energy.ca.gov/elecbycounty.aspx (accessed December 26, 2019).

As shown in Table 4.5.A, the estimated potential increase in natural gas demand associated with the proposed project is 106,328 therms per year. Total natural gas consumption for the residential sector in Orange County in 2018 was 339,030,950 therms.[1] Therefore, operation of the proposed project would negligibly increase the annual residential natural gas consumption in Orange County by approximately 0.03 percent.

Electrical and natural gas demand associated with project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The project would be required to adhere to all federal, State, and local requirements for energy efficiency, including the Title 24 standards. Title 24 building energy efficiency standards establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Compliance with Title 24 standards is required as identified in Regulatory Compliance Measure ENG-1, which would significantly reduce energy usage. Impacts are considered less than significant and no mitigation is required.

The proposed project would also result in energy usage associated with gasoline and diesel fuel consumed by project-related vehicle trips. As shown in Table 4.5.A, fuel use associated with the vehicle trips generated by the proposed project is estimated at 98,833 gallons of gasoline and 8,478 gallons of diesel fuel per year. The amount of operational fuel use was estimated using CARB's EMFAC2017 model, which provided projections for typical daily fuel usage in Orange County. This analysis conservatively assumes that all vehicle trips generated as a result of project operation would be new to Orange County. Based on fuel consumption obtained from EMFAC2017, 160.5 million gallons of diesel and 1.3 billion gallons of gasoline were consumed from vehicle trips in Orange County in 2018. Therefore, operation of the proposed project would increase the annual gasoline and diesel fuel consumption in Orange County by approximately 0.01 percent. Fuel consumption associated with vehicle trips generated by project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Impacts are considered less than significant, and no mitigation is required.

Threshold 4.5.2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. In 2002, the Legislature passed SB 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in

[1] CEC. 2019c. Gas Consumption by County. Website: https://ecdms.energy.ca.gov/gasbycounty.aspx (accessed December 26, 2019).

implementing incentive programs for ZEVs and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC recently adopted the *2017 Integrated Energy Policy Report*[1] and the *2018 Integrated Energy Policy Report Update*[2]. The CEC circulated the 2019 Integrated Energy Policy Report for public review in February 2019 and is anticipated to approve the report in February 2020. The Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The Integrated Energy Policy Report covers a broad range of topics, including implementation of SB 350, integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency, transportation electrification, barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas, updates on Southern California electricity reliability, natural gas outlook, and climate adaptation and resiliency. The City of San Juan Capistrano relies on the State integrated energy plan and does not have its own local plan to address renewable energy or energy efficiency.

As indicated above, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in Orange County, and the State's available energy sources and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's *2017 Integrated Energy Policy Report*. Additionally, as demonstrated above under Threshold 4.5.A, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy. Potential impacts related to conflict with or obstruction of a State or local plan for renewable energy or energy efficiency would be less than significant, and no mitigation is required.

4.5.7 Level of Significance Prior to Mitigation

Energy impacts related to the inefficient, wasteful, and unnecessary consumption of energy are considered less than significant, and no mitigation is required.

1 CEC. 2018a. *2017 Integrated Energy Policy Report.* California Energy Commission. Publication Number: CEC-100-2017-001-CMF. February.

2 CEC. 2018b. *2018 Integrated Energy Policy Report Update*. California Energy Commission. Publication Number: CEC-100-2018-001-VI. February.

4.5.8 Regulatory Compliance Measures and Mitigation Measures

4.5.8.1 Regulatory Compliance Measures

The proposed project would comply with the following Regulatory Compliance Measure. The City considers this to be mandatory; therefore, it is not considered mitigation.

Regulatory Compliance Measure ENG-1 **California Code of Regulations (CCR), Title 24.** Prior to issuance of building permits, the City of San Juan Capistrano (City) Director of Development Services, or designee, shall confirm that the project design complies with the 2019 Building Energy Efficiency Standards (CCR Title 24) energy conservation and green building standards, as well as those listed in Part 11 (California Green Building Standards Code [CALGreen Code]). The City Director of Development Services, or designee, shall confirm that the project complies with the mandatory measures listed in the CALGreen Code for residential building construction.

4.5.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.5.9 Level of Significance after Mitigation

Construction and operational impacts related to energy use would be less than significant. No mitigation is required.

4.5.10 Cumulative Impacts

The geographic area for electricity and natural gas is that of the SDG&E boundaries. The proposed project would result in an increased services demand in electricity and natural gas. Although the proposed project would result in a net increase in electricity, this increase would not require SDG&E to expand or construct infrastructure that could cause substantial environmental impacts. As discussed previously, the total annual electricity consumption the SDG&E service area in 2018 was 18,767.0 GWh (6,359.0 GWh for the residential sector).[1] By 2030, consumption is anticipated to decrease by approximately 2,000 GWh for the low-demand scenario and increase by 4,000 GWh for the high-demand scenario.[2] While this forecast represents a large increase in electricity consumption, the proposed project's percent of cumulative consumption would negligible. The proposed project, in combination with cumulative development, is well within SDG&E's system-wide net annual increase in electricity supplies over the 2018 to 2030 period, and there are sufficient planned electricity supplies in the region for estimated net increases in energy demands.

1 CEC. 2019b. Electricity Consumption by Entity. Website: https:// ecdms.energy.ca.gov/elecby util.aspx (accessed December 26, 2019)

2 CEC. 2018c. California Energy Demand, 2018-2030 Revised Forecast. Publication Number: CEC-200-2018-002-CMF. February. Website: https://efiling.energy.ca.gov/getdocument.aspx?tn=223244 (accessed December 26, 2019).

Similarly, additional natural gas infrastructure is not required to accommodate cumulative development. Total natural gas consumption in the SDG&E service area in 2018 was 482.5 million therms (264.5 million therms for the residential sector).[1] Between 2018 and 2030, total natural gas consumption in the SDG&E service area is forecast to remain steady for the low- and mid-demand scenarios and to increase by approximately 100 million therms in the high-demand scenario due to intense energy efficiency efforts. The proposed project's percent of cumulative consumption of natural gas in the SDG&E service area would be negligible. It is anticipated that SDG&E would be able to meet the natural gas demand of the related projects without additional facilities. In addition, SDG&E demand forecasts include the growth contemplated by the proposed project and the related projects. Increased energy efficiency to comply with building energy efficiency standards will reduce energy consumption on a per-square-foot basis. In addition, utility companies are required to increase their renewable energy sources to meet the Renewable Portfolio Standards mandate of 60 percent renewable supplies by 2030. SDG&E plans to continue to provide reliable service to its customers and upgrade their distribution systems as necessary to meet future demand.

Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Orange County and the region. The proposed project and related projects are required to comply with various federal and State government legislation to improve energy efficiency in buildings, equipment, and appliances, and reduce VMT.

Compliance with Regulatory Compliance Measure ENG-1 would ensure that the proposed project does not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, the proposed project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable, and no mitigation is required.

[1] CEC. 2019d. Gas Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/gasbyutil. aspx (accessed December 26, 2019).

4.6 GEOLOGY AND SOILS

This section provides a discussion of the existing geologic and soils environment and an analysis of potential impacts from implementation of the proposed Tirador Residential Development Project (project). This section also addresses the potential for structural damage due to the local geology underlying the project site, as well as slope stability, ground settlement, soil conditions, grading, and regional seismic conditions. In addition, this section analyzes the potential for the proposed project to affect unknown paleontological resources on or within the vicinity of the project site. This section summarizes information provided in the *Geotechnical Engineering Investigation, Proposed Residential Housing, San Juan Mixed Use, Intersection of Calle Arroyo and Paseo Tirador, City of San Juan Capistrano, California* (Geotechnical Investigation) (GeoSoils Consultants Inc.; July 10, 2017); the Response to City of San Juan Capistrano Review Letter, dated May 29, 2018, *Proposed Residential Housing, San Juan Mixed Use, Intersection of Calle Arroyo and Paseo Tirador, San Juan Capistrano California* (GeoSoils Consultants Inc.; October 29, 2018); and the *Report of Phase I Paleontological Assessment for Ventanas Business Center Project, San Juan Capistrano, South Orange County, California* (Paleontological Resources Assessment) (Archaeological Resources Management Corporation (ARMC); August 22, 2007). These reports are provided in Appendix E of this EIR.

4.6.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. None of the comment letters included comments related to Geology and Soils.

4.6.2 Methodology

4.6.2.1 Geology and Soils

To assess the impacts of the proposed project with respect to geologic and soil conditions, a field exploration was undertaken by GeoSoils Consultants Inc. as part of the Geotechnical Investigation. The scope of the exploration included background review, geologic mapping, field exploration including soil borings, laboratory tests, engineering analysis, and report preparation.

Soils and geologic and seismic hazards, as identified in the Geotechnical Investigation, were assessed with respect to significance within the context of Appendix G of the Guidelines for the California Environmental Quality Act (*State CEQA Guidelines*) and the City's Initial Study Checklist.

4.6.2.2 Paleontological Resources

The existing conditions for paleontological resources in the proposed project area were determined through a records search through the Vertebrate Paleontology Section, Natural History Museum of Los Angeles County (LACM) and a field survey of the project site, both conducted in 2007. The findings of the record search and field survey are presented in the Paleontological Resources Assessment prepared by ARMC. The Paleontological Resources Assessment was prepared for the proposed project site in 2007 for the then proposed Ventanas Business Center, which was located on the same site as the proposed project. The purpose of the records search was to identify

previously recorded or otherwise known fossil localities in or adjacent to the project area; and to obtain information about the geological setting of the project area and the potential for geological formations underlying the project area for containing fossils.

4.6.3 Existing Environmental Setting

4.6.3.1 Site Description and Topography

The existing project site is irregular in shape and is bound by Calle Arroyo to the North, Paseo Tirador to the east, the San Juan Creek Trail to the south, and Interstate 5 (I-5) to the west. The San Juan Creek drainage extends in a southwesterly direction from the Santa Ana Mountains in the eastern area of Orange County to the area near the project site, where it eventually flows into the Pacific Ocean. Due to its proximity to the San Juan Creek, the project is located within a historic floodplain. Paseo Tirador crosses the eastern perimeter of the property, but the roadway is currently inaccessible to vehicles and pedestrians.

In its current condition, the site is vacant and characterized by relatively flat terrain. Access to the site is restricted by perimeter fencing.

4.6.3.2 Regional and Local Geologic Setting

The project site located within the Los Angeles Basin, a north-west trending alluvial plain situated at the north end of the Peninsular Ranges geomorphic province of coastal Southern California. The Los Angeles Basin is approximately 50 miles long and 20 miles wide, and is an area with active sedimentation. The Los Angeles Basin is part of the Peninsular Ranges Geomorphic Province of California, which is characterized by northwest-southeast trending mountain ranges associated with the San Andreas Fault, intervening valleys, and sub-parallel blocks sliced longitudinally by young, steep northwest trending fault zones.

4.6.3.3 Subsurface Conditions

The project site is located in an area generally underlain by estuarine deposits of the San Juan Creek floodplain. As such, some of these areas have been modified by the addition of fill. Fill materials predominately include fine-grained materials, such as silt and clay.

Although the site itself is relatively flat, in the hillside areas, particularly east of the site, hills and ridges are composed of sedimentary bedrock of the Miocene age. Numerous landslides have been mapped within Capistrano Formation bedrock in these areas, and in other areas east of the site. Though slopes are present on and near the site, the project site and vicinity are not in an area characterized by the State for seismically-induced landslides.

4.6.3.4 Groundwater Conditions

Groundwater depth is affected by seasonal fluctuations of rainfall and environmental changes, such as irrigation, pumping, or the flow of the adjacent San Juan Creek. Although the historic high at which groundwater was encountered was at approximately 5 ft below ground surface (bgs), groundwater was encountered at approximately 17 ft bgs. According to the Geotechnical

Investigation, fill previously placed on the site may have altered the original ground elevation by 5 to 20 feet (ft).

4.6.3.5 Seismicity and Faulting

As stated above, the project site is located within the Peninsular Range Geomorphic Province, which is dominated by northwest-trending, faults zones. The Peninsular Ranges include the nearby Santa Ana Mountains and San Jacinto Mountains.

A fault is described as the area where two tectonic or continental plates meet. An "active" fault is defined by the State of California as having had surface displacement within the Holocene time (i.e., within the last 11,000 years). A "potentially active" fault is defined as showing evidence of surface displacement during the Quaternary time (e.g., during the last 1.6 million years).[1]

The project site would potentially be affected by seismically active faults in the region. Several active and potentially active faults have been mapped within several miles of the property. However, there are no known active or potentially active faults or fault traces crossing the site. Therefore, the project site is not located within an Alquist-Priolo Earthquake Fault Zone.

The Newport-Inglewood-Rose Canyon Fault is a right-lateral fault in Southern California. The fault extends for 75 kilometers (46 miles) from the Santa Monica Mountains southeast to the offshore area of the neighboring City of Dana Point. This zone has a history of moderate to high seismic activity and has produced numerous earthquakes higher than magnitude 4.0, including the March 11, 1933, magnitude 6.3 Long Beach earthquake. The fault is considered capable of producing an earthquake with a magnitude of 6.0–7.4.[2] The project site is located approximately 22 miles south of the southern terminus of the Newport-Inglewood-Rose Canyon Fault. Regional geologic mapping by the State shows that the closest active fault is the Dana Point section of the Newport-Inglewood-Rose Canyon Fault, located offshore approximately 5 miles west of the site. A significant contribution to potential ground motion is also associated with the San Joaquin Hills Fault, a northwest trending fault zone located approximately 7 miles north of the site. Active faults within the greater region include the Wildomar Fault, located 22 miles to the east of the project site near Lake Elsinore, and the Mount Soledad Fault, located 50 miles to the south of the project site in La Jolla.

Non-Seismic Geologic Constraints.

> ***Erosion.*** The erosion potential of soil is governed by the physical properties of the soil along with environmental factors such as rainfall, wind, topography, and vegetative cover. Erosion typically occurs from concentrated runoff on unprotected slopes or along unlined channels underlain by relatively erosion-prone earth materials (e.g., topsoil, soft alluvium, uncemented sandstone).

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1 Department of Conservation, Division of Mines and Geology. Fault-Rupture Hazard Zones in California. 1997.

2 Southern California Earthquake Data Center. *Newport-Inglewood Fault Zone.* July 2009.

As previously stated, the site contains fill and alluvium. Fill consists of clay and silty sands with rock fragments. Alluvium consists of silty sands, sandy silts, clayey silts, and moist fine to medium sands. These materials may be easily eroded under conditions of uncontrolled, concentrated surface runoff.

Expansive Soils. Expansive soils contain types of clay minerals that occupy considerably more volume when they are wet or hydrated than when they are dry or dehydrated. Volume changes associated with changes in the moisture content of near-surface expansive soils can cause uplift or heave of the ground when they become wet or, less commonly, cause settlement when they dry out.

As previously stated, the site contains fill and alluvium. The expansion potential for on-site soils is unknown at this time; however, undocumented fill on site includes clay at varying moisture contents, and as such may be potentially expansive.

Subsidence. Subsidence is the sinking or settlement of the ground surface relative to the surrounding area, with little or no horizontal movement. Four types of land subsidence are known to occur in California. In descending order of significance, these are (1) subsidence caused by aquifer system compaction related to the lowering of groundwater levels, generally due to pumping activities, (2) subsidence caused by hydrocompaction of soils above the groundwater table, (3) subsidence related to extraction of oil and gas deposits, and (4) subsidence related to seismic activity.

In its existing condition, the project site does not contain an oil or gas pump on site, and has not been used for the extraction of these resources. There are two existing water wells located on the project site. An existing City-owned parcel, Assessor's Parcel Number (APN) 666-131-08, contains an active water well directly adjacent to the southern boundary of the project site between Paseo Tirador and San Juan Creek. This well would remain in operation during the life of the proposed project. A privately owned, inactive well is located on APN 666-131-12 and will remain inactive upon project implementation. However, according to the United States Geologic Service (USGS), the project site is not located in an area with documented subsidence.[1]

Corrosive Soils. Corrosive soils contain chemical constituents that may cause damage to construction materials such as concrete and ferrous metals. One such constituent is water-soluble sulfate, which, if high enough in concentration, can react with and damage concrete. Electrical resistivity, chloride content, and percentage of hydrogen (pH) level are indicators of the soil's tendency to corrode ferrous metals.

The potential for corrosive soils on the site is unknown at this time.

[1] United States Geologic Service. California Water Center. Areas of Land Subsidence in California. Website: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html (accessed November 26, 2019).

Seismically Induced Hazards.

Ground Shaking and Surface Fault Rupture. The primary seismic effects associated with earthquakes are ground shaking and surface fault rupture.

Ground shaking due to seismic events (earthquakes) would typically be considered the greatest source of potential damage to structures. Seismic shaking is characterized by the physical movement of the land surface during and subsequent to an earthquake. Seismic shaking has the potential to cause destruction and damage to buildings and property, including damage resulting from damaged or destroyed gas or electrical utility lines; blockage of surface seepage and groundwater flow; changes in groundwater flow; dislocation of street alignments; displacement of drainage channels and drains; and possible loss of life. In addition, ground shaking can induce several kinds of secondary seismic effects, including liquefaction, differential settlement, and landslides, all of which are described below.

The intensity of seismic shaking during an earthquake depends largely on geologic formation conditions of the materials comprising the upper several hundred feet of the earth's surface. The greatest amplitudes and longest durations of ground shaking occur on thick, water-saturated, unconsolidated alluvial sediments. Ground shaking can also cause ground failure or deformation due to lurching and liquefaction.

Surface rupture is the displacement and cracking of the ground surface that occurs along a fault trace. Unlike seismically induced ground shaking, which can affect a wide geographic area, surface rupture is confined to the area very near the fault.

The project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. Known active faults capable of producing strong ground shaking at the site include the Dana Point Section of the Newport-Inglewood-Rose Canyon Fault, the San Joaquin Hills Fault, Wildomar Fault, and the Mount Soledad Fault.

Liquefaction and Ground Settlement. Liquefaction is caused by sudden temporary increases in pore water pressure due to seismic densification or other displacement of submerged granular soils. Intervals of loose sand may, therefore, be subject to liquefaction if these materials are or were to become submerged and are also exposed to strong seismic ground shaking. Seismic ground shaking of relatively loose granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. This loss of support can produce local ground failure such as settlement or lateral spreading that may damage overlying improvements.

Ground settlement is a secondary seismic effect that can result in damage to property when an area settles to different degrees over a relatively short distance. The sinking or settlement of a structure, area of fill, or other imposed load is usually the result of compaction or consolidation of the underlying soil. Soils susceptible to seismically induced settlement typically include loose granular materials.

The project site is located within a State-designated Liquefaction Hazard Zone for the Dana Point Quadrangle. On-site borings to a depth of 50 ft bgs and subsequent laboratory testing were conducted in order to analyze the liquefaction potential on the project site. Results of these tests indicate that the materials underlying the project site have a potential for liquefaction.

Lateral Spreading. Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "unconfined" face such as an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane and may often be associated with liquefaction.

According to the Response to City of San Juan Capistrano Review Letter (2018), which is included in Appendix E of this EIR, lateral spreading is not anticipated to occur on the project site.

Ground Oscillation. Ground oscillation occurs when liquefaction occurs, but gentle sloping inhibits lateral displacement. When this occurs, individual blocks may separate and oscillate on a liquefied layer. Sand boils and fissures are often associated with this phenomenon.

The potential for ground oscillation on the project site is not known at this time. However, ground oscillation is associated with liquefaction, for which there is potential on the project site.

Flow Failure. Flow failure involves large masses of liquefied sediment or blocks of intact material riding on a liquefied layer, moving at high speeds over large distances. Generally, flow failures are associated with ground slopes steeper than those associated with either lateral spreading or ground oscillation.

The potential for flow failure on the project site is not known at this time. However, flow failure is associated with liquefaction, for which there is potential on the project site.

Bearing Strength Loss. Loss of bearing strength occurs when the effective stresses are reduced due to the cyclic loading caused by an earthquake. Even if the soil does not liquefy, the bearing of the soil may be reduced either prior to or after the earthquake. If the bearing strength is sufficiently reduced, structures supported on the sediments can settle, tilt, or even float upward in the case of lightly loaded structures such as gas pipelines.

The potential for bearing strength loss on the project site is not known at this time. However, bearing strength loss is associated with liquefaction, for which there is potential on the project site.

Ground Fissuring and Sand Boils. Ground fissures are likely to develop when phenomena associated with liquefaction, such as lateral spreading, ground oscillation, and flow failures occur. Sand boils, or gushers, occur when the high pore water pressures are relived by drainage to the surface along weak spots that may have been created by ground fissuring. As water flows to the surface, it can carry sediments, and create a gusher at the point of exit if the pore water pressures are high enough.

The potential for ground fissuring and sand boils on the project sire are not known at this time. However, these phenomena are associated with liquefaction, for which there is potential on the project site.

Slope Instability and Seismically Induced Landslides. The downslope movement of loose rock or soil is also a potential secondary seismic effect that can occur during strong ground shaking. Geologic mapping for the site does not indicate that the site is susceptible to landslide. In addition, the project site is in a generally flat area with no evidence of historic landslides.

4.6.3.6 Paleontological Resources

The existing conditions for paleontological resources in the project area were determined through a 2007 record search conducted through Los Angeles County Museum (LACM), the repository for paleontological resource records. In addition, a 2007 field survey of the project site was conducted to determine if any fossils were present on the surface or in exposures of the subsurface deposits to determine what potential, if any, there was for the preservation of fossils on the project site.

The proposed project site is underlain by three types of rock. The proposed project site is primarily underlain by nonmarine sedimentary rocks of Pleistocene to Holocene age mapped Quaternary alluvium within the creek bed, and older river terrace deposits of San Juan Creek. These fluvial deposits from the adjacent San Juan Creek are coarsely-grained to finely-grained and are primarily comprised of poorly consolidated gravels and sands. The accumulation of Quaternary alluvium in San Juan Creek reaches a thickness of 175 ft near the southern boundary of the project site. According to the Paleontological Resources Assessment, the Quaternary alluvium and river deposits have a low paleontological sensitivity, meaning the probability of encountering fossils at shallow depths is very low.

The northwestern portion of the project site is also underlain by the marine Late Miocene to Early Pliocene Capistrano Formation Siltstone Facies. According to LACM, the closest recorded locality to the marine Capistrano Formation lies to the southeast above the Reed Reservoir. The specimen was a fossil great white shark (Carcharodon carcharias) (LACM 7296). A second locality (LACM 5792) located north of the project site in the hills across Horno Creek produced a substantial fossil fauna, primarily of marine vertebrates, such as sharks, bony fishes, sea lions, whales, and sea cows, as well as some terrestrial and freshwater specimens, such as elephants and pond turtles. Due to the occurrence of late Miocene marine and nonmarine fossils occurring in deposits of the Capistrano Formation in this region of Orange County, this area of the project site is considered to have a high paleontological sensitivity.

4.6.4 Regulatory Setting

4.6.4.1 Federal Regulations

National Pollution Discharge Elimination System. Regulations applicable to erosion and soils hazards include Stormwater Pollution Prevention Plans (SWPPP). The SWPPP prepared in compliance with a National Pollutant Discharge Elimination System (NPDES) Phase I Permit describes erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control

measures and maintenance responsibilities, and non-stormwater management controls. Dischargers are also required to inspect construction sites before and after storms to identify stormwater discharge from construction activity and to identify and implement controls where necessary.

Additionally, the City operates under a municipal separate storm sewer system (MS4) permit (South Orange County MS4 Permit) under the NPDES. MS4 permits require an aggressive water quality ordinance, specific municipal practices, and the use of best management practices (BMPs) in many development-related activities to further reduce the amount of contaminants in urban runoff. MS4 permits also require local agencies to cooperatively develop a public education campaign to inform people about what they can do to protect water quality.

Earthquake Hazards Reduction Act. In 1977, the United States Congress passed the Earthquake Hazards Reduction Act, which established the National Earthquake Hazards Reduction Program (NEHRP). When NEHRP was first established, the primary purpose of this program was to improve understanding, characterization, and prediction of earthquakes and associated vulnerabilities. However, in recent years, NEHRP has recently shifted its primary focus to minimizing losses from earthquakes. In order to minimize this risk, NEHRP helps to improve building codes and land use practices, risk reduction through post-earthquake investigations, development of new design and construction techniques, and mitigation. The Federal Emergency Management Agency (FEMA) is the lead agency for NEHRP, and as such, authorizes funding for earthquake preparedness and mitigation programs.

4.6.4.2 State Regulations

Alquist-Priolo Earthquake Fault Zoning Act (1972). Regulations that are applicable to geologic, seismic, and soil hazards include the Alquist-Priolo Earthquake Fault Zoning Act of 1972 and updates (AP, Public Resources Code, Section 2621, et seq.), State-published Seismic Hazards maps, and provisions of the applicable edition of the California Building Code (CBC). There are no Earthquake Fault zones established at or in the near vicinity of the site, and procedures and regulations as recommended by the California Geological Survey (CGS) for investigations conducted in such zones do not specifically apply.

Seismic Hazard Mapping Act (1990). The Seismic Hazard Mapping Act (SHMA) was adopted by the state in 1990 for the purpose of protecting public safety from the effects of (non-surface fault rupture) earthquake hazards. The CGS prepares and provides local governments with seismic hazard zones maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. The seismic hazards zones are referred to as “zones of required investigation” because site-specific geological investigations are required for construction projects located within these areas. Before a project can be permitted, a geologic investigation, evaluation, and written report must be prepared by a licensed geologist to demonstrate that proposed buildings will not be constructed across active faults. If an active fault is found, a structure for human occupancy must be set back from the fault (generally 50 ft). In addition, sellers (and their agents) of real property within a mapped Seismic Hazard Zone must disclose that the property lies within such a zone at the time of sale.

California Building Code (2016). California Code of Regulations (CCR), Title 24, Part 2, the CBC, provides minimum standards for building design in the state. Local codes are permitted to be more restrictive than Title 24, but not less restrictive. The procedures and limitations for the design of structures are based on site characteristics, occupancy type, configuration, structural system height, and seismic zoning. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as specified in California Occupational Safety and Health Administration (Cal/OSHA) regulations (CCR, Title 8).

California Health and Safety Code. Sections 17922 and 17951–17958.7 of the California Health and Safety Code require cities and counties to adopt and enforce the current edition of the CBC, including a grading section. The City enforces these provisions (refer to Title 8 of the City's Municipal Code). Sections of Volume 2 of the CBC specifically apply to select geologic hazards. Chapter 16 of the 2016 CBC addresses requirements for seismic safety. Chapter 18 regulates excavation, foundations, and retaining walls. Chapter 33 contains specific requirements pertaining to site demolition, excavation, and construction.

Public Resources Code Section 5097.5. Public Resources Code (PRC) Section 5097.5 provides for the protection of cultural and paleontological resources and prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of State or local authorities.

General Construction Activity Storm Water Permit. The *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ (Construction General Permit), adopted by the SWRCB, regulates construction activity that includes clearing, grading, and excavation resulting in soil disturbance of at least 1 acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities.

The Construction General Permit is required where construction activities will occur over more than 1 acre of land. To obtain coverage under the Construction General Permit, a project applicant must electronically file all permit registration documents with the SWRCB prior to the start of construction.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

4.6.4.3 Regional Regulations

Orange County National Pollutant Discharge Elimination System Permit. The City is a Permittee of the *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4) Draining the Watersheds within the San Diego Region* (South Orange County MS4 Permit), Order R9-2013-0001, NPDES No. CAS6010266, as amended by Order No. R9-2015-0001. The South Orange County MS4 Permit regulates discharges into the MS4 system in the cities and county areas within Orange

County that are in the jurisdiction of the San Diego RWQCB. As discussed further below, the South Orange County MS4 Permit requires preparation of a Water Quality Management Plan (WQMP) and implementation of post-construction BMPs for new development and significant redevelopment projects that qualify as Priority Development Projects.

The proposed project is considered a Priority Development Project under the following categories specified in the South Orange County MS4 Permit:

- **Category (a)** New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.

- **Category (c)** New and redevelopment projects that create 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses:

    - (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812).

    - (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

    - (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

- **Category (d)** New or redevelopment projects that create or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharging directly to an Environmentally Sensitive Area (ESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e., not commingled with flows from adjacent lands).

- **Category (f)** New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction.

4.6.4.4 Local Regulations

City of San Juan Capistrano Municipal Code. The City adopted, with amendments, and enforces the 2016 edition of the CBC as published by the International Code Council. Chapter 2, Building Code, of Title 8, of the City's Municipal Code is the City's building code. The purpose of a building code is to provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within the City. Building Code provisions

apply to the construction, alteration, moving, demolition, repair, and use of any building or structure within the City.

City of San Juan Capistrano General Plan.

Safety Element of the City's General Plan. The Safety Element (1999) provides goals and policies to reduce the potential risk of death, injuries, and property damage resulting from natural and human-induced hazards. This element specifically addresses geologic, seismic, flood, and fire hazards and disaster planning.

According to the Safety Element, the project site is located in an area with a high potential for liquefaction. The project site is also located within an area at risk for inundation as a result of a 100-year flood and/or a catastrophic failure of the Trampas Canyon Dam. The site is not located within an area at risk for wildfires or landslides.

The following policy related to geology and soils is presented in the Safety Element and is applicable to the proposed project:

> **Policy 1.1:** Reduce the risks of impacts from geologic and seismic hazards by applying proper development engineering, building construction, and retrofitting requirements.

Cultural Resources Element of the City's General Plan. The goals and policies of the Cultural Resources Element (1999) are intended to be a guide for preserving historic, archaeologic, and paleontological resources within the City. The purpose of the goals and policies in this element intended to preserve important cultural resources to enhance the character and tradition of the community as a whole.

According to the Cultural Resources Element, the project site is located within an area with potential prehistoric and archaeological resources. The following goal and policy related to cultural resources are presented in the Cultural Resources Element and are applicable to the proposed project:

Goal 1: Preserve and protect historical, archeological, and paleontological resources.

> **Policy 1.1:** Balance the benefits of development with the project's potential impacts to existing cultural resources.

City Council Historical, Archaeological, and Paleontological Resource Management Guidelines. In 1997, the City revised City Council Policy 601 and renamed this policy, "Historical, Archaeological, and Paleontological Resource Management Guidelines." The general intent and purpose of these guidelines is to protect and preserve the City's unique cultural heritage, including historic, archaeological, and paleontological resources. In addition, the guidelines aim to ensure that cultural resource evaluations, including paleontological resource assessment, for projects within the City are conducted by qualified individuals. The policy also establishes procedures for reviewing these reports and mitigation measures to address potential impacts to previously unknown cultural resources (including paleontological resources) during construction activities.

4.6.5 Thresholds of Significance

The thresholds for geology and soils impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to geology and soils if it would:

Threshold 4.6.1: **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**

Threshold 4.6.1.i: **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidences of known fault (Refer to Division of Mines and Geological Special Publication 42.).**

Threshold 4.6.1.ii: **Strong seismic ground shaking.**

Threshold 4.6.1.iii: **Seismic-related ground failure, including liquefaction.**

Threshold 4.6.1.iv: **Landslides.**

Threshold 4.6.2: **Result in substantial soil erosion or the loss of topsoil.**

Threshold 4.6.3: **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-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.**

Threshold 4.6.4: **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating direct or indirect substantial risks to life or property.**

Threshold 4.6.5: **Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.**

Threshold 4.6.6: **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.**

The Initial Study, provided in Appendix A, substantiates that there would be no impacts associated with Threshold 4.6.1.i because the project site is not located within an established Alquist-Priolo Earthquake Fault Zone and because there are no known active faults or fault traces with the potential for surface fault rupture crossing the project site. In addition, the Initial Study substantiates that impacts associated with Threshold 4.6.1.iv would be less than significant because the project site is not within an earthquake-induced landslide zone and is not located within an area subject to potential seismic slope instability. The Initial Study also substantiates that impacts associated with Threshold 4.6.4 would be less than significant because laboratory testing of soils on the project site were classified to have a low expansion potential, as documented in the Draft

Geotechnical Investigation (2017). Finally, the Initial Study substantiates that impacts associated with Threshold 4.6.5 would be less than significant because the project does not propose the installation of, or connection to, a septic system or alternative wastewater disposal system. These thresholds will not be addressed in the following analysis.

4.6.6 Project Impacts

Threshold 4.6.1.ii: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving *strong seismic ground shaking*?

Less Than Significant with Mitigation Incorporated. As with all of Southern California, the project site is subject to strong ground motion resulting from earthquakes on nearby faults. There are several faults near the project site that are capable of producing strong ground motion, including the Dana Point section of the Newport-Inglewood-Rose Canyon Fault and the San Joaquin Hills Fault. Other major regional active faults include the Wildomar Fault and the Mount Soledad Fault. During an earthquake along any of these faults, seismically induced ground shaking would be expected to occur. The severity of the shaking would be influenced by the distance of the site to the seismic source, the soil conditions, and the depth to groundwater.

Peak ground acceleration (PGA) is a measure of earthquake acceleration on the ground and an important input parameter for earthquake engineering. The United States Geological Survey (USGS) Unified Hazard Tool was used in the Geotechnical Investigation in order to determine how seismicity would affect the project site. Based on the site-specific evaluation that was performed, the peak horizontal ground acceleration for the project site was calculated to be 0.5 g (acceleration due to gravity) with a two percent probability of exceedance in 50 years. These accelerations are consistent with other sites in this region of southern California that are underlain by similar geologic materials and indicate that strong seismic ground shaking generated by seismic activity is considered a potentially significant impact that may affect people or structures associated with the proposed project. Therefore, Mitigation Measures GEO-1, GEO-2, and GEO-3 would be required to ensure that appropriate seismic design provisions would be implemented during project design and construction. Mitigation Measure GEO-1 would require the Project Applicant to comply with the recommendations of the Geotechnical Investigation and the most current CBC during design, grading, and construction. Mitigation Measure GEO-2 would require the review of the grading plan and on-site inspection during grading to ensure that recommendation developed during the geotechnical evaluation are appropriately incorporated into project plans and design. Mitigation Measure GEO-3 would require the Project Applicant to design and construct structures and retaining walls in accordance with the seismic parameters presented in the Geotechnical Investigation and applicable sections of Section 1613 of the 2016 CBC. With implementation of Mitigation Measures GEO-1, GEO-2, and GEO-3, potential project impacts related to seismic ground shaking would be reduced to a less than significant level.

Threshold 4.6.1.iii: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving *seismic-related ground failure, including liquefaction*?

Less Than Significant with Mitigation Incorporated. Liquefaction commonly occurs when three conditions are present simultaneously: (1) high groundwater; (2) relatively loose, cohesionless (sandy) soil; and (3) earthquake-generated seismic waves. Structures on or above potentially liquefiable soils may experience lateral spreading, consolidation and settlement of loose sediments, ground oscillation, flow failure, loss of bearing strength, ground fissuring, sand boils, and other damaging deformations. Factors known to influence the potential for liquefaction include soil type, relatively density, grain size, confining pressure, depth to groundwater, and the intensity and duration of the seismic ground shaking.

The project site is located with a State-designated Liquefaction Hazard Zone for the Dana Point Quadrangle.[1] In addition, testing performed as part of the Geotechnical Investigation found a potential for liquefaction in thin sand and sandy silt layers underlying the site. However, surface layers would be unlikely to experience liquefaction due to the confinement of potentially lower liquefiable layers from the surface by less permeable layers. Furthermore, Mitigation Measures GEO-1, GEO-2, and GEO-3 require the Project Applicant to comply with the recommendations of Geotechnical Investigation and the most current CBC, which stipulates appropriate design provisions (including provisions related to foundation design) that shall be implemented with project design and construction. Mitigation Measure GEO-2 would require the review of the grading plan and on-site inspection during grading to ensure that recommendation developed during the geotechnical evaluation are appropriately incorporated into project plans and design. With implementation of Mitigation Measures GEO-1, GEO-2, and GEO-3, potential project impacts related to seismically induced ground failure, including liquefaction, would be reduced to a less than significant level.

Threshold 4.6.2: Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The project site is currently vacant and is characterized by scattered vegetation and exposed soil. During grading and construction, soil would be exposed and there would be an increased potential for soil erosion compared to existing conditions due to soil disturbance and the exposure of substantial amounts of soil to weather conditions (e.g., wind, rain). During a storm event, soil erosion could occur at an accelerated rate. The increased erosion potential would result in short-term water quality impacts as identified in Section 4.8, Hydrology and Water Quality, of the Initial Study (Appendix A).

Because the project would disturb greater than one acre of soil, the project is subject to the requirements of the State Water Resources Control Board's (SWRCB) *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Orders No. 2010-0014-DWQ and 2012-0006-DWQ) (Construction General Permit). The Construction General Permit requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of construction Best Management Practices (BMPs).

Adherence to Regulatory Compliance Measures GEO-1 and GEO-2 during construction would ensure that erosion-related impacts during construction would be less than significant by requiring the

[1] California Department of Conservation. 2019. Earthquake Zones of Required Investigation. Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed November 26, 2019).

implementation of construction site BMPs. During construction, the Project Applicant is required to adhere to the requirements of the General Construction Permit and utilize typical BMPs specifically identified in the SWPPP for the project in order to prevent construction pollutants from contacting stormwater and to keep all products of erosion from moving off site into receiving waters. Additionally, the Project Applicant is required to install and maintain erosion control devices year round in compliance with a City-approved pollution control plan, construction BMP plan, and/or erosion and sediment control plan.

The proposed project would result in a 6.86-acre increase in impervious area and a net increase in stormwater runoff; however, the proposed project would also install a stormwater runoff system, including catch basins, a subsurface water quality detention facility, storm drain pipes, and a biofiltration system. This stormwater runoff system would manage increased peak runoff from the site. Additionally, as required by Regulatory Compliance Measure GEO-3, a Final Hydrology and Hydraulics Analysis would be required to be prepared and submitted to the City of approval, to ensure the peak flow of stormwater runoff in the proposed condition would not exceed the outfall capacity. As a result, any increase in peak discharge would be negligible. Therefore, the proposed project would not result in substantial on-site or downstream erosion, siltation, or flooding, and no mitigation is required.

Threshold 4.6.3: Would the project 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-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?

Slope Stability.

Less Than Significant with Mitigation Incorporated. As previously stated, no existing landslides are present on or adjacent to the property. Geologic mapping for the site does not indicate that the site is susceptible to landslide. In addition, the project site is in a generally flat area with no evidence of historic landslides. Therefore, the potential for seismically induced landslides on the site is considered low.

Due to the topography of the project site and the design of the proposed project, grading would entail cut-and-fill slopes, and construction of earth-retaining structures, such as freestanding cantilever retaining walls, and below-grade walls, which would be necessary in some areas. In addition, shoring would be required during excavation. Unstable cut-and-fill slopes could create significant short-term and long-term hazards. Mitigation Measure GEO-1 requires planned grading and shoring to conform to the recommendations of the Geotechnical Investigation, which contains specific recommendations for addressing potential slope instability. With implementation of these recommendations as required by Mitigation Measures GEO-1 and GEO-2, potential impacts related to slope instability would be reduced to a less than significant level.

Unsuitable Soils.

Corrosive Soils and Soluble Sulfate Content.

Less Than Significant with Mitigation Incorporated. Corrosive soils contain constituents or physical characteristics that attack concrete (water-soluble sulfates) and/or ferrous metals (chlorides, ammonia, nitrates, low pH levels, and low electrical resistivity). Corrosive soils could potentially create a significant hazard to the project by weakening the structural integrity of the concrete and metal used to construct the building and could potentially lead to structural instability. Structural damage and foundation instability caused by corrosive soils is a potentially significant impact.

As required by Mitigation Measure GEO-1, on-site soils anticipated to come into contact with pipes or concrete on the site shall be tested for pH, minimum resistivity, soluble chloride content, and soluble sulfate content. Where corrosive soils are identified, corrosion protection measures shall be implemented. Corrosion protection may include, but is not limited to, sacrificial metal, the use of protective coatings, and/or cathodic protection. With implementation of Mitigation Measure GEO-1, potential impacts related to corrosive soils would be reduced to a less than significant level.

Settlement Potential.

Less Than Significant with Mitigation Incorporated. The amount of settlement for a site is dependent on the thickness of design fills, the loading conditions, and the nature of the native materials underlying the fill. Potential ground settlement may be separated into three types: (1) hydroconsolidation of alluvium left in place above the water table, (2) consolidation settlement of compressible alluvium left in place below the water table, and (3) liquefaction-induced settlement of a few loose, granular layers below the water table.

The site is underlain by clayey, silty, and sandy layers containing rock fragments within alluvial deposits and fill, which are likely to liquefy during an earthquake. As such, these layers could experience a loss of shear strength resulting in ground deformation and settlement. In total, the Geotechnical Investigation found that seismic settlements due to liquefaction could be up to 2.62 inches on the project site. Compliance with the recommendations contained in the Geotechnical Investigation for the proposed project, including those related to earthwork activities and foundation design, would be required to reduce potential impacts related to ground settlement. Implementation of Mitigation Measure GEO-1 would reduce potential impacts with respect to ground settlement to a less than significant level.

Subsidence.

Less Than Significant Impact. The phenomenon of widespread land sinking, or subsidence, is generally related to substantial overpumping of groundwater or petroleum reserves from deep underground reservoirs. Overpumping and excessive groundwater withdrawal have

not occurred in the project area. In addition, the project does not have an oil or gas pump on site, and the site has not been used for the extraction of either resource. An existing City-owned parcel, APN 666-131-08, contains an active water well directly adjacent to the southern boundary of the project site between Paseo Tirador and San Juan Creek. This well would remain in operation during the life of the proposed project. A privately owned, inactive well is located on APN 666-131-12 and will remain inactive upon project implementation. However, as previously established, the project site is not located in an area with documented subsidence.[1] Subsidence is therefore not considered a potential constraint or a potentially significant impact of the project, and no mitigation is required.

Lateral Spreading.

Less Than Significant Impact. Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "unconfined" face such as an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane and may often be associated with liquefaction. According to the Geotechnical Investigation, soils on the project site are not subject to lateral spreading. Therefore, lateral spreading is not considered a potential constraint or a potentially significant impact of the project, and no mitigation is required.

Threshold 4.6.6: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. The project site is located on younger Quaternary Alluvium, older river terrace deposits of the San Juan Creek, and the marine Capistrano Formation. There are no known fossil localities on the project site, but based on the locality search conducted for the proposed project, sensitive sediments that may contain fossil remains do exist within the project area. As such, there is the potential to encounter paleontological resources during any ground-disturbing activities for the proposed project. Mitigation is required to reduce potential adverse impacts to unknown (buried) paleontological resources.

Mitigation Measure GEO-4 requires the Project Applicant to comply with the City's Historical, Archaeological, and Paleontological Resource Management Guidelines and prepare a Paleontological Resources Assessment to evaluate the potential for project implementation to significantly impact unknown paleontological resources on the site. In the event that the Paleontological Resources Assessment does not identify the potential for the project to impact such resources, no further action or mitigation is required. In the event that the Paleontological Resources Assessment identifies a low potential for the project to impact paleontological resources, the Project Applicant shall retain a paleontologist on an on-call basis to address any unanticipated discoveries. If the Paleontological Resources Assessment determines that the paleontological resources may be impacted by project development, a Paleontological Resources Impact Mitigation Program (PRIMP) shall be prepared, and paleontological monitoring, fossil collection and treatment

[1] United States Geologic Service. California Water Center. Areas of Land Subsidence in California. Website: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html (accessed November 26, 2019).

(if necessary), and preparation of a final monitoring report shall occur as described in Mitigation Measure GEO-5. Implementation of Mitigation Measures GEO-4 and GEO-5 would reduce potential impacts to unknown paleontological resources to less than significant, and no additional mitigation is required.

4.6.7 Level of Significance Prior to Mitigation

The proposed project would result in potentially significant impacts with respect to strong seismic ground shaking, ground failure (including liquefaction), slope stability, corrosive soils, ground settlement, expansive soils, and the destruction of unknown paleontological resources without the implementation of applicable mitigation measures.

4.6.8 Regulatory Compliance Measures and Mitigation Measures

4.6.8.1 Regulatory Compliance Measures

The proposed project would comply with the following Regulatory Compliance Measures. The City considers these to be mandatory; therefore, they are not considered mitigation.

Regulatory Compliance Measure GEO-1

Construction General Permit. Prior to commencement of construction activities, the Project Applicant shall obtain coverage under the *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit),* NPDES No. CAS000002, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ, or any other subsequent permit. This shall include submission of Permit Registration Documents (PRDs), including permit application fees, a Notice of Intent (NOI), a risk assessment, a site plan, a Stormwater Pollution Prevention Plan (SWPPP), a signed certification statement, and any other compliance-related documents required by the permit, to the State Water Resources Control Board via the Stormwater Multiple Application and Report Tracking System (SMARTS). As required by the Section 8-14.107 of the City of San Juan Capistrano's (City) Municipal Code, construction activities shall not commence until a Waste Discharge Identification Number (WDID) is obtained for the project from the SMARTS and provided to the City of San Juan Capistrano Building Official, or designee, to demonstrate that coverage under the Construction General Permit has been obtained. Project construction shall comply with all applicable requirements specified in the Construction General Permit, including but not

limited to, preparation of a SWPPP and implementation of construction site Best Management Practices (BMPs) to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate risk level identified for the project. The SWPPP shall identify the sources of pollutants that may affect the quality of stormwater and shall include BMPs (e.g., Sediment Control, Erosion Control, and Good Housekeeping BMPs) to control the pollutants in stormwater runoff. Construction Site BMPs shall also conform to the requirements specified in the latest edition of the Orange County Stormwater Program *Construction Runoff Guidance Manual for Contractors, Project Owners, and Developers* to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. Upon completion of construction activities and stabilization of the project site, a Notice of Termination shall be submitted via SMARTS.

Regulatory Compliance Measure GEO-2 **Erosion and Sediment Control Plans.** In compliance with the requirements of Sections 8-2.15, 8-2.16, and 8-14.107 of the San Juan Capistrano Municipal Code, the Project Applicant shall submit a pollution control plan, construction BMP plan, and/or erosion and sediment control plan to the City of San Juan Capistrano Building Official, or designee, for review and approval prior to issuance of a grading permit. The Project Applicant shall also install and maintain erosion control devices year round in compliance with the City-approved pollution control plan, construction BMP plan, and/or erosion and sediment control plan. The Project Applicant shall ensure that the construction BMPs are inspected and maintained prior to, during, and after rain events.

Regulatory Compliance Measure GEO-3 **Final Hydrology and Hydraulics Analysis.** Prior to issuance of building permits, the Project Applicant shall submit a Final Hydrology and Hydraulics Analysis to the City of San Juan Capistrano Building Official, or designee, for review and approval. The Final Hydrology and Hydraulics Analysis shall be prepared consistent with the requirements of the *Orange County Hydrology Manual* (Orange County Public Works 1986) and *Orange County Hydrology Manual Addendum No. 1* (Orange

County Public Works 1996), or subsequent guidance manuals. The Final Hydrology and Hydraulics Analysis shall confirm that the on-site storm drains, on-site detention systems, and any other drainage structures are appropriately sized to accommodate stormwater runoff from the design storm so that the capacity of downstream storm drain facilities is not exceeded. The City of San Juan Capistrano Building Official, or designee, shall ensure that the drainage facilities specified in the Final Hydrology and Hydraulics Analysis are incorporated into the final project design.

4.6.8.2 Mitigation Measures

The proposed project is required to implement the following mitigation measures to reduce potential impacts to geology and soils, as well as to unknown paleontological resources.

Mitigation Measure GEO-1 **Incorporation of and Compliance with the Recommendations in the Geotechnical Investigation.** All grading operations and construction shall be conducted in conformance with the recommendations included in the project-specific geotechnical investigation report prepared by GeoSoils Consultants Inc. (July 10, 2017). Design, grading, and construction shall be performed in accordance with the requirements of the City of San Juan Capistrano (City) Building Code and the California Building Code (CBC) applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the Director of the City of San Juan Capistrano Development Services Department, or designee, prior to issuance of grading permits.

Recommendations in the Geotechnical Investigation are summarized below.

- **Site Grading/Earthwork.** Prior to grading activities on the site, organics and debris shall be removed and hauled off-site. Undocumented fill within the project limits shall be over-excavated to a minimum depth of 12 feet (ft). The bottom of the excavated area shall be underlain by a layer of filter fabric (which will prevent contamination of crushed aggregate from underlying fine soils) and overlain by a minimum of 2 ft of crushed rock and a geogrid layer(which will minimize the manifestation of vertical settlements to the surface). The excavated layer shall be backfilled with engineered fill, which shall be compacted to at least 90 percent. Compaction shall be

verified by observation, probing, and testing by a Geotechnical Consultant.

- **Fill Material.** On-site soils with an Expansion Index (EI) less than 35 and free of organic materials, debris, and cobbles larger than 3 inches may be used for backfilling. Imported granular soils may be used in compacted fills within the project limits. All imported soil shall contain binder material. Imported materials shall also be non-expansive and free of organic materials, debris, and cobbles larger than 3 inches, with no more than 25 percent passing No. 200 Sieve. All fill materials within the upper 2 ft shall be free of particles greater than 2 inches in size. A bulk sample of import material, weighing at least 30 pounds, shall be submitted to the Geotechnical Consultant for approval at least 48 hours prior to fill operations.

- **Utility Trenching.** Bedding materials consisting of sand, gravel, or crushed aggregate shall be used to backfill around utility pipes. On-site soils having a Sand Equivalent (SE) of 30 or greater can also be used as bedding material. Prior to placing pipes, the pipe trench subgrade shall be observed by the Geotechnical Consultant. If exposed subgrade is loose or unstable, unsuitable subgrade shall be excavated and replaced with bedding material. Trenches in pavement areas shall be capped with at least 1 ft of compacted, on-site soil and shall be compacted to at least 95 percent relative compaction.

- **Temporary Excavations.** All temporary excavations shall be properly sloped or shored. Excavation of 3.5 ft or less in depth may be performed with vertical sidewalls. Deeper excavations up to a depth of 10 ft can be accomplished with Occupational Safety and Health Administration (OSHA) requirements for Type C soils and may be laid back 1H:1.5V gradient, or 1H:1V upon review by the Geotechnical Consultant.

- **Shoring.** Shoring systems feasible for the site are expected to include cantilever shoring, such as soldier piles. All shoring shall be designed in accordance with the latest edition of the *Trenching and Shoring Manual* (Caltrans 2011), and shall be approved by the Geotechnical Consultant. A licensed surveyor shall be retained to establish monuments on the shoring and surrounding area. These monuments shall be monitored for movement during construction.

- **Spread/Strip Footing Foundations.** Upon completion of the grading (cutting) required to establish the proposed building

pad elevations, the proposed structures may be supported by a spread/strip footing foundation system. Spread/strip footings shall be at least 24 and 18 inches wide, respectively, and embedded at least 18 inches below the lowest adjacent grade in the engineered fill. The slab-on-grade should be at least 5 inches thick and reinforced with rebar. Footings shall be deepened as necessary in order to maintain adequate support for the foundations adjacent to utility trenches.

- **Matt Foundations.** Upon completion of the grading (cutting) required to establish the proposed building pad elevations, the proposed structures may be supported by a matt foundation system in areas where settlements cannot be tolerated by spread/strip footings. The mat should be at least 10 inches thick and embedded at least 18 inches below the lowest adjacent grade in the engineered fill.

- **Concrete Flatworks.** Frequent construction or control joints shall be provided in all concrete slabs where cracking is objectionable. Contraction or weakened plane joints shall extend deeper than one-quarter of the slab thickness. Control joints shall be spaced a minimum of 10 ft intervals. Exterior concrete slab-on-grade may be subjected to drying due to the fluctuation of moisture content in subgrade soils. Deepened edge sections will aid in reducing the potential for the shrinkage and swelling of underlying soils.

- **Retaining Walls.** The proposed development is expected to require various types of earth-retaining structures: freestanding cantilever retaining wall, temporary shoring, and below grade walls for several of the proposed structures. In general, retaining structures planned at the site shall be backfilled with compacted soil and be constructed with a backdrain.

- **Corrosive Soils.** A representative bulk sample of soils in contact with concrete and pipes shall be collected and tested or pH, minimum resistivity, soluble chloride content, and soluble sulfate content. The test results shall be used to determine the chemical properties of on-site soils and appropriate recommendations. Recommendations for corrosion protection may include, but are not limited to, sacrificial metal, the use of protective coatings, and/or cathodic protection.

- **Geotechnical Review and Future Testing.** Additional site testing and final design evaluation shall be conducted by the project Geotechnical Consultant to refine and enhance these

recommendations. Final design shall be based on testing and analyses of the near-surface soils following the completion of grading. Design, grading, and construction shall be conducted in accordance with the specifications of the Geotechnical Consultant as summarized in a final report based on the CBC applicable at the time of grading and building and the City of San Juan Capistrano Building Code.

Mitigation Measure GEO-2 **Grading Plan Review and On-Site Inspection**. Grading plan review shall also be conducted by the Geotechnical Consultant and the Director of the City of San Juan Capistrano Development Services Department, or designee, prior to the start of grading to verify that the recommendations developed during the geotechnical design evaluation have been appropriately incorporated into the project plans. On-site inspection during grading shall be conducted by the Geotechnical Consultant and the City Building Official, or designee, to ensure compliance with geotechnical specifications as incorporated into project plans.

Mitigation Measure GEO-3 **California Building Code Compliance and Seismic Standards.** Structures and retaining walls shall be designed in accordance with the seismic parameters presented in the Geotechnical Investigation and applicable sections of Section 1613 of the 2016 California Building Code (CBC). Prior to issuance of building permits for planned structures, the project soils engineer and the Director of the San Juan Capistrano Development Services Department, or designee, shall review building plans to verify that structural design conforms to the recommendations of the Geotechnical Investigation and the City of San Juan Capistrano Building Code.

Mitigation Measure GEO-4 **Paleontological Resources Assessment.** Prior to issuance of grading permits, and in accordance with City of San Juan Capistrano's Historical, Archaeological, and Paleontological Resource Management Guidelines (previously known as Council Policy 601), a paleontologist certified by the County of Orange shall prepare a Paleontological Resources Assessment that includes the following information: a clear map delineating the project boundaries, the results of a field survey of the project area, the results of background research and sources for that background information, criteria for evaluation of paleontological sensitivity of the property, and a determination of whether development of the project has the potential to impact paleontological resources. If the Paleontological Resources Assessment determines that project activities will not impact paleontological resources, no further paleontological resource impact mitigation is required. If the Paleontological

Resources Assessment determines that there is a low possibility for project activities to impact paleontological resources, the Project Applicant shall retain a paleontologist on an on-call basis to address any unanticipated discoveries. If the Paleontological Resources Assessment determines that paleontological resources may be impacted by project development, a Paleontological Resources Impact Mitigation Program shall be prepared, and paleontological monitoring, fossil collection and treatment (if necessary), and preparation of a final monitoring report shall occur as described in Mitigation Measure GEO-5.

Mitigation Measure GEO-5

Paleontological Resources Impact Mitigation Program. In the event the project specific Paleontological Resources Assessment determines that paleontological resources may be impacted by project development, a Paleontological Resources Impact Mitigation Program (PRIMP) shall be prepared prior to commencement of any grading activity on site, and approved by the Director of Planning, or designee. The PRIMP shall be prepared by a paleontologist who is listed on the County of Orange list of certified paleontologists, and shall include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP) (2010).

The paleontologist or paleontological monitor shall attend one pre-construction meeting in order to explain the mitigation measures associated with the project, the potential for encountering paleontological resources, and the types of resources that may be found.

Ground-disturbing activities in deposits with high paleontological sensitivity shall be monitored by a paleontological monitor following the PRIMP. Spot check monitoring is required for ground disturbance in deposits with low paleontological sensitivity, and no paleontological monitoring is required for ground disturbance in deposits with no paleontological sensitivity. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment in the area of the find in order to allow removal of abundant or large specimens. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in

the immediate area of the find shall be redirected and a paleontologist shall be contacted to assess the find for significance.

Sediments shall occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils.

Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a scientific institution.

At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program. When submitted to the City of San Juan Capistrano Director of Development Services, or designee, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources.

4.6.9 Level of Significance after Mitigation

The proposed project would result in less than significant impacts with respect to geology and soils following implementation of Mitigation Measures GEO-1 through GEO-4.

4.6.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probably future projects within the cumulative impact area for geology and soils.

For geology and soils, the cumulative study area consists of the area that could be affected by the proposed project activities and the areas affected by other projects whose activities could directly or indirectly affect the geology and soils of the project site. The analysis above indicated no rare or special geological features or soil types on the project site that would be affected by project activities and no other known activities or projects with activities that affect the geology and soils of this site. In addition, the proposed project, as with all foreseeable projects, would be required to comply with the applicable state and local requirements, including the City of San Juan Capistrano Building Code. Therefore, the project's contribution to cumulative geotechnical and soil impacts is less than cumulatively significant.

For paleontological resources, the cumulative study area is the geographical area of the City, which is the geographical area covered by the City's General Plan, including all goals and policies included therein. Future development in the City could include excavation and grading that could potentially affect paleontological resources. The cumulative effect of the proposed project is the continued loss of these resources. The proposed project, in conjunction with other development in the City, has the

potential to cumulatively impact paleontological resources; however, it should be noted that each development proposal received by the City that requires discretionary approval would be required to undergo environmental review pursuant to CEQA. If there is a potential for significant impacts to paleontological resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. If subsurface cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than cumulatively significant. In addition, the City's General Plan policies would be implemented as appropriate to reduce the effects of additional development within the City. Therefore, the project's contribution to the destruction of known and unknown paleontological resources throughout the City would be less than cumulatively significant.

4.7 GREENHOUSE GAS EMISSIONS

This section provides a discussion of global climate change (GCC), existing regulations pertaining to GCC, and an analysis of greenhouse gas (GHG) emissions associated with the proposed Tirador Residential Development Project (proposed project). This section summarizes information provided in the *Air Quality and Greenhouse Gas Emissions Analysis* (LSA 2020) that was prepared for the project. The *Air Quality & Greenhouse Gas Emissions Analysis* is included in Appendix B of this Draft Environmental Impact Report (EIR).

4.7.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. No comment letters included comments related to GHG emissions.

4.7.2 Methodology

The *Air Quality and Greenhouse Gas Emissions Analysis* (LSA 2020) was prepared for the proposed project. Impacts related to GHG emissions and GCC were assessed in accordance with methodologies recommended by California Air Resources Board (CARB) and the Southern California Air Quality Management District (SCAQMD). GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). The latest version of the California Emissions Estimator Model (CalEEMod) (v2016.3.2), which was released by the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air quality districts on October 17, 2017, was used to determine construction and operational GHG emissions of the proposed project. The length of construction is based on estimates provided by the Project Applicant; construction of the proposed project is anticipated to start in 2021 and is estimated to last approximately 20 months. Operational GHG emissions were based on area source and energy use emissions as well as the estimated traffic trip generation rates from the *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (TIA) (LSA, 2019) (Appendix H) which account for project-related vehicle emissions. Project-related emissions were modeled under the assumption that construction of the proposed project would occur in 11 phases (as shown in Table E of the *Air Quality and Greenhouse Gas Emissions Analysis*). The construction equipment list (as shown in Table F of the *Air Quality and Greenhouse Gas Emissions Analysis*) is used in the CalEEMod model to calculate on-site emissions for each construction phase.

4.7.3 Existing Environmental Setting

4.7.3.1 Global Climate Change

GCC is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (e.g., precipitation or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

Climate change refers to any change in measures of weather (e.g., temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from natural factors (e.g., changes in the sun's intensity), natural processes within the climate system (e.g., changes in ocean circulation), or human activities (e.g., the burning of fossil fuels, land clearing, or agriculture). The primary observed effect of GCC has been a rise in the average global tropospheric[1] temperature of 0.36°F per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming may occur, which may induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of the State could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns, or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones. Specific effects in the State might include a decline in the Sierra Nevada snowpack, erosion of the State's coastline, and seawater intrusion in the San Joaquin Delta.

Global surface temperatures have risen by 1.33°F ±0.32°F over the last 100 years. The rate of warming over the last 50 years is almost double that over the last 100 years (Intergovernmental Panel on Climate Change [IPCC] 2013). The latest projections, based on state-of-the-art climate models, indicate that temperatures in the State are expected to rise 3°F to 10.5°F by the end of the century (California Energy Commission 2006). The prevailing scientific opinion on climate change is that "most of the warming observed over the last 60 years is attributable to human activities" (IPCC 2013). Increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as "the greenhouse effect."[2]

4.7.3.2 Primary Greenhouse Gases

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are:[3]

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);

1 The troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

2 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse allows heat from sunlight in and reduces the amount of heat that escapes, GHGs like CO_2, CH_4, and N_2O in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

3 The GHGs listed are consistent with the definition in Assembly Bill 32 (Government Code 38505), as discussed later in this memorandum.

- Perfluorocarbons (PFCs); and
- Sulfur hexafluoride (SF_6).

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which some scientists believe can cause global warming. While GHGs produced by human activities include naturally occurring GHGs (e.g., CO_2, CH_4, and N_2O), some gases (e.g., HFCs, PFCs, and SF_6) are completely new to the atmosphere. Certain other gases (e.g., water vapor) are short-lived in the atmosphere compared to these GHGs, which remain in the atmosphere for significant periods of time and contribute to climate change in the long term. Water vapor is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes (e.g., oceanic evaporation). For the purposes of this analysis, the term "GHGs" will refer collectively to the six gases identified in the bulleted list provided above.

These gases vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of metric tons[1] of "CO_2 equivalents" (metric tons [MT] of CO_2e). For example, N_2O is 298 times more potent at contributing to global warming than CO_2. Table 4.7.A identifies the GWP for each GHG analyzed.

Table 4.7.A: Global Warming Potential for Selected Greenhouse Gases

Pollutant	Lifetime (Years)	Global Warming Potential (100-year)[1]
Carbon Dioxide (CO_2)	~100[2]	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	121	298

Source: CARB. First Update to the Climate Change Scoping Plan (2014).

[1] The 100-year global warming potential estimates are from Section 8.7.1.2 of The Global Warming Potential Concept in the IPCC 2007 Fourth Assessment Report (AR4). Website: http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm (accessed November 2019).

[2] CO_2 has a variable atmospheric lifetime and cannot be readily approximated as a single number.

CARB = California Air Resources Board
CO_2 = carbon dioxide
IPCC = Intergovernmental Panel on Climate Change

[1] A metric ton is equivalent to approximately 1.1 tons.

The following discussion summarizes the characteristics of the six primary GHGs.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO_2 are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO_2 to the atmosphere. Natural removal processes (e.g., photosynthesis by land- and ocean-dwelling plant species) cannot keep pace with this extra input of human-made CO_2, and consequently the gas is building up in the atmosphere. The concentration of CO_2 in the atmosphere has risen approximately 30 percent since the late 1800s.[1]

The transportation sector remained the largest source of GHG emissions in 2017, representing 40 percent of the State's GHG emission inventory.[2] The largest emissions category within the transportation sector is on-road, which consists of passenger vehicles (cars, motorcycles, and light-duty trucks) and heavy-duty trucks and buses. Emissions from on-road sources constitute more than 92 percent of the transportation sector total. Industry and electricity generation were the State's second- and third-largest categories of GHG emissions, respectively.

Methane. CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources of CH_4 include fires, geologic processes, and bacteria that produce CH_4 in a variety of settings (most notably, wetlands) (USEPA 2010). Anthropogenic sources include rice cultivation, livestock, landfills and waste treatment, biomass burning, and fossil fuel combustion (e.g., the burning of coal, oil, and natural gas). As with CO_2, the major removal process of atmospheric CH_4—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH_4 concentrations in the atmosphere are increasing.

Nitrous Oxide. N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N_2O is also a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion sources emit N_2O. The quantity of N_2O emitted varies according to the types of fuel, technology, and pollution control devices used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in the State.

1 California Environmental Protection Agency (Cal/EPA). 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. Website: http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF (accessed November 2019).

2 Cal/EPA. Air Resources Board. 2019. California GHG Emission Inventory. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf (accessed January 2020).

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for O_3-depleting substances regulated under the Montreal Protocol.[1] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in the State; however, the rapid growth in the semiconductor industry, which is active in the State, has led to greater use of PFCs. However, there are no known project-related emissions of these three GHGs; therefore, these substances are not discussed further in this analysis.

4.7.3.3 Emissions Sources and Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, national, State, and local GHG emission inventories. However, because GHGs persist for a long time in the atmosphere, accumulate over time, and are generally well mixed, their impact on the atmosphere and climate cannot be tied to a specific point of emission.

Global Emissions. Worldwide emissions of GHGs in 2017 totaled 25.6 billion MT of CO_2e (UNFCCC 2019).[2] Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change (UNFCCC).

United States Emissions. In 2017, the United States emitted approximately 6.456 billion MT of CO_2e, down from 7.4 billion MT of CO_2e in 2007. United States emissions decreased by 0.5 percent from 2016 to 2017. This decrease was largely driven by a decrease in emissions from fossil fuel combustion, which was a result of multiple factors including a continued shift from coal to natural gas and increased use of renewables in the electric power sector, and milder weather that contributed to less overall electricity use. In 2017, the total United States GHG emissions were approximately 13 percent less than 2005 levels (USEPA 2019).

State of California Emissions. According to CARB emission inventory estimates, the State emitted approximately 424 million metric tons of CO_2e (MMT of CO_2e) emissions in 2017. This is a decrease of 5 MMT of CO_2e from 2016 and below the 2020 target of 431 MMT of CO_2e (CARB 2019).

The CARB estimates that transportation was the source of approximately 37 percent of the State's GHG emissions in 2017. The transportation sector remains the largest source of GHG emissions, accounting for 40 percent (CARB 2019). Followed by electricity generation (both in-state and out-of-state) at 15 percent and industrial sources at 21 percent. The remaining sources of GHG emissions were residential and commercial activities at 9 percent, agriculture at 8 percent, high-GWP gases at 4.3 percent, and recycling and waste at 2 percent (CARB 2019).

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1 The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the O3 layer by phasing out the production of several groups of halogenated hydrocarbons that are believed to be responsible for O3 depletion and are also potent GHGs.

2 United Nations Framework Convention on Climate Change (UNFCCC). 2019. GHG data from UNFCCC. Website: https://unfccc.int/process/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc (accessed December 2019).

Existing Project Site Emissions. The project site is currently undeveloped and vacant. The existing project site is characterized by dirt and scattered ruderal vegetation, is irregular in shape, and is relatively flat with a slight slope to the east/southeast. There are no current emissions associated with the undeveloped site.

4.7.4 Regulatory Setting

4.7.4.1 Federal Regulations

Prior to the last decade, there had been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are federal actions regarding GHGs and fuel efficiency over the last decade.

GHG Endangerment. In *Massachusetts vs. Environmental Protection Agency,* 549 U.S. 497, which was decided on April 2, 2007, the United States Supreme Court found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the federal Clean Air Act (CAA). The Court held that the USEPA 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 USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (i.e., 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.

- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

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 in the section titled "Clean Vehicles" below. After a lengthy legal challenge, the United States Supreme Court declined to review an Appeals Court ruling that upheld the USEPA Administrator's findings.

4.7.4.2 State Regulations

Assembly Bill 32. In September 2006, the California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "GHGs" as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride (NF_3), has also been added to the list of GHGs. CARB is the State agency charged with monitoring and regulating sources of GHGs. CARB approved the 1990 GHG emissions level of 427 MMT of CO_2e on December 6, 2007. Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMT of CO_2e. Emissions in 2020 in a "business as usual" (BAU) scenario were estimated to be 596 MMT of CO_2e, which do not account

for reductions from AB 32 regulations. At that level, a 28.4 percent reduction was required to achieve the 427 MMT of CO_2e 1990 inventory. In October 2010, CARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 MMT of CO_2e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.

CARB Scoping Plan. The CARB 2008 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 having a different emission reduction target. Most of the measures target the transportation and electricity sectors.

In November 2017, CARB released the final 2017 Scoping Plan Update, which identifies the State's post-2020 reduction strategy. The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order (EO) B-30-15 and codified by SB 32. Key programs that the Scoping Plan Update builds upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks, and freight movement utilizing cleaner, renewable energy and strategies to reduce CH_4 emissions from agricultural and other wastes. The 2017 Scoping Plan establishes a new emissions limit of 260 MMT of CO_2e for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

Senate Bill 32 and Assembly Bill 197. On September 8, 2016, former Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the State to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in EO B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving EO S-3-05, which sets a statewide GHG reduction target of 80 percent below 1990 levels by 2050. AB 197 created a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but to the Legislature as well.

Senate Bill 375 – Sustainable Communities and Climate Protection Act of 2008. Passing the Senate on August 30, 2008, SB 375 was signed by former Governor Brown on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires Metropolitan Planning Organizations (MPOs) to include sustainable community strategies in their Regional Transportation Plans (RTPs) for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for implementation of the strategies.

Executive Order S-3-05. Former Governor Arnold Schwarzenegger announced on June 1, 2005, through EO 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 B-30-15. On April 29, 2015, former Governor Brown issued EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. EO B-30-15 aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris in late 2015. In addition, EO B-30-15 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 CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMT of CO_2e. EO B-30-15 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. As with EO S-3-05, EO B-30-15 is not legally enforceable for local governments and the private sector. Legislation that would update AB 32 to make post-2020 targets and requirements a mandate is in process in the State Legislature.

Executive Order B-55-18 and Senate Bill 100. SB 100 and EO B-55-18 were signed by former Governor Brown on September 10, 2018. Under the existing renewables portfolio standard, 25 percent of retail sales are required to be from renewable sources by December 31, 2016, 33 percent by December 31, 2020, 40 percent by December 31, 2024, 45 percent by December 31, 2027, and 50 percent by December 31, 2030. SB 100 raises California's renewables portfolio standard requirement to 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. In addition to targets under AB 32 and SB 32, EO B-55-18 establishes a carbon neutrality goal for the State of California by 2045, and sets a goal to maintain net negative emissions thereafter. EO B-55-18 directs the California Natural Resources Agency, the California Environmental Protection Agency (Cal/EPA), the Department of Food and Agriculture, and the CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

4.7.4.3 Regional Regulations

South Coast Air Quality Management District. The SCAQMD is the air pollution control agency for Orange County, as well as the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD addresses the impacts to climate change from projects subject to SCAQMD permits as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions. All projects within the Basin are subject to SCAQMD rules and regulations in effect at the time of construction.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the Basin. The Working Group developed several different options that are contained in the SCAQMD 2008 draft guidance document titled *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* (SCAQMD 2008b) that could be applied by lead agencies. On September 28, 2010, SCAQMD Working Group Meeting #15 provided further guidance, including a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- **Tier 1.** Exemptions: If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2.** Consistency with a locally adopted GHG Reduction Plan: If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3.** Numerical Screening Threshold: If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. SCAQMD, under Option 1, is proposing a "bright-line" screening-level threshold of 3,000 MT of CO_2e per year (CO_2e/yr) for all land use types or, under Option 2, the following land-use-specific thresholds: 1,400 MT of CO_2e/yr for commercial projects, 3,500 MT of CO_2e/yr for residential projects, or 3,000 MT of CO_2e for mixed-use projects. This bright-line threshold is based on a review of the Governor's Office of Planning and Research (OPR) database of CEQA projects. Based on its review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal and therefore less than cumulatively considerable impact on GHG emissions:

- **Tier 4.** Performance Standards: If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT of CO_2e per year per service population (MT of CO_2e/yr/SP) for project-level analyses and 6.6 MT of CO_2e/yr/SP for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees.

  For the purpose of this analysis, a draft threshold of 3,500 MT of CO_2e/yr was used for residential developments such as the proposed project.

The SCAQMD has not presented a finalized version of these thresholds to the governing board.

The SCAQMD identifies the emissions level for which a project would not be expected to substantially conflict with any State legislation adopted to reduce statewide GHG emissions. As such, the utilization of a service population represents the rates of emissions needed to achieve a fair share of the State's mandated emissions reductions. Overall, SCAQMD identifies a GHG efficiency level that, when applied statewide or to a defined geographic area, would meet the year 2020 and post-2020 emissions targets as required by AB 32 and SB 32. If projects are able to achieve targeted rates of emissions per the service population, the State will be able to accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target and future post-2020 targets.

Regional Transportation Plan/Sustainable Communities Strategy. The Southern California Association of Governments (SCAG) is a regional council consisting of the following six counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. In total, the SCAG region encompasses 191 cities and over 38,000 square miles within Southern California. SCAG is the Metropolitan Planning Organization (MPO) serving the region under federal law, and serves as the Joint Powers Authority, the Regional Transportation Planning Agency, and the Council of Governments under State law. As the Regional Transportation Planning Agency, SCAG prepares long-range transportation plans for the Southern California region, including the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the 2008 Regional Comprehensive Plan (RCP).

On April 7, 2016, SCAG adopted the 2016–2040 RTP/SCS. The 2016–2040 RTP/SCS is a long-range planning document that provides a common foundation for regional and local planning, policymaking, and infrastructure goals in the SCAG region. The overall vision for the 2016–2040 RTP/SCS is to allow for compact communities that are connected by numerous public transit options, are more walkable, and are safe for bicyclists. By promoting more compact communities and improving the regional transit system, SCAG's 2016–2040 RTP/SCS aims to reduce vehicular miles traveled and associated air quality and greenhouse gas emissions, promote active lifestyles, and fuel economic growth.

The 2016–2040 RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for target years 2020 and 2035. Additionally, the RTP/SCS establishes an overall GHG target for the region consistent with both the statewide GHG-reduction targets for 2020 and post-2020 Statewide GHG reduction goals. Overall, the 2016–2040 RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently.

Regional Comprehensive Plan. In 2008, SCAG adopted the Regional Comprehensive Plan (RCP) for the purpose of providing a comprehensive strategic plan for defining and solving housing, traffic, water, air quality, and other regional challenges. The 2008 RCP has two primary objectives in implementing this strategic plan: (1) integrating transportation, land use, and air quality planning approaches, and (2) outlining key roles for public and private sector stakeholders to implement reasonable policies regarding transportation, land use, and air quality approaches. While the 2008 RCP outlines several policies to inform local decision-makers within the SCAG region with respect to

policy and planning decisions, these policies are considered recommendations and are not mandated by law.

4.7.4.4 Local Regulations

The City of San Juan Capistrano does not have any plans, policies, regulations, significance thresholds, or laws addressing climate change at this time. However, the City's General Plan Public Services and Utilities Element (1999) includes policies addressing energy conservation.

In April 2018, the City Council passed Resolution No. 18-04-17-04, which supports findings that human activities are a key contributor to climate change, as well as acknowledges that if left unaddressed, the consequences of climate change will adversely impact the public, especially the most vulnerable populations.

4.7.5 Thresholds of Significance

The thresholds for greenhouse gas emissions impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing CEQA* (2019). The proposed project may be deemed to have a significant impact with respect to greenhouse gas emissions if it would:

Threshold 4.7.1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Threshold 4.7.2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases.

As stated above, for the purpose of this analysis, a draft threshold of 3,500 MT of CO_2e/yr was used for residential developments such as the proposed project.

4.7.6 Project Impacts

Threshold 4.7.1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact.

Construction. During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs (e.g., CO_2, CH_4, and N_2O). Furthermore, CH_4 is emitted during the fueling of heavy equipment. GHG emissions associated with project construction would occur over the short term from construction activities and would consist primarily of emissions from equipment exhaust. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

Table 4.7.B lists the annual GHG emissions from construction of the proposed project.

Table 4.7.B: Construction Greenhouse Gas Emissions

Construction Phase	Greenhouse Gas Emissions (MT/yr)			
	CO_2	CH_4	N_2O	CO_2e
Site Preparation	26.32	<0.01	0	26.52
Existing Utility Relocation	26.32	<0.01	0	26.52
Grading	169.72	0.04	0	170.60
Backbone Infrastructure	49.85	0.01	0	50.22
Building Construction Model Phase 1 - 2021	176.90	0.03	0	177.54
Building Construction Model Phase 2 - 2022	127.66	0.02	0	128.13
Building Construction (Phase 2) - 2021	86.18	0.01	0	86.49
Building Construction (Phase 2) - 2022	288.92	0.04	0	289.98
Building Construction (Phase 3) - 2022	367.31	0.05	0	368.65
Paving (Phase 1) - 2022	21.35	<0.01	0	21.52
Architectural Coating (Phase 1) - 2022	5.03	<0.01	0	5.03
Building Construction (Phase 4) - 2022	365.08	0.05	0	366.40
Paving (Phase 2) - 2022	21.35	<0.01	0	21.52
Architectural Coating (Phase 2) - 2022	5.03	<0.01	0	5.03
Paving (Phase 3) - 2022	21.35	<0.01	0	21.52
Architectural Coating (Phase 3) - 2022	5.03	<0.01	0	5.03
Paving (Phase 4) – 2022	21.35	<0.01	0	21.52
Architectural Coating (Phase 4) - 2022	5.03	<0.01	0	5.03
Total Construction Emissions	**1,789.77**	**0.30**	**0**	**1,797.24**
Amortized over 30 years	**59.66**	**<0.01**	**0**	**59.91**

Source: Compiled by LSA (January 2020).
Note: Column totals may not add due to rounding from the model results.
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide

Per the SCAQMD guidance,[1] due to the long-term nature of the GHGs in the atmosphere, instead of determining significance of construction emissions alone, the total construction emissions are amortized over 30 years (an estimate of the life of the proposed project), added to the operational emissions, and compared to the applicable GHG significance threshold.

As shown in Table 4.7.B, construction of the proposed project would generate approximately 1,797.24 MT of CO_2e over the course of construction. The amortized construction emissions have been assessed as part of the annual average operation emissions, below. Because construction would be temporary (approximately 20 months), would cease upon project completion, and would not result in a permanent increase in emissions, impacts would be less than significant, and no mitigation is required.

[1] SCAQMD. 2008b. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans*. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2 (accessed April 2018).

Operation. Operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with resident trips to and from the project site. Area-source emissions would be associated with activities including landscaping and maintenance of proposed land uses, natural gas for cooking and heating, and other sources. Increases in stationary-source emissions would also occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed use.

The GHG emission estimates presented in Table 4.7.C show the emissions associated with the level of development envisioned by the proposed project. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for heating and cooking. As shown in Table 4.7.C, the proposed project, including amortized construction emissions, would generate 1,661.47 MT of CO_2e/yr. This level of project-related GHG emissions would fall below the SCAQMD bright-line screening threshold of 3,500 MT of CO_2e/yr for residential development. Therefore, GHG emissions generated by the project are not considered to be cumulatively contributable to statewide GHG emissions, and impacts would be less than significant. No mitigation is required.

Table 4.7.C: Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/yr)					
	Bio-CO_2	**NBio-CO_2**	**Total CO_2**	**CH_4**	**N_2O**	**CO_2e**
Total Construction emissions amortized over 30 years	0	59.66	59.66	<0.01	0	59.91
Area Sources	0	29.18	29.18	<0.01	<0.01	29.39
Energy Sources	0	334.23	334.23	0.01	<0.01	336.04
Mobile Sources	0	1,137.86	1,137.86	0.05	0	1,139.01
Waste Sources	18.55	0	18.55	1.10	0	45.95
Water Usage	2.73	39.27	42.00	0.28	<0.01	51.17
Total Proposed Project GHG Emissions	**21.28**	**1,600.20**	**1,621.48**	**1.44**	**0**	**1,661.47**

Source: Compiled by LSA (December 2019)
Note: Column totals may not add due to rounding from the model results.

Bio-CO_2 = biologically generated CO_2
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
NBio-CO_2 = Non-biologically generated CO_2
SCAQMD = South Coast Air Quality Management District

Threshold 4.7.2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases?

Less Than Significant Impact. The City of San Juan Capistrano does not currently have an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and SCAG's 2016–2040 RTP/SCS. A consistency analysis with these plans for the proposed project is presented below.

The CARB Scoping Plan is applicable to state agencies, but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require the City to adopt policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. These regulations provide reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that would affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the low carbon fuel standards and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley II, and California Advanced Clean Cars program). Although measures in the Scoping Plan apply to State agencies and not the proposed project, the project's GHG emissions would be reduced by compliance with statewide measures that have been adopted since AB 32 and SB 32 were adopted. Therefore, the proposed project would not conflict with the CARB Scoping Plan, and impacts are considered less than significant.

San Juan Capistrano is a member city of the SCAG. SCAG's 2016–2040 RTP/SCS, adopted on April 7, 2016, is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 and establishes an overall GHG target for the region consistent with both the statewide GHG-reduction targets for 2020 and the post-2020 statewide GHG reduction goals. Table 4.7.D shows the proposed project's consistency with the 2016–2040 RTP/SCS goals.

As shown in Table 4.7.D, the proposed project would not conflict with the stated goals of the 2016–2040 RTP/SCS. As such, the proposed project would not interfere with SCAG's ability to achieve the region's 2020 and post-2020 mobile source GHG reduction targets outlined in the 2016–2040 RTP/SCS, and it can be assumed that regional mobile emissions will decrease consistent with the goals of the 2016–2040 RTP/SCS. Further, the proposed project is not considered regionally significant per *State CEQA Guidelines* Section 15206. Thus, the project would not conflict with the 2016–2040 RTP/SCS targets since those targets were established and are applicable on a regional level. Therefore, impacts related to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions would be less than significant, and no mitigation is required.

Table 4.7.D: Southern California Association of Governments RTP/SCS Goals

SCAG Measure	Project Consistency
Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness.	**Not Applicable**: This is not a project-specific policy and is therefore not applicable for the residential land uses.
Goal 2: Maximize mobility and accessibility for all people and goods in the region.	**Consisten**t: Improvements to the transportation network in San Juan Capistrano are developed and maintained to meet the needs of local and regional transportation and to ensure efficient mobility. A number of regional and local plans and programs are used to guide development and maintenance of transportation networks, including but not limited to: ● 2017 Orange County Congestion Management Program ● Caltrans Traffic Impact Studies Guidelines ● Caltrans Highway Capacity Manual ● SCAG RTP/SCS The proposed project would not result in any significant impacts to the transportation network. Therefore, the proposed project would be consistent with Goal 2.
Goal 3: Ensure travel safety and reliability for all people and goods in the region.	**Consistent**: All modes of transit in San Juan Capistrano are required to follow safety standards set by corresponding regulatory documents. Pedestrian walkways and bicycle routes must follow safety precautions and standards established by local (e.g., City of San Juan Capistrano, County of Orange) and regional (e.g., SCAG, Caltrans) agencies. Roadways for motorists must follow safety standards established for the local and regional plans. The proposed project provides continuous sidewalks throughout the development to ensure pedestrian safety. Therefore, the proposed project would be consistent with Goal 3.
Goal 4: Preserve and ensure a sustainable regional transportation system.	**Consistent**: All new roadway developments and improvements to the existing transportation network must be assessed with some level of traffic analysis (e.g., traffic assessments, traffic impact studies) to determine how the developments would impact existing traffic capacities and to determine the needs for improving future traffic capacities. Therefore, the proposed project would be consistent with Goal 4.
Goal 5: Maximize the productivity of our transportation system.	**Consistent**: The local and regional transportation system would be improved and maintained to encourage efficiency and productivity. The City's Public Works and Utility Department oversees the improvement and maintenance of all aspects of the public right-of-way on an as needed basis. The City also strives to maximize productivity of the region's public transportation system (e.g., bus, bicycle) for residents, visitors, and workers coming into and out of San Juan Capistrano. The traffic study prepared for the proposed project determined that the proposed project would not result in any significant impacts to the transportation network. Therefore, the proposed project would be consistent with Goal 5.

Table 4.7.D: Southern California Association of Governments RTP/SCS Goals

SCAG Measure	Project Consistency
Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transport-ation, such as bicycling and walking).	**Consistent**: The reduction of energy use, improvement of air quality, and promotion of more environmentally sustainable development are encouraged through the development of alternative transportation methods, green design techniques for buildings, and other energy reducing techniques. For example, development projects are required to comply with the provisions of the California Building and Energy Efficiency Standards and the Green Building Standards Code (CALGreen Code). The City also strives to maximize the protection of the environment and improvement of air quality by encouraging and improving the use of the region's public transportation system (e.g., bus, bicycle) for residents, visitors, and workers coming into and out of San Juan Capistrano. The proposed project includes continuous sidewalks throughout the development and also includes a multi-use trail. Therefore, the proposed project would be consistent with Goal 6.
Goal 7: Actively encourage and create incentives for energy efficiency, where possible.	**Not Applicable**: This is not a project-specific policy and is therefore not applicable.
Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consisten**t: See response to RTP/SCS Goal 6.
Goal 9: Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	**Consistent**: The City of San Juan Capistrano monitors existing and newly constructed roadways and transit routes to determine the adequacy and safety of these systems. Other local and regional agencies (e.g., Orange County Transportation Authority, Caltrans, and SCAG) work with the City to manage these systems. Security situations involving roadways and evacuations would be addressed in the County of Orange's emergency management protocols (e.g., the Orange County Emergency Management Division's Emergency Operations Center) developed in accordance with the state and federal mandated emergency management regulations. The proposed project would be consistent with Goal 9.

Source: Compiled by LSA (December 2019).

CALGreen Code = California Green Building Standards Code
RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy
SCAG = Southern California Association of Governments

4.7.7 Level of Significance Prior to Mitigation

There would be no potentially significant impacts related to GHG emissions.

4.7.8 Regulatory Compliance Measures and Mitigation Measures

4.7.8.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the proposed project.

4.7.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.7.9 Level of Significance after Mitigation

The proposed project would result in less than significant impacts with respect to GHG emissions and there would be no significant unavoidable adverse impacts of the proposed project.

4.7.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for GHG emissions. GHG emissions are global pollutants, and therefore, result in cumulative impacts by nature. Consequently, it is speculative to determine how an individual project's GHG emissions would impact California. As such, impacts identified under Section 4.7.6, Project Impacts, are not project-specific impacts to GCC, but are the proposed project's contribution to this cumulative impact. The impact of project-related GHG emissions would not result in a reasonably foreseeable cumulatively considerable contribution to GCC. Additionally, the proposed project, in conjunction with other cumulative projects, would be subject to all applicable regulatory requirements which would further reduce GHG emissions. Further, the proposed project would not conflict with SCAG's 2016–2040 RTP/SCS. Therefore, the project's cumulative contribution of GHG emissions would be less than significant and the project's cumulative GHG impacts would also be less than cumulatively considerable.

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4.8 HYDROLOGY AND WATER QUALITY

This section evaluates the potential impacts to hydrology and water quality conditions from implementation of the Tirador Residential Development Project (proposed project). The analysis in this section is based in part on the P*reliminary Hydrology Report for Paseo Tirador TTM 18148, San Juan Capistrano, CA* (Preliminary Hydrology Report) (IBI Group, November 2017a, revised March 2018) and the *Preliminary Water Quality Management Plan for Paseo Tirador, San Juan Capistrano, CA* (PWQMP) (IBI Group, November 2017b, revised March 2018, July 2018, and January 2019) (provided in Appendix F of this Environmental Impact Report [EIR]).

4.8.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. One comment letter included comments related to Hydrology and Water Quality.

The letter from Orange County Public Works (OCPW) received on December 4, 2019, noted that the project should ensure that the property is protected from flooding during the 100-year flood event, and stated that the City should review and approve all local hydrology and hydraulic analyses. OCPW also commented that the City should ensure that the impacted Federal Emergency Management Agency (FEMA) 100-year floodplain is revised per FEMA regulations in accordance with the City's floodplains ordinances, and that encroachment should not result in any increase in flood levels within the floodway during the occurrence of base flood discharge.

4.8.2 Methodology

Project impacts to hydrology and water quality are evaluated based on the proposed project's adherence to local, regional, State and federal standards; the proposed land uses and project design; changes in pre- and post-project stormwater flows; and proposed BMPs for control of surface runoff and reduction of pollutants in stormwater runoff.

4.8.3 Existing Environmental Setting

4.8.3.1 Surface Waters

The project site is located within the San Juan Creek Watershed, which covers approximately 176 square miles and includes portions of the Cities of Dana Point, Laguna Hills, Laguna Niguel, Mission Viejo, Rancho Santa Margarita, and San Juan Capistrano.[1]

For planning purposes, the San Diego Regional Water Quality Control Board (RWQCB) uses a watershed classification system that divides surface waters into hydrologic units (HUs), areas, and subareas. As designated by the RWQCB, the project site is located within the San Juan HU, which

[1] United States Army Corps of Engineers (USACE), Los Angeles District. 2002. San Juan Creek Watershed Management Study, Orange County, California Feasibility Phase F-5 Report. August.

itself is divided into Hydrologic Areas (HAs), which are then divided into Hydrologic Subareas (HSAs). The project site is located the San Juan HU, Mission Viejo HA and Ortega HSA.[1]

The project site is bound on the east by San Juan Creek. San Juan Creek originates in the Santa Ana Mountains in the Cleveland National Forest in the easternmost part of Orange County (County). San Juan Creek flows into the Pacific Ocean south of Dana Point Harbor at Doheny State Beach.[2]

4.8.3.2 Stormwater Drainage

In the existing condition, an earthen swale located off site to the west of the project site conveys stormflows from the west to a 27-inch reinforced concrete pipe (RCP) located in the southwestern corner of the project site. Catch basins on the southeast portion of the existing project site also convey on-site stormwater flows to the RCP. The RCP conveys stormwater flows to Horno Creek Channel. Horno Creek Channel is a 16-feet-wide by 8.5-feet-tall reinforced concrete box which bisects the project site in a north/south direction, and is a County-owned and maintained facility. Additionally, there is a portion of the site that sheet flows to existing catch basins within Paseo Tirador; the catch basins then drain into the RCP culvert portion of Horno Creek. Horno Creek Channel then discharges stormwater runoff to San Juan Creek. The portion of San Juan Creek adjacent to the project site is an unimproved natural watercourse. Downstream of the project site, San Juan Creek is improved as a concrete-lined earthen channel with a soft bottom. An existing scour protection wall within the project area limits provides flood protection and soil stability on site.

4.8.3.3 Surface Water Quality

San Juan Creek is listed on the 2014/2016 California Integrated Report (CWA Section 303(d) List/305(b) Report, as described in Section 4.8.4.1, Federal Regulations, below) as impaired for dichlorodiphenyldichloroethylene (DDE), indicator bacteria, selenium, toxicity, benthic community effects, nitrogen, dissolved oxygen, and phosphorus. The mouth of San Juan Creek is impaired for cadmium, copper, nickel, ammonia, and indicator bacteria. The Pacific Ocean shoreline at San Juan Creek is impaired for indicator bacteria. Horno Creek is not listed as impaired on the 2014/2016 303(d) list.

4.8.3.4 Groundwater

The project site lies within the San Juan Groundwater Basin. The San Juan Valley groundwater basin underlies the San Juan Valley and several tributary valleys in southern Orange County. The basin is bounded on the west by the Pacific Ocean and otherwise by tertiary semi-permeable marine deposits.

For management purposes, groundwater basins are designated in the San Diego RWQCB's Basin Plan using the same HUs, HAs, and HSAs as surface waters.

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1 San Diego Regional Water Quality Control Board (RWQCB). 1994. Water Quality Control Plan for the San Diego Basin. September 8, 1994 (with amendments effective on or before May 17, 2016).

2 United States Army Corps of Engineers (USACE), Los Angeles District. 2002. San Juan Creek Watershed Management Study, Orange County, California Feasibility Phase F-5 Report. August.

Groundwater recharge is from flow in San Juan Creek, Oso Creek, and Arroyo Trabuco and precipitation to the valley floor. Additional recharge is from water from springs that flow directly from Hot Spring Canyon into San Juan Creek. Groundwater in the basin flows southwest toward the Pacific Ocean.[1]

As discussed in the Geotechnical Engineering Investigation prepared for the project, groundwater could be encountered at depths of 17 ft below the existing grade.

4.8.3.5 Groundwater Quality

Groundwater in the San Juan Valley groundwater basin near the coast typically has a calcium-sodium sulfate or sulfate-chloride character. In general, total dissolved solids (TDS) content is in the range of 2,000 mg/L near the coast.[2]

4.8.3.6 Flood Zones

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Nos. 06059C0506J and 06059C0507J (December 3, 2009), the southern portion of the project site is located within 100-year floodplain Zone AE, a small portion of the eastern portion of the site is located within a mapped floodway, and the northern portion of the project site is located within Zone X (refer to Figure 4.8.1 at the end of this section). Zone AE is defined by FEMA as areas subject to inundation by a 1-percent-annual-chance (100-year) flood for which base flood elevations have been determined. Elevations of the floodplain over the project area range from 85 ft to 95 ft. Zone X is defined by FEMA as areas of minimal flood hazard, which are the areas outside of the Special Flood Hazard Area and higher than the elevation of the 0.2 percent annual chance flood. The northeastern portion of the project site contains a Zone AE Regulatory Floodway[3] associated with El Horno Creek and San Juan Creek. In addition, according to the City's General Plan Safety Element,[4] the project site is located within the inundation area in the event of catastrophic failure of Trampas Canyon Dam.

4.8.4 Regulatory Setting

4.8.4.1 Federal Regulations

Clean Water Act. In 1972, the Federal Water Pollution Control Act (now referred to as the Clean Water Act [CWA]) was amended to require that the discharge of pollutants into waters of the United States from any point source be effectively prohibited unless the discharge is in compliance with an NPDES permit. In 1987, the CWA was again amended to require that the United States Environmental Protection Agency (USEPA) establish regulations for the permitting of stormwater discharges (as a point source) by municipal and industrial facilities and construction activities under

1 Department of Water Resources (DWR). 2004. California's Groundwater Bulletin 118. Hydrologic Region South Coast, San Juan Valley Groundwater Basin. February.

2 Ibid.

3 FEMA defines regulatory floodways as a channel of a river or other watercourse where adjacent land is reserved in order to discharge the base flood without cumulatively increasing the water surface elevation.

4 City of San Juan Capistrano. 1999. General Plan Safety Element. December 14.

the NPDES permit program. The regulations require that Municipal Separate Storm Sewer System (MS4) discharges to surface waters be regulated by an NPDES permit.

The CWA requires states to adopt water quality standards for water bodies and have those standards approved by the USEPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses. Water quality criteria are set concentrations or levels of constituents (e.g., lead, suspended sediment, and fecal coliform bacteria) or narrative statements that represent the quality of water that support a particular use. Because California had not established a complete list of acceptable water quality criteria for toxic pollutants, the USEPA Region IX established numeric water quality criteria for toxic constituents in the form of the California Toxics Rule (CTR).

When designated beneficial uses of a particular water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as impaired. Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for each impairing water quality constituent. A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards (often with a "factor of safety" included, which limits the total load of pollutants to a level well below that which could cause the standard to be exceeded). Once established, the TMDL is allocated among current and future dischargers into the water body.

Direct discharges of pollutants into waters of the United States are not allowed except in accordance with the NPDES program established in Section 402 of the CWA.

> ***Clean Water Act, Section 303, List of Impaired Water Bodies.*** The State Water Resources board (SWRCB), in compliance with Section 303(d) of the CWA, prepared a 2014/2016 list of impaired water bodies in California. The SWRCB approved the 2014/2016 California Integrated Report (CWA Section 303(d) List/305(b) Report) on October 3, 2017. On April 6, 2018, the USEPA approved the 2014/2016 California 303(d) List of Water Quality Limited Segments (303[d] list) The 303(d) list includes a priority schedule for the development of TMDL implementation for each contaminant impacting the water body.
>
> As stated above, San Juan Creek is listed on the 2014/2016 303(d) list as impaired for DDE, indicator bacteria, selenium, toxicity, benthic community effects, nitrogen, dissolved oxygen, and phosphorus. The mouth of San Juan Creek is impaired for cadmium, copper, nickel, ammonia, and indicator bacteria. The Pacific Ocean shoreline at San Juan Creek is impaired for indicator bacteria. As stated previously, Horno Creek is not listed as impaired on the 2014/2016 303(d) list.

National Flood Insurance Act. Congress acted to reduce the costs of disaster relief by passing the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The intent of these acts was to reduce the need for large, publicly funded flood control structures and disaster relief efforts by restricting development in floodplains. FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in a floodplain. FEMA issues FIRMs of communities

participating in the NFIP. These maps delineate flood hazard zones in the community. The City of San Juan Capistrano manages local storm drain facilities, and the Orange County Flood Control District (OCFCD) is responsible for regional flood control planning within Orange County.

4.8.4.2 State Regulations

Porter-Cologne Water Quality Control Act of 1970. The federal CWA places the primary responsibility for the control of water pollution and planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs.

California's primary statute governing water quality and water pollution is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and the nine RWQCBs broad powers to protect water quality and is the primary vehicle for the implementation of California's responsibility under the federal CWA. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, to regulate discharges to surface water and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil, or petroleum product.

Each RWQCB must formulate and adopt a water quality plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that an RWQCB may include in its region a regional plan with water discharge prohibitions applicable to particular conditions, areas, or types of waste. The City, including the project site, is within the jurisdictional boundaries of the San Diego RWQCB.

California Toxics Rule. As stated previously, because California had not established a complete list of acceptable water quality criteria for toxic pollutants, USEPA Region IX established numeric water quality criteria for toxic constituents in the form of the CTR. The CTR provides water quality criteria for certain potentially toxic compounds for inland surface waters, enclosed bays, estuaries, and waters designated for human health or aquatic life uses. The CTR is often used by the RWQCBs when establishing water quality objectives and TMDLs. Although the CTR criteria do not apply directly to discharges of stormwater runoff, they are utilized as benchmarks for toxics in urban runoff. The CTR is used as a benchmark to evaluate the potential ecological impacts of stormwater runoff to receiving waters. The CTR establishes acute and chronic surface water quality standards for certain water bodies. Acute criteria provide benchmarks for the highest permissible concentration below which aquatic life can be exposed for short periods of time without deleterious effects. Chronic criteria provide benchmarks for an extended period of time (i.e., 4 days or more) without deleterious effects. The acute CTR criteria have a shorter relevant averaging period (less than 4 days) and provide a more appropriate benchmark for comparison for stormwater flows.

CTR criteria are applicable to the receiving water body and therefore must be calculated based on the probable hardness values of the receiving waters. At higher hardness values for receiving waters, certain constituents (including copper, lead, and zinc) are more likely to be complexed

(bound with) components in the water column. This in turn reduces the bioavailability and resulting potential toxicity of these metals.

Total Maximum Daily Load Requirements. The San Diego RWQCB has established a TMDL for indicator bacteria which applies to San Juan Creek, the downstream receiving waters for the project site. On February 10, 2010, the San Diego RWQCB adopted Resolution No. R9-2010-0001, *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*. This TMDL Basin Plan amendment was subsequently approved by the SWRCB on December 14, 2010; by the Office of Administrative Law on April 4, 2011; and by the USEPA on June 22, 2011. Under State law, this TMDL Basin Plan became fully effective on April 4, 2011, the date of Office of Administrative Law approval. The Municipal MS4s are stakeholders with waste load allocations in the TMDL. This Basin Plan amendment establishes TMDLs and associated load and wasteload allocations for total coliform, fecal coliform, and enterococci bacteria in 20 beach and creek segments, including San Juan Creek. Due to the delisting of these beaches for contact water recreation (REC1) uses in the 2010 Integrated Report, as long as water quality continues to meet delisting standards, no further actions, beyond monitoring, is required under the TMDL by the Municipal MS4s stakeholders as wasteload allocations have been met. Additionally, there are no TMDL requirements listed for Horno Creek.

General Construction Activity Storm Water Permit. The *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ (Construction General Permit), adopted by the SWRCB, regulates construction activity that includes clearing, grading, and excavation resulting in soil disturbance of at least 1 acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities.

The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology/ Economically Achievable/Best Conventional Pollutant Control Technology standards;
- Perform inspections and maintenance of all BMPs; and
- Conduct stormwater sampling, if required based on risk level.

To obtain coverage under the Construction General Permit, a project applicant must electronically file all permit registration documents with the SWRCB prior to the start of construction. Permit registration documents must include a:

- Notice of Intent (NOI),
- Risk Assessment,
- Site map,
- SWPPP,
- Annual fee, and
- Signed certification statement.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

Sustainable Groundwater Management Act. The Sustainable Groundwater Management Act (SGMA) of 2014 is a comprehensive three-bill package that Governor Jerry Brown signed into California state law in September 2014. The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for State intervention if necessary to protect the resource. The plan is intended to ensure a reliable groundwater supply for California for years to come.

The SGMA requires governments and water agencies of high- and medium-priority basins to halt overdrafts of groundwater basins. The SGMA requires the formation of local groundwater sustainability agencies (GSAs) that are required to adopt Groundwater Sustainability Plans to manage the sustainability of the groundwater basins.

4.8.4.3 Regional Regulations

The San Diego RWQCB has adopted a Basin Plan for their region of responsibility that delineates water resource area boundaries based on hydrological features. For the purposes of achieving and maintaining water quality protection, specific beneficial uses have been identified for each of the surface waters and groundwater management zones described in the Basin Plan. Once beneficial uses are designated, appropriate water quality objectives can be established, and programs that maintain or enhance water quality can be implemented to ensure the protection of beneficial uses.

The existing beneficial uses for San Juan Creek and Horno Creek, as designated by the RWQCB in the Basin Plan, are listed below.

- **Agricultural Supply (AGR):** Uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.
- **Industrial Service Supply (IND):** Uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
- **Contact Water Recreation (REC1):** Uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.

- **Noncontact Water Recreation (REC2):** Uses of water for recreational activities involving proximity to water but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.
- **Warm Freshwater Habitat (WARM):** Uses of water that support warm-water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Cold Freshwater Habitat (COLD):** Uses of water that support cold-water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Wildlife Habitat (WILD):** Uses of water that support terrestrial ecosystems, including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

San Juan Creek and Horno Creek are exempted from the Municipal and Domestic Supply (MUN) beneficial use. The existing beneficial uses for groundwater for the Ortega HSA are MUN, AGR, and IND.

Basin Plans also establish implementation programs to achieve water quality objectives to protect beneficial uses and require monitoring to evaluate the effectiveness of the programs. These objectives must comply with the State antidegradation policy (State Board Resolution No. 68-16), which is designed to maintain high-quality waters while allowing some flexibility if beneficial uses are not unreasonably affected.

Basin Plans have established narrative and numeric water quality objectives for inland surface streams and groundwater. If water quality objectives are exceeded, the RWQCBs can use their regulatory authority to require municipalities to reduce pollutant loads to the affected receiving waters. Relevant surface water quality objectives for all inland surface waters and groundwater under the jurisdiction of the San Diego RWQCB that are applicable to the receiving waters for the project site are shown in Table 4.8.A.

In addition to the water quality objectives applicable to all surface waters, bays and estuaries, and groundwater, the San Diego RWQCB has designated site-specific water quality objectives for waters. The site-specific water quality objectives for the Mission Viejo HA are:

- TDS = 500 mg/L
- Chloride = 250 mg/L
- Sulfate = 250 mg/L
- Percent Sodium = 60
- Iron = 0.3 mg/L
- Manganese = 0.05 mg/L
- Methylene Blue Active Substances = 0.5 mg/L

Table 4.8.A: Water Quality Objectives

Constituent	Objective
Ammonia, Unionized	Discharge of wastes shall not cause concentrations of unionized ammonia to exceed 0.025 mg/L (as N).
Bacteria, Coliform	In waters designated for REC1, the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a log mean of 200 organisms/100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 400 organisms/100 mL.
Bacteria, E. Coli	In fresh waters designated for REC1, the steady-state E. coli concentration shall not exceed 126 colonies/100 mL, the maximum concentration shall not exceed 406 colonies/100 mL at moderately or lightly used areas, and the maximum concentration shall not exceed 576 colonies/100 mL for infrequently used areas.
Bacteria, Enterococci	In salt waters designated for REC-1, the steady-state enterococci concentration shall not exceed 33 colonies/100 mL, the maximum concentration shall not exceed 108 colonies/100 mL at moderately or lightly used areas, and the maximum concentration shall not exceed 151 colonies/100 mL for infrequently used areas.
Biostimulatory Substances	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those that stimulate algae and emergent plant growth. Threshold total phosphorus (P) concentrations shall not exceed 0.05 mg/L in any stream at the point where it enters any standing body of water, or 0.025 mg/L in any standing body of water. A desired goal in order to prevent plant nuisance in streams and other flowing waters appears to be 0.1 mg/L total P. These values are not to be exceeded more than 10 percent of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the San Diego RWQCB. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and then upheld. If data are lacking, a ratio of N:P = 10:1 on a weight-to-weight basis shall be used.
Color	Waters shall be free of coloration that causes nuisance or adversely affects the water for beneficial uses. The natural color of fish, shellfish, or other resources in inland surface waters, coastal lagoons or bays and estuaries shall not be impaired.
Dissolved Oxygen	Dissolved oxygen levels shall not be less than 5 mg/L in inland surface waters with a designated WARM beneficial use. The annual mean dissolved oxygen concentration shall not be less than 7 mg/L more than 10 percent of the time.
Floating Materials	Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses.
Oil and Grease	Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, or that cause nuisance or otherwise adversely affect beneficial uses.
Pesticides	No individual pesticide or combination of pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels that will bioaccumulate in aquatic organisms to levels that are harmful to human health, wildlife, or aquatic organisms.
pH	In inland surface waters, the pH shall not be depressed below 6.5 or raised above 8.5.
Radioactivity	Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

Table 4.8.A: Water Quality Objectives

Constituent	Objective
Sediment	Waters shall not contain suspended or settleable solids in concentrations that cause nuisance or adversely affect beneficial uses.
Suspended and Settleable Solids	Waters shall not contain suspended and settleable solids in concentrations that cause nuisance or adversely affect beneficial uses.
Taste and Odor	Waters shall not contain taste- or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses. The natural taste and odor of fish, shellfish, or other regional water resources used for human consumption shall not be impaired for inland surface waters.
Temperature	The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the San Diego RWQCB that such alteration in temperature does not adversely affect beneficial uses. Additionally, at no time or place shall the temperature of any COLD water be increased more than 5 degrees Fahrenheit above the natural receiving water temperature.
Toxicity	All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms; analyses of species diversity, population density, and growth anomalies; bioassays of appropriate duration; or other appropriate methods as specified by the San Diego RWQCB. Inland surface waters shall not contain toxic pollutants in excess of the numerical objectives applicable to California specified in the California Toxics Rule (40 CFR 131.36)
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Source: San Diego RWQCB, *Water Quality Control Plan for the San Diego Basin* (1994).

CFR = Code of Federal Regulations
mg/L = milligrams per liter
mL = milliliter
REC-1 = Contact Water Recreation
RWQCB = Regional Water Quality Control Board
WARM = Warm Freshwater Habitat

- Boron = 0.75 mg/L
- Turbidity = 20 nephelometric turbidity units (NTU)
- Color = 20 units
- Fluoride = 1 mg/L

In addition, the nitrogen and phosphorus site-specific water quality objective specified that total phosphorus concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any standing body of water and shall not exceed 0.025 mg/l in any standing body of water. A desired goal to prevent plant nuisances in streams and other flowing waters is 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific body in question clearly show that water quality objective changes are permissible and changes are approved by the RWQCB. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N: P=10:1 shall be used.

The site specific groundwater quality objectives for the Ortega HSA are:

- TDS = 1,100 mg/L
- Chloride = 375 mg/L
- Sulfate = 450 mg/L
- Percent Sodium = 60
- Nitrate = 45 mg/L
- Iron = 0.3 mg/L
- Manganese = 0.05 mg/L
- Methylene Blue Active Substances = 0.5 mg/L
- Boron = 0.75 mg/L
- Turbidity = 5 NTU
- Color = 15 units
- Fluoride = 1 mg/L

Orange County National Pollutant Discharge Elimination System Permit. The City is a Permittee of the *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4) Draining the Watersheds within the San Diego Region* (South Orange County MS4 Permit), Order R9-2013-0001, NPDES No. CAS6010266, as amended by Order No. R9-2015-0001. The South Orange County MS4 Permit regulates discharges into the MS4 system in the cities and county areas within Orange County that are in the jurisdiction of the San Diego RWQCB. As discussed further below, the South Orange County MS4 Permit requires preparation of a Water Quality Management Plan (WQMP) and implementation of post-construction BMPs for new development and significant redevelopment projects that qualify as Priority Development Projects.

The proposed project is considered a Priority Development Project under the following categories specified in the South Orange County MS4 Permit:

- **Category (a)** New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.

- **Category (c)** New and redevelopment projects that create 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses:

    - (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

- **Category (f)** New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction.

Drainage Area Management Program. The Drainage Area Management Plan (DAMP) was created by the County of Orange, the OCFCD, and incorporated cities (permittees), and includes specific water pollutant requirements of the Orange County Stormwater Program. The DAMP is the principal guidance and compliance document for the county-wide implementation of the Stormwater Program. It is the foundation for the permittees to implement model programs designed to prevent pollutants from entering receiving waters to the maximum extent practicable. Section 7 of the DAMP discusses issues relating to new developments and significant redevelopments.

Model Water Quality Management Plan. The *Model Water Quality Management Plan (Model WQMP) for South Orange County*[1] was developed to aid Orange County, the OCFCD, the cities in Orange County (permittees), and developers in Orange County to address post-construction urban runoff and stormwater pollution from new development and significant redevelopment projects that qualify as Priority Development Projects.

Priority Development Projects are required to develop a Project WQMP to minimize adverse impacts of development to on-site hydrology, volume and rate of runoff, and pollutants of concern. Project WQMPs include project-specific BMPs to minimize these effects (e.g., Low Impact Development [LID], site design measures, source control BMPs). The requirements identified in the Project WQMPs are subject to Section 7 of the DAMP.

Technical Guidance Document. The County of Orange developed the *Technical Guidance Document (TGD) for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (WQMPs) in South Orange County* (TGD)[2] in cooperation with the incorporated cities of South Orange County to aid agency staff and project proponents with addressing post-construction urban runoff and stormwater pollution from new development and significant redevelopment projects in Orange County. The TGD serves as a technical guidance to complete the Project WQMP.

Hydromodification Plan. Pursuant to the requirements of the South Orange County MS4 Permit, the County prepared the *South Orange County Hydromodifcation Management Plan (HMP)*.[3] All priority development projects that do not meet the exemption criteria are required to comply with hydromodification criteria in the HMP. The goal of hydromodification control is to integrate hydrologic controls into a proposed project so that post-project runoff discharge rates and durations do not exceed predevelopment (naturally occurring) discharge rates and durations.

Orange County Construction Runoff Guidance Manual. The *Construction Runoff Guidance Manual for Contractors, Project Owners, and Developers*[4] presents the requirements related to construction from the DAMP. The goal of this Guidance Manual is to control pollutant discharges from

1 County of Orange. 2017a. *Model Water Quality Management Plan for South Orange County*. September 28.

2 County of Orange. 2018. *Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (WQMPs) in South Orange County*. December.

3 County of Orange. 2017b. *South Orange County Hydromodification Management Plan (HMP*). September.

4 County of Orange, Stormwater Program. 2012. *Construction Runoff Guidance Manual for Contractors, Project Owners, and Developers.* December.

construction sites. As such, it helps applicants with building and grading permits to understand the water quality requirements during the construction phase of development projects.

Groundwater Dewatering Permit. On June 24, 2015, the San Diego RWQCB issued the *General Waste Discharge Requirements for Discharges from Groundwater Extraction Discharges to Surface Waters within the San Diego Region* (Order No. R9-2015-0013, NPDES No. CAG919003) (Groundwater Discharge Permit). This permit regulates construction dewatering and discharges of groundwater to surface waters during excavation. This permit specifies the discharge prohibitions, receiving water limitations, monitoring and reporting program requirements, and general compliance determination criteria for groundwater dewatering during construction activities. Dischargers are required to collect and analyze representative groundwater samples for all constituents listed in the Groundwater Discharge Permit. Based on the results, dischargers would be required to provide treatment for any toxic compounds detected above the applicable screening levels. To obtain coverage under the Groundwater Discharge Permit, each permittee must submit a Notice of Intent to begin the application process.

4.8.4.4 Local Regulations

Jurisdictional Runoff Management Plan. The City Jurisdictional Runoff Management Plan (JRMP) is the principal guidance and compliance document specific to the City's jurisdiction for compliance with the requirements of the South Orange County MS4 Permit. The JRMP provides the description and details of the City's water quality program implementation activities. The JRMP is designed to work in conjunction with the Orange County DAMP.

Municipal Code. Chapter 2 of the City Municipal Code regulates construction activities within the City. Chapter 14 of the City Municipal Code contains water quality regulations for stormwater discharges within the City.

- **Section 8-2.15** of the Municipal Code requires that erosion control devices be installed year round in compliance with a City-approved erosion control plan.
- **Section 8-2.16** of the Municipal Code requires maintenance of construction BMPs during and after rain events.
- **Section 8-14.105** of the Municipal Code requires that all new development and redevelopment projects comply with the DAMP and JRMP and implement BMPs.
- **Section 8-14.106** of the Municipal Code requires developers of a priority development project to submit a WQMP to the City for approval.
- **Section 8-14.107** of the Municipal Code requires that proof of coverage under the Construction General Permit and a pollution control plan, construction BMP plan, and/or erosion and sediment control plan be prepared for construction plans and submitted to the City.
- **Section 8-11.115** of the Municipal Code specifies the design requirements for developments within a 100-year floodplain. All new residential construction shall have the lowest floor, including basement in AE zones, elevated at least 1 foot above the base flood elevation. Upon

the completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a professional engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the Floodplain Administrator.

4.8.5 Thresholds of Significance

The thresholds for hydrology and water quality impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to hydrology and water quality if it would:

Threshold 4.8.1: **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.**

Threshold 4.8.2: **Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede substantial groundwater management of the basin.**

Threshold 4.8.3: **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

Threshold 4.8.3.i: **Result in substantial erosion or siltation on- or off-site.**

Threshold 4.8.3.ii: **Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.**

Threshold 4.8.3.iii: **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.**

Threshold 4.8.3.iv: **Impede or redirect flood flows.**

Threshold 4.8.4: **In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.**

Threshold 4.8.5: **Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.**

The Initial Study, provided as Appendix A, substantiates that impacts associated with Thresholds 4.8.1, 4.8.2, 4.8.3.i through 4.8.3.iii, 4.8.4, and 4.8.5 would be less than significant because the proposed project would comply with NPDES and City requirements governing hydrology and water quality. In compliance with these requirements, drainage facilitates to accommodate stormwater runoff and BMPs to reduce pollutants in stormwater runoff would be implemented. Additionally, existing catch basins on the project site would also convey stormwater flows from the site to an existing 27-inch RCP, which would then convey stormwater to the Horno Creek Channel. Similar to existing conditions, Horno Creek Channel would then discharge the project site stormwater runoff

to San Juan Creek. Existing and proposed drainage facilities, as well as implementation of BMPs, would ensure impacts to hydrology and water quality are less than significant. Therefore, impacts related to surface and groundwater quality, groundwater supplies, erosion and siltation, flooding, storm drain capacity, polluted runoff, release of pollutants, and conflict with water quality and groundwater plans would be less than significant. These thresholds will not be addressed in the following analysis.

4.8.6 Project Impacts

Threshold 4.8.3.iv: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would *impede or redirect flood flows*?

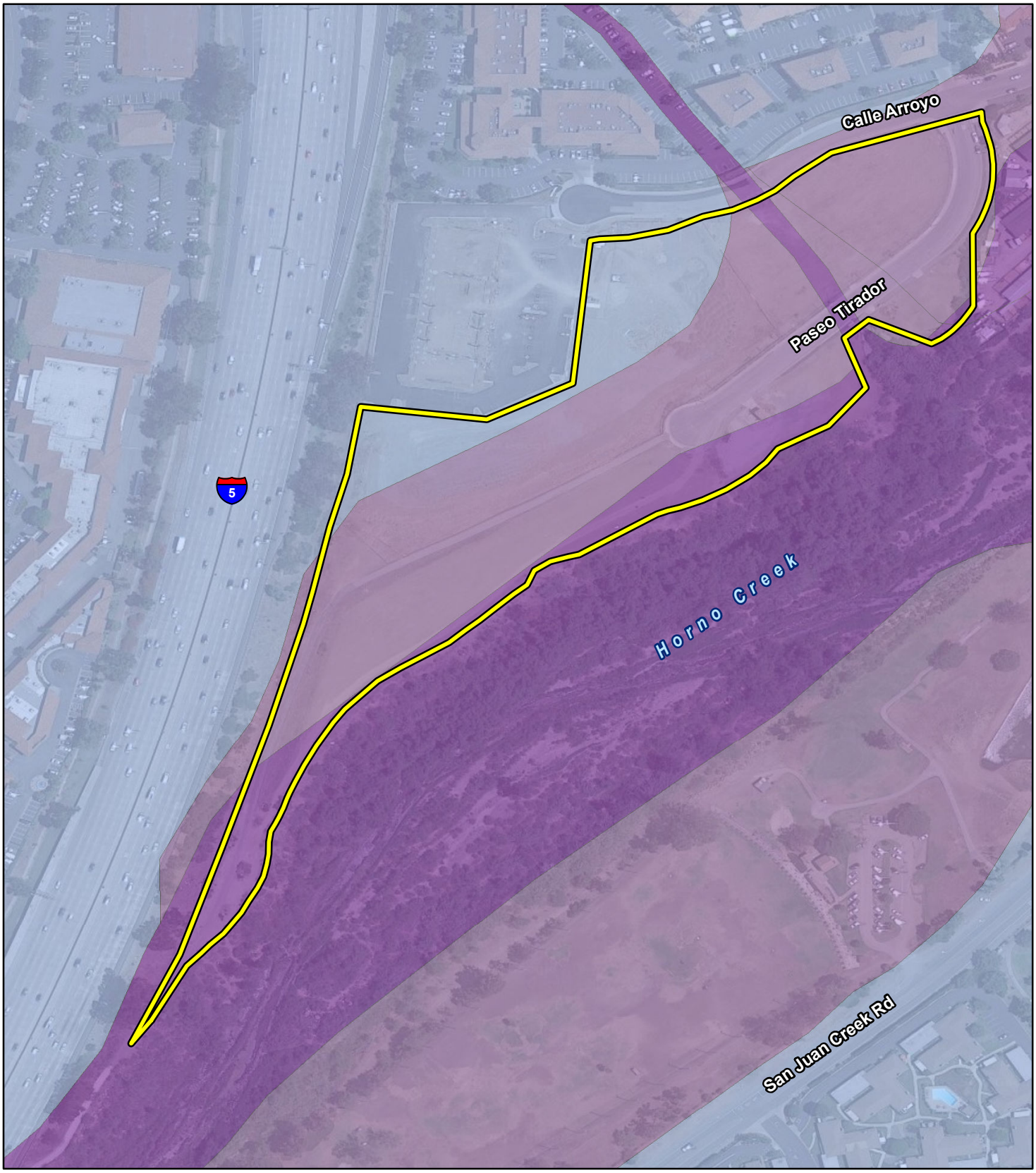
Less Than Significant Impact. In the existing condition, an earthen swale located off site to the west of the project site conveys stormflows from the west to a 27-inch RCP located in the southwestern corner of the project site. Catch basins on the southeast portion of the existing project site also convey on-site stormwater flows to the RCP. The RCP conveys stormwater flows to Horno Creek Channel, which discharges stormwater to San Juan Creek. An existing scour protection wall within the project limits provides flood protection and soil stability on site. According to the Preliminary Hydrology Report prepared for the project (IBI Group, November 2017a, updated March 2018), in the proposed condition, the overall site drainage patterns would generally remain the same as existing drainage patterns. Storm flows would continue to reach San Juan Creek via the existing 27-inch RCP in the southwest corner of the project site and via Horno Creek Channel. Furthermore, the project would not alter the course of Horno Creek Channel or San Juan Creek, as drainage patterns would remain similar to the existing condition during project implementation.

In the event of a 100-year flood event, stormflows would be conveyed similar to existing conditions. Currently, the project site is undeveloped and consists of primarily pervious surfaces (the project site currently contains 0.9 acre of impervious surface area). As detailed in the Preliminary Hydrology Report prepared for the project, stormwater runoff from the project site is 23.5 cubic feet per second (cfs) during a 25-year storm and 30.6 cfs during a 100-year storm. Development of the project would increase impervious surface area by approximately 6.86 acres, which would increase stormwater runoff. The increase in impervious surface waters would increase stormwater runoff from the project site by 8.4 cfs (to 31.9 cfs) during a 25-year storm and by 10.6 cfs (to 41.2 cfs) during a 100-year storm. However, the proposed BMPs would capture and reduce stormwater runoff. As specified in the PWQMP prepared for the project, proposed BMPs include a subsurface water quality detention facility and a subsurface Modular Wetland System. According to the Preliminary Hydrology Report, the total peak discharge flow rate to the existing 27-inch RCP would be below existing conditions after implementation of the proposed BMPs (peak flow would decrease by 1.4 cfs during a 25-year storm and by 2.3 cfs during a 100-year storm). Discharge to El Horno Creek would increase by 5.6 cfs during a 25-year storm event and by 7.1 cfs during a 100-year storm event. However, according to the Preliminary Hydrology Report, El Horno Creek should have sufficient capacity to accommodate the small increase in runoff due to the small time of concentration of discharge from the project site compared to the longer time of concentration for the approximately 4.3-square-mile El Horno Creek watershed. El Horno Creek is a facility of the

County of Orange, and if flows to the creek are to be increased or if alterations are made to the facility, the project will be required to obtain County approval for the alterations. El Horno Creek has a design capacity of 3,100 cfs and is nearly empty during storm flows; therefore, it can accommodate the increased stormwater runoff from the project site. Finally, the project would decrease stormwater runoff to San Juan Creek by 23.5 cfs during a 25-year storm event and by 5.3 cfs during a 100-year storm event. Therefore, the increase in impervious surface area would not alter drainage patterns in a manner which would impede or redirect flood flows.

According to the FEMA FIRM Nos. 06059C0506J and 06059C0507J (December 3, 2009), the southern portion of the project site is located within 100-year floodplain Zone AE, and the northern portion of the project site is located within Zone X (refer to Figure 4.8.1). Zone AE is defined by FEMA as areas subject to inundation by a 1-percent-annual-chance (100-year) flood for which base flood elevations have been determined. Zone X is defined by FEMA as areas of minimal flood hazard, which are the areas outside of the Special Flood Hazard Area and higher than the elevation of the 0.2 percent annual chance flood. A portion of the project site contains a Zone AE Regulatory Floodway associated with El Horno Creek and San Juan Creek. Because the project site would place improvements and structures within a 100-year flood zone on the southern portion of the project site, there is potential for the project to impede or redirect flood flows. However, the proposed project would process all necessary map revisions with FEMA, as described below, to ensure the project does not impede or redirect flood flows that would impact adjacent or downstream property.

The proposed project would be designed in compliance with the design requirements of Section 8-11.115 of the City's Municipal Code, which specifies design requirements for developments within the 100-year floodplain. The proposed project would be required to obtain an Elevation certificate, as outlined in Regulatory Compliance Measure WQ-1. The Elevation Certificate is part of the National Flood Insurance Program (NFIP) and is used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to determine the proper insurance premium rate, and may serve as documentation supporting a Conditional Letter of Map Revision (CLOMR), Conditional Letter of Map Revision Based on Fill (CLOMR-F), Letter of Map Revision (LOMR), or Letter of Map Revision Based on Fill (LOMR-F). In addition, as specified in Regulatory Compliance Measure WQ-2, the project would be required to process a CLOMR or CLOMR-F during final design and a LOMR or LOMR-F upon project completion through the City, the OCFCD, and FEMA. A CLOMR and a CLOMR-F are FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a floodplain and thus result in the modification of the existing floodplain or floodway or the base flood elevation. A CLOMR proposes to revise the effective FIRM and a CLOMR-F does not revise an effective FIRM; instead, a CLOMR-F indicates whether the project, if built as proposed, would be raised above the base flood elevation. A LOMR is processed for properties elevated by the placement of fill, and is a letter determination that officially amends an effective FIRM, and a LOMR-F is processed when FEMA accepts a project which does not result in an adverse impact to adjacent or downstream property and does not increase the base flood elevation. The CLOMR and LOMR or CLOMR-F and LOMR-F would ensure that the FEMA FIRM reflects the changes to the floodplain that would result from project implementation. The process of obtaining a CLOMR and LOMR or CLOMR-F and LOMR-F would not occur until after certification of the Final EIR for the proposed project.



LSA

FIGURE 4.8.1

LEGEND

Project Boundary

FEMA FIRM and Flood Hazard Area

X: Area with Minimal Flood Hazard

AE: 1% Annual Chance Flood Hazard

AE: Regulatory Floodway

N

0 125 250

FEET

Tirador Residential Development Project

FEMA Floodplains

SOURCE: Google Maps (2018); FEMA (2017)

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Therefore, the CLOMR and LOMR or CLOMR-F and LOMR-F are conditions of approval of the project, as noted in the Project Description in Table 3.C and described in Regulatory Compliance Measure WQ-2. With implementation of Regulatory Compliance Measures WQ-1 and WQ-2, potential impacts related to impeding or redirecting flood flows would be less than significant and no mitigation is required.

4.8.7 Level of Significance Prior to Mitigation

Construction and operational impacts related to hydrology and water quality would be less than significant. No mitigation measures are required.

4.8.8 Regulatory Compliance Measures and Mitigation Measures

4.8.8.1 Regulatory Compliance Measures

The proposed project would comply with the following Regulatory Compliance Measures. The City considers these to be mandatory; therefore, they are not considered mitigation.

Regulatory Compliance Measure WQ-1

Flood Hazard Certification. Prior to issuance of any Certificates of Occupancy, the Project Applicant shall obtain certification from a registered professional engineer or surveyor that the constructed structures on comply with the requirements of Section 8-11.115 of the City of San Juan Capistrano's (City) Municipal Code. The certification shall be a Federal Emergency Management Agency (FEMA) Elevation Certificate, and shall verify that all new residential construction and substantial improvement of any structure in Zone AE of the project site shall have the lowest floor, including basement, elevated at least 1 foot above the base flood elevation. The certification shall be submitted to and verified by the City Floodplain Administrator.

Regulatory Compliance Measure WQ-2

Letter of Map Revision. Flood Insurance Rate Map Revisions. Prior to the issuance of any grading or construction permits, the Project Applicant shall process a Conditional Letter of Map Revision (CLOMR) or Conditional Letter of Map Revision based on Fill (CLOMR-F) through the City of San Juan Capistrano, Orange County Flood Control District (OCFCD), and the Federal Emergency Management Agency (FEMA). Project construction shall not commence until the CLOMR or CLOMR-F is approved by FEMA. Upon completion of construction, the Project Applicant shall process a Letter of Map Revision (LOMR) or Letter of Map Revision based on Fill (LOMR-F) through the City of San Juan Capistrano, OCFCD, and FEMA. The City of San

Juan Capistrano shall not issue the first Certificate of Occupancy until the LOMR or LOMR-F is approved by FEMA.

4.8.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.8.9 Level of Significance after Mitigation

Construction and operational impacts related to hydrology and water quality would be less than significant. No mitigation is required.

4.8.10 Cumulative Impacts

The cumulative study area for hydrology and water quality is the San Juan Creek Watershed. Cumulative development in the San Juan Creek Watershed is a continuation of the existing urban pattern of development that has already resulted in extensive modifications to watercourses in the area. The area's watercourses have been channelized and drainage systems have been put into place to respond to the past urbanization that has occurred in this area. For the cumulative analysis related to hydrology and water quality, the cumulative projects being considered include the related projects, which all discharge to the same watershed as the proposed project (i.e., the San Juan Creek Watershed). Each of these related projects could potentially increase the volume of stormwater runoff and contribute to pollutant loading in stormwater runoff reaching both the City's storm drain system and the San Juan Creek Watershed, thereby resulting in cumulative impacts to hydrology and surface water quality.

New development and redevelopment can result in increased stormwater runoff and increased urban pollutants in stormwater runoff from project sites. Each related project must include BMPs to reduce impacts to water quality and hydrology in compliance with local ordinances and plans adopted to comply with requirements of the various NPDES permits. Specifically, all projects that disturb 1 acre or more of soil must comply with the requirements of the Construction General Permit, the South Orange County MS4 Permit, and the City of San Juan Capistrano Municipal Code. The preparation and approval of a SWPPP and pollution control plan, construction BMP plan, and/or erosion and sediment control plan (for construction), and a WQMP (for operation) would be required for each related project to determine appropriate BMPs to minimize water quality impacts. In addition, the preparation and approval of a hydrology study would be required to determine the hydrologic control required to minimize increases in runoff from each site so they do not exceed regulatory requirements or exceed the capacity of downstream stormdrain systems. In addition, the City's Building Official reviews all development projects on a case-by-case basis to ensure that sufficient local and regional drainage capacity is available.

Each related project must consider impaired receiving waters and TMDLs for receiving waters. The TMDL program is designed to identify all constituents that adversely affect the beneficial uses of water bodies and then identify appropriate reductions in pollutant loads or concentrations from all sources so that the receiving waters can maintain/attain the beneficial uses in the Basin Plan. Thus, by complying with TMDLs, a project's contribution to overall water quality improvement in the San

Juan Creek Watershed in the context of the regulatory program is designed to account for cumulative impacts.

Regional programs and BMPs such as TMDL programs and the MS4 Permit Program have been designed under an assumption that the San Juan Creek Watershed would continue their pattern of urbanization. The regional control measures contemplate the cumulative effects of proposed development. The proposed project would be required to comply with the requirements of the Construction General Permit and the South Orange County MS4 Permit and implement construction and operational BMPs to reduce pollutants in stormwater runoff. Compliance with these regional programs and permits constitutes compliance with programs intended to address cumulative water quality impacts. As stated above, each related project would be required to develop a SWPPP; pollution control plan, construction BMP plan, and/or erosion and sediment control plan; a WQMP; and a hydrology study, and would be evaluated individually to determine appropriate BMPs and treatment measures to reduce impacts to surface water quality and hydrology. Because the proposed project and other related projects would comply with applicable NPDES requirements and would include BMPs to reduce the volume of stormwater runoff and pollutants of concern in stormwater runoff, the cumulative hydrology and water quality impacts of the proposed project and the related projects would be less than significant. In addition, the cumulative projects do not encroach in the 100-year floodplain of the project, so there is no cumulative impact from placement of developments within the floodplain. Therefore, the proposed project's incremental hydrology and water quality impacts would not be cumulatively considerable.

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4.9 LAND USE AND PLANNING

This section analyzes the existing land uses on the project site and in its vicinity and analyzes the consistency of the proposed Tirador Residential Development (proposed project) as it relates to surrounding land uses and relevant policy and planning documents. Information presented in this section is based on information provided in the City of San Juan Capistrano General Plan Land Use Element (1999, Revised September 2014), the Housing Element (Adopted January 21, 2014, Revised September 19, 2017), and Zoning Ordinance (Municipal Code Title 9).

4.9.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. Three of the comment letters included comments related to Land Use and Planning.

Two of the three letters from Capistrano Mutual Water Company (CAMWC), both of which were received on December 9, 2019, state that the easements used to serve water wells and water transmission facilities on the site held by CAMWC are not identified properly on the project's site plan, and that certain project improvements shown on the site plan cannot be constructed as proposed because they lie within the easement areas. The third letter from CAMWC, received on December 12, 2019, provides a copy of the grant deed showing the easement areas on the project site reserved for CAMWC's water well and water transmission facilities.

4.9.2 Methodology

The analysis contained in this section considers the physical effects of the proposed project related to land use compatibility and considers whether or not there are any potential inconsistencies of the proposed development with planning documents, as amended by the project entitlements, from the City and other agencies with applicable land use plans or policies (e.g., City of San Juan Capistrano General Plan Land Use Element and the City of San Juan Capistrano Zoning Code, Title 9). Regulations and policies from the City's General Plan are also discussed in applicable topical sections of the EIR, where policies related to physical effects are addressed.

The consistency analysis presented in this section was prepared in compliance with *State CEQA Guidelines* Section 15125(d). The purpose of the required analysis is to identify potential inconsistencies between the proposed project and applicable general plans and regional plans. Neither CEQA nor the *State CEQA Guidelines* set forth standards for determining when a project is inconsistent with an applicable plan, but the final determination that a project is consistent or inconsistent with an applicable plan should be made by the Lead Agency when it acts on the project. Using the methodology described below, the analysis in this EIR presents the findings of policy review and is intended to provide a guide to the decision-makers for policy interpretation.

A project's inconsistency with a policy is only considered significant if such an inconsistency would cause significant physical environmental impacts (per *State CEQA Guidelines* Section 15382). This section determines whether any project inconsistencies with public land use policies and documents would be significant and whether mitigation is feasible. Under this approach, a policy conflict is not

in and of itself considered to be a significant environmental impact. An inconsistency between a proposed project and an applicable plan is a legal determination that may or may not indicate the likelihood of environmental impact. In some cases, an inconsistency may be evidence that an underlying physical impact is significant and adverse. Conversely, plan consistency may also indicate that a potential environmental impact is less than significant.

4.9.3 Existing Environmental Setting

The project site consists of a vacant, undeveloped site that is approximately 16.1 acres and comprises 7 parcels. The project site is bordered on the north by Calle Arroyo, with commercial and institutional uses located beyond. El Horno Creek (a tributary of San Juan Creek) and San Juan Creek are adjacent to the south of the project site; a portion of the San Juan Creek Trail is located along the southern portion of the project site. The San Juan Hills Golf Club and multiple-family residential developments are located further south of the project site. Paseo Tirador is located along a portion of the eastern boundary of the project site with the Ortega Equestrian Center located further east. The Interstate 5 (I-5) freeway forms the western boundary of the project site with the Del Obispo Shopping Center located beyond.

In its existing condition, the project site is undeveloped and vacant. Access to the northwestern portion of the site is restricted due to the presence of a chain-link fence along the perimeter. However, the San Juan Creek Trail is publicly accessible; the trail begins at the intersection of Calle Arroyo and Paseo Tirador, traverses the project site in a southwest direction, and terminates at the Pacific Ocean in the City of Dana Point.

4.9.4 Regulatory Setting

4.9.4.1 Federal Regulations

There are no federal land use policies or regulations that are applicable to the proposed project with respect to land use regulation.

4.9.4.2 State Regulations

Senate Bill (SB) 166, which went into effect on January 1, 2018, requires a local jurisdiction to ensure that its Housing Element inventory can accommodate its remaining unmet Regional Housing Needs Assessment (RHNA) at all times. RHNA refers to housing unit construction goals set by the State Department of Housing and Community Development allocated to cities through regional planning agencies such as the Southern California Association of Governments (SCAG). RHNA identifies the number of units needed for different housing types within a jurisdiction during specific planning periods. The 2012 Final RHNA Allocation Plan prepared by SCAG assigned the City 147 very low income units, 104 low income units, 120 moderate income units, and 267 above moderate income units. During the current 2014–2021 Housing Element planning period, no local jurisdiction shall permit or cause its inventory of sites to be insufficient to meet its remaining unmet share of the RHNA for lower or moderate income households.

4.9.4.3 Regional Regulations

SCAG Regional Comprehensive Plan and Guide. In 2008, the Southern California Association of Governments (SCAG) adopted the Regional Comprehensive Plan (RCP) for the purpose of providing a comprehensive strategic plan for defining and solving housing, traffic, water, air quality, and other regional challenges. The RCP outlines a vision of how the Southern California region can balance growth with conservation in order to achieve a higher quality of life. The 2008 RCP has two primary objectives in implementing this strategic plan: (1) integrating transportation, land use, and air quality planning approaches, and (2) outlining key roles for public and private sector stakeholders to implement reasonable policies regarding transportation, land use, and air quality approaches. While the 2008 RCP outlines several policies to inform local decision-makers within the SCAG region with respect to policy and planning decisions, these policies are considered recommendations and are not mandated by law. The 2016–2040 RTP/SCS also provides a comprehensive outline for transportation investments throughout the SCAG region. The RTP was most recently adopted in 2016 and is updated every four years to address regional transportation needs. In order to receive State and federal funding, transportation projects must be outlined in the RTP.

With respect to land use policy, the 2008 RCP includes a Land Use and Housing chapter that aims to link land use and transportation planning decisions to the projected population and economic growth in the SCAG region. Specifically, the Land Use and Housing chapter of the 2008 RCP promotes sustainable planning for land use and housing in the SCAG region by maximizing the efficiency of the existing circulation network, providing a greater variety in housing types, promoting a diverse and growing economy, and protecting the existing natural environment. The 2008 RCP identifies 2% Strategy Areas as part of the Sustainability Planning Grant (formerly known as Compass Blueprint growth vision); however, these areas have since been updated and replaced by the high-quality transit areas (HQTAs) identified in the 2016–2040 RTP/SCS.

Natural Communities Conservation Plan (NCCP). In an effort to respond to growing concern regarding the conservation of coastal sage scrub and other biological communities, federal, State, and local agencies have developed a multispecies approach to habitat conservation planning known as the NCCP process. The goal of this NCCP program is to identify important coastal sage scrub habitat and to develop ways and means to preserve and/or restore the ecological value of this and associated plant communities and their attendant sensitive species in a rapidly urbanizing setting.

This was made possible by legislation (Assembly Bill [AB] 2172) that authorized the California

Department of Fish and Wildlife (CDFW) to enter into agreements for the preparation and implementation of NCCPs. The United States Fish and Wildlife Service (USFWS) joined in this effort, utilizing both the Section 4(d) Special Rule and the HCP processes.

In Orange County, the development of two subregional NCCP/HCPs for coastal sage scrub and other covered habitats was undertaken jointly by the County of Orange, the Transportation Corridor Agencies (TCA), USFWS, and CDFW, in cooperation with several large private landowners, including the Irvine Company, with the County as the Lead Agency and other cities as participating agencies. The NCCP/HCP for the Central and Coastal Subregion, which was approved by the participating agencies in July 1996, addresses a range of species issues and, in particular, subregional habitat

needs of the coastal California gnatcatcher. As part of the NCCP/HCP, projects that would impact sensitive habitat areas, as designated by the NCCP/HCP, are required to pay NCCP/HCP in-lieu fees to mitigate impacts to sensitive biological resources.

4.9.4.4 Local Regulations

The City has preeminent authority over deciding the land uses on the site. The adopted planning documents regulating land use within and around the project site are the City's General Plan and Zoning Code. The following paragraphs explain the City's regulations, plans, and policies applicable to the site.

City of San Juan Capistrano General Plan. The City of San Juan Capistrano General Plan was approved by the City Council in December 1999, with the exception of the Housing Element, which was updated and adopted by the City Council in January 2014. In May 2002, the City Council approved a General Plan Amendment, which included a variety of changes to several of the General Plan Elements. The current General Plan consists of the Land Use, Housing, Circulation, Safety, Conservation and Open Space, Noise, Cultural Resources, Community Design, Growth Management, Parks and Recreation, Public Services and Utilities, and Flood Plain Management Elements. Each of these General Plan Elements is briefly described below.

- **Land Use Element:** The Land Use Element presents goals and policies pertaining to how existing development is going to be maintained and enhanced and new development occur. The Land Use Element identifies the proposed distribution, location, and extent of land uses. The Land Use Element goals and policies directly affect the establishment and maintenance of existing neighborhoods, districts, corridors, and open spaces that distinguish and contribute to the City's livability, vitality, and image, while enhancing the City's existing setting through new development. A key ingredient to successful implementation of this vision is through the management of land uses and the appropriate mix of land uses. To this end, a Land Use Map was adopted and included in the Land Use Element to guide future development decisions.

  The majority of the approximately 16.1-acre project site is designated Planned Community on the City's General Plan Land Use Map (2002). According to the City's General Plan Land Use Element (2002), the Planned Community designation allows for the development of residential, commercial, industrial, institutional, recreational, or open space uses. There are also small portions of the project site designated as General Open Space and Community Park. The proposed land uses are consistent with these designations, and no General Plan Amendment would be required to implement the proposed project.

- **Housing Element:** The Housing Element addresses issues, goals, and policies to ensure an adequate supply of housing opportunities for all residents. Unlike the other elements, state law sets forth very specific regulations regarding the content and breadth of the Housing Element. Typically, Housing Elements must be updated every 5 years in response to Regional Housing Needs Assessment (RHNA) cycles established by the State Department of Housing and Community Development.

On May 6, 2008, the San Juan Capistrano City Council adopted a resolution that certified the Final EIR and approved preliminary development plans for the proposed Ventanas Business Center for a 19.43-acre property that included the present subject project site in its entirety. The Ventanas Business Center project consisted of 11 proposed buildings totaling 225,000 gross square feet (sf). Following the approval of the Ventanas Business Center project, the City identified the subject project site as being suitable for high-density housing, and for inclusion in the City's 2014–2021 Housing Element as a site that could accommodate affordable housing (230 very-low-income units). The proposed project includes 118 market-rate units and 14 moderate-income affordable units on the site. As such, the project would result in fewer units by income category for the site than identified in the City's Housing Element. SB 166, which went into effect on January 1, 2018, requires a local jurisdiction to ensure that its Housing Element inventory can accommodate at all times its remaining unmet Regional Housing Needs Assessment (RHNA). To ensure compliance with SB 166, the Project Applicant and the City have identified a separate site to accommodate the "net loss" of affordable housing units that would result from development of the site.

- **Circulation Element:** The Circulation Element addresses the movement of people and goods via automobiles, transit, bicycles, and other modes. It addresses key issues such as trip reduction; parking, bicycle, pedestrian, and equestrian access; traffic flow; transportation improvements and funding; traffic safety; and enhancement of public water transportation services.

  The project site is located is located east of I-5. Calle Arroyo borders the project site to the north, and is designated in Figure C-2 of the Circulation Element as a Commuter Arterial (two lanes). Paseo Tirador, an undivided two lane local street located along a portion of the eastern boundary of the project site, does not have a designation in the Circulation Element and will become a private road as part of the proposed project. Calle Arroyo and Paseo Tirador will provide direct access to the project site. Ortega Highway, located further north of the project site, is designated as a Primary Arterial (four lanes divided).

- **Safety Element:** The Safety Element provides goals and policies to reduce the potential risk of death, injuries, and property damage resulting from natural and human-induced hazards. This element specifically addresses geologic, seismic, flood, and fire hazards and disaster planning.

  As discussed in Section 4.6, Geology and Soils, according to the Safety Element, the project site is located in an area with a high potential for soil liquefaction in the event of a seismic occurrence. As discussed in Section 4.8, Hydrology and Water Quality, the project site is also located within an area at risk for inundation as a result of a 100-year flood and/or a catastrophic failure of the Trampas Canyon Dam. The site is not located within an area at risk for wildfires or landslides.

- **Conservation and Open Space Element:** The primary objective of the Conservation and Open Space Element is to provide direction regarding the conservation and enhancement of the City's parks, creeks, agricultural land, hillsides, ridgelines, and canyons. It identifies the City's natural resources and provides goals and policies for their preservation and use. This element addresses

open space, agricultural resources, biological and ecological resources, hillsides and ridgelines, air quality, and water quality.

The project site is not located within an area identified for the preservation of open space nor is the site located on a protected hillside/ridgeline. The area immediately south of the project site along the San Juan Creek is designated as General Open Space and Open Space Recreation.

- **Noise Element:** The Noise Element identifies noise-sensitive land uses and noise sources, and defines areas of noise impact. Goals and policies within this Element provide a framework to ensure that City residents will be protected from excessive noise intrusion.

  The main noise source for the project site is traffic on surrounding roadways, including I-5, Calle Arroyo, and Paseo Tirador. Additionally, the project site is located approximately 2,150 feet east of the Los Angeles - San Diego - San Luis Obispo (LOSSAN) rail corridor.

- **Cultural Resources Element:** The goals and policies of the Cultural Resources Element are intended to be a guide for preserving historic, archaeological, and paleontological resources within the City. The purpose of the goals and policies in this element intended to preserve important cultural resources to enhance the character and tradition of the community as a whole.

  According to the Cultural Resources Element, there are no known historic buildings and structures on the site; however, the project site is located within an area with potential prehistoric and archaeological resources. One prehistoric site (CA-ORA-1672) was identified in the 2007 Cultural Resources Assessment prepared for the *Ventanas Business Center Environmental Impact Report* (Ventanas EIR). However, as concluded in the Ventanas EIR, prehistoric site CA-ORA-1672 neither possesses significant cultural materials nor represents a significant cultural resource.

- **Community Design Element:** The Community Design Element addresses the conservation and enhancement of the visual quality of the City. The goals and policies in the Community Design Element aim to protect natural hillsides and features in the City (e.g., creeks and floodplains), preserve and enhance the historic character of the community, incorporate new development into existing developed neighborhoods, and maintain the community's "small-village" and "rural atmosphere."

  The project site is not located within a protected district for which specific design guidelines have been established (e.g., the Mission District). However, the Community Design Element establishes general design guidelines, such as those related to exterior lighting, with which the project must comply.

- **Growth Management Element:** The goals and policies outlined in the Growth Management Element are intended to assure that capital facilities are planned and provided in a manner that will adequately serve existing and future residents of the City. The Growth Management Element aims to phase new development in tandem with the required expansion of public

services and infrastructure to assure that growth does not decrease the level of service provided by existing public services and infrastructure.

The Growth Management Element does not establish specific areas within the City that are targeted for growth. Rather, the Growth Management Element contains some goals to consider when contemplating new development, particularly on undeveloped parcels such as the project site. These include requirements to coordinate rational and orderly growth that assures the economic and efficient provision of public services and infrastructure to new development (Growth Management Goal 1) and provide for a balance of jobs and housing through land use planning (Growth Management Goal 3). The proposed project's consistency with these goals is evaluated below in Table 4.9.A.

- **Parks and Recreation Element:** The Parks and Recreation Element addresses the provision of parklands and recreation programs for the City's residents. Specific recreational issues and policies contained in the Parks and Recreation Element include parks and recreation facilities; hiking, biking, pedestrian, and equestrian trails; and open space.

  The proposed project includes a multi-use trail that would create and/or enhance pedestrian and bicycle linkages to the San Juan Creek Trail, located immediately south of the site along San Juan Creek.

- **Public Services and Utilities Element:** The Public Services and Utilities Element addresses the community's need for public services and utilities related to police, fire, school, library, water, wastewater treatment, natural gas, electricity, and solid waste disposal. The purpose of this element is to ensure that sufficient levels of public services and utilities are provided as development continues to occur within the City.

  Given the current undeveloped nature of the project site, the Public Services and Utilities Element does not identify any schools, police or fire stations, or libraries on or adjacent to the project site.

- **Floodplain Management Element:** The goals and policies outlined in the Floodplain Management Element are intended to protect streambeds, creeks, and ponds within the City. The Floodplain Management Element also aims to maintain recreational facilities within floodplain areas, as well as provide effective protection of life and property from floodwaters.

  The San Juan Creek borders the project site to the west. Due to the site's proximity to the creek, the property is located within the inundation area in the event of catastrophic failure of Trampas Canyon Dam, as discussed in Section 4.8, Hydrology and Water Quality.

City of San Juan Capistrano Zoning Code. Title 9, Land Use, Chapter 3, Zoning Districts and Standards, of the City's Zoning Code ensures consistency with the City's General Plan and defines land use categories, boundaries, and development standards for various land uses in the City.

The project site is zoned as a Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP 78-01). The purpose of the Planned

Community zone is to encourage the use of modern land planning and design techniques to create developments integrating a mixture of different types of land uses.

Because the project will include residential units restricted to households of moderate income, the Project Applicant will request a concession and waivers from certain development standards. In total, 14 of the townhomes, or approximately 10.6 percent of the total units, would be designated as restricted affordable units. The project is therefore entitled to one incentive or concession under the State density bonus law and the City's affordable housing ordinance. The project is also entitled to waiver of development standards as necessary to prevent physical preclusion of the project to the extent those waivers do not have a specific adverse impact upon health, safety, the physical environment, or a designated historical resource. The concession requested by the Project Applicant would negate the requirement that the second-story floor area not exceed 80 percent of the first-story floor area.

Imposition of all of the design standards applicable to the project site would result in a significant reduction of the floor area and the number of units the project proposes to yield, making it infeasible to include restricted affordable units. Construction of the project, including the designated affordable units, would therefore be physically precluded if certain City development standards are applied. The Project Applicant will therefore request waiver of those standard as permitted by the State density bonus law and the City's affordable housing ordinance. The requested waivers will allow a building separation of 8 ft in lieu of the otherwise required 20 ft; a 0 ft setback from the property line between the site and Assessor's Parcel Number (APN) 666-131-08, where the City of San Juan Capistrano water well is located, rather than the otherwise required 20 ft; and the elimination of recreational vehicle parking spaces.

4.9.5 Thresholds of Significance

The thresholds for land use and planning impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to land use and planning if it would:

Threshold 4.9.1: Physically divide an established community.

Threshold 4.9.2: 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.

The Initial Study, included as Appendix A, substantiates that there would be no impact associated with Threshold 4.9.1 as the proposed project would not physically divide an established community because the roughly triangular site is bordered on its three sides by open space, commercial development, and the I-5 freeway. All improvements proposed as part of the project would be restricted to within the boundaries of the site, which is currently vacant. This threshold will not be addressed in the following analysis.

4.9.6 Project Impacts

Threshold 4.9.2: Would the project 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?

Less Than Significant Impact. Several regionally and locally adopted land use plans, policies, and regulations would be applicable to development for the proposed project, including the SCAG 2008 Regional Comprehensive Plan, the SCAG 2016–2040 RTP/SCS, the City of San Juan Capistrano General Plan, and the City of San Juan Capistrano Zoning Code.

Southern California Association of Governments Regional Comprehensive Plan. The 2008 Regional Comprehensive Plan (RCP) addresses regional goals related to growth and infrastructure in the Southern California region. The RCP also addresses issues such as housing, traffic, air quality, and water resources as a guide for local agencies to use in preparing plans that deal with regional issues. The RCP outlines a vision of how the Southern California region can balance growth with conservation in order to achieve a higher quality of life. In order to achieve this balance, the RCP aims to establish the following land use goals: (1) focus growth in existing centers and along major transportation corridors, (2) encourage mixed-use development, (3) provide new housing opportunities, (4) encourage development near existing and planned transportation stations to reduce traffic congestion and associated air pollutants, (5) preserve existing single-family neighborhoods, and (6) protect open space and environmentally sensitive habitat areas from development. The proposed project is residential in nature and does not feature a mixed-use component; therefore, Goal (2) is not applicable to the proposed project and is not discussed further in the following RCP consistency analysis below.

The project site is located immediately east of I-5, south of Calle Arroyo, northwest of Paseo Tirador, and north of San Juan Creek. The proposed project would develop the currently undeveloped and underutilized project site with a 132-unit residential development with recreation amenities and a multi-use trail along San Juan Creek. Development of the proposed project would introduce a residential land use to an area that is characterized by commercial and residential land uses, and provide additional housing near employment and retail centers. Uses proposed as part of the project would be easily accessed from Calle Arroyo and Paseo Tirador, and other major transportation corridors near the project site (e.g., I-5, Rancho Viejo Road, and Ortega Highway/State Route 74 (SR-74)). In addition, the proposed project would be located immediately north of a Class 2 bike lane along the San Juan Creek trail, 1.1 miles east of the nearest bus station (e.g., Orange County Transportation Authority Route 91 station near the intersection of Del Obispo and Camino Capistrano), and 1.2 miles southeast of the San Juan Capistrano Train Station. Due to the proximity to these facilities, residents of the proposed residential development and visitors may utilize alternative transportation to access the site.

The proposed project would be consistent with RCP Goal 1 to focus growth along major transportation corridors, Goal 3 to provide new housing opportunities, and Goal 4 to encourage new development near existing transportation stations.

The proposed project would improve the currently vacant and underutilized site with landscaping and amenities that would serve future residents; it would not interfere or conflict with the existing land use patterns and visual character of established residential neighborhoods near the site. Therefore, the project would be consistent with RCP Goal 5 of preserving existing single-family neighborhoods. Though the southernmost and easternmost portions of the project site have General Plan Land Use designations of Open Space and Community Park, the proposed residential development uses would not be sited in these areas. The portions of the project site designated as Open Space and Community Park would be developed with vegetation and landscaping. In addition, a portion of the multi-use trail would be sited with the area designated as Open Space. As such, the proposed land uses are consistent with these land use designations. Furthermore, the project proposes to designate a 5.5-acre area adjacent to the project's southern boundary along the San Juan Creek as a conservation area. As such, the project would protect existing open space an environmentally sensitive areas; therefore, the proposed project would be consistent with RCP Goal 6 to protect open space and environmentally sensitive habitat areas from development.

For the reasons stated above, the proposed project would be consistent with applicable goals and policies in SCAG's 2008 RCP.

SCAG RTP/SCS Consistency. The 2016–2040 RTP/SCS also provides a comprehensive outline for transportation investments throughout the SCAG region. The RTP was most recently adopted in 2016 and is updated every four years to address regional transportation needs. In order to receive State and federal funding, transportation projects must be outlined in the RTP. In addition, the 2016–2040 RTP outlines the following primary goals: (1) align the plan investments and policies with improving regional economic development and competitiveness, (2) maximize mobility and accessibility for all people and goods in the region, (3) ensure travel safety and reliability for all people and goods in the region, (4) preserve and ensure a sustainable regional transportation system, (5) maximize the productivity of our transportation system (6) protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking) (7) actively encourage and create incentives for energy efficiency, where possible, (8) encourage land use and growth patterns that facilitate transit and active transportation, and (9) maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies. Goal 9 of the 2016–2040 RTP/SCS relates to planning/policy actions to be taken by regional and local agencies; therefore, the project's consistency with Goal 9 is not discussed further in the 2016–2040 RTP/SCS consistency analysis provided below.

As previously stated, the proposed project would result in the conversion of the currently vacant and underutilized project site to a residential community with recreational outdoor amenities. Access to the project site is provided by Calle Arroyo, a Commuter Arterial that runs in an east-west fashion. Calle Arroyo connects with Rancho Viejo Road, which would serve to connect the project site with the local and regional transportation network. Additionally, Ortega Highway/ SR-74, which is located to the north of the project site, provides regional access. The project would provide access to the site from Calle Arroyo and Paseo Tirador, which would serve to connect the site with the local and regional transportation systems. The project site would

contain internal drive aisles, and three access points would be provided from Calle Arroyo. Paseo Tirador would serve as an east-west entry to the project site. By providing multiple access points and a robust on-site circulation system, traffic queueing and congestion at any individual access point would be reduced, and the productivity of the existing roadway network would be maximized. In addition, the project would provide connections to the existing regional bikeway and equestrian trail network along the San Juan Creek, which would encourage greater use of the region's existing sidewalks, bikeways, and multi-purpose trails. As such, development of the proposed project would help maximize the productivity of the existing roadway network in the vicinity of the site and would improve accessibility to the site and areas adjacent to the site (Goals 2 and 5), including I-5 to the west. The project's on-site circulation system would accommodate pedestrians and cyclists. The project would also provide connections to the existing regional bikeway and equestrian trail network, thereby encouraging the use of active transportation modes (Goals 4 and 6). Moreover, all access improvements included as part of the proposed project would comply with City and OCFA standards to ensure the safety and reliability of transportation improvements included as part of the project (Goal 3). Development of the currently underutilized project site would also provide additional housing opportunities in the City. Therefore, the proposed project would improve the regional economy by promoting economic activity and ensuring that are workers would have access to new housing in close proximity to their jobs. (Goal 1).

The proposed project would promote energy efficiency through compliance with the California Green Building Standards Code (CALGreen Code). Sustainability features proposed as part of the project would include the installation of an off-site recycled water main to allow the future use of recycled water in the vicinity of the project, the installation of on-site private recycled water lines to allow the future use of recycled water for irrigation of common landscaped areas, installation of energy-efficient lighting techniques and "smart" weather-based irrigation controllers, the exclusion of landscaping materials that are invasive species and the inclusion of vegetation requiring minimal watering, and the utilization of drip-irrigation for all non-turf areas. As such, the project would be consistent with Goal 7 in the 2016–2040 RTP/SCS.

As described above in the analysis for Goals 2 and 5, the project would provide an on-site circulation system that would encourage pedestrian and bicycle traffic, and specifically a connection to the San Juan Creek Trail, thereby encouraging the use of active transportation modes. OCTA Route 91 serves the City and provides bus service from the City of Dana Point to the City of Rancho Santa Margarita, through the City of Mission Viejo. Route 91 provides connections to other major OCTA routes that provide greatest access to the northern portion of Orange County. An OCTA bus stop is provided approximately 1 mile west of I-5 on Camino Capistrano north of Ortega Highway. OCTA Route 91 provides transportation to/from the Laguna Hills Transportation Center and the San Clemente Metrolink Station with a stop at the San Juan Capistrano Train Depot. This stop can be accessed by foot or by bicycle from the project site along the San Juan Creek Trail and Camino Capistrano.

The project would facilitate transit use and active transportation by providing new housing on the project site, which is already adjacent to a Class 2 bikeway. Additionally, the project site is located 1.2 miles from the San Juan Capistrano Train Station along the LOSSAN corridor. This

train station is served by the Amtrak and Metrolink lines, which provide connectivity throughout Orange, San Diego, and Los Angeles counties, as well as to major the employment centers near the Irvine, Tustin, Fullerton, and Orange train stations. New residents would be able to cycle or take transit to work at major employment centers within the area. Therefore, the proposed project would be consistent with Goal 8 in the 2016–2040 RTP/SCS.

For the reasons stated above, the proposed project would be consistent with applicable goals outlined in the 2016–2040 RTP/SCS.

***City of San Juan Capistrano General Plan*.** The existing General Plan land use designation for the project site is Planned Community. According to the City's Land Use Element (1991), the Planned Community land use designation denotes large areas of land under common ownership for the detailed planning and development of residential, commercial, industrial, institutional, recreational, or open spaces uses. There are also small portions of the project site designated as General Open Space and Community Park. The proposed land uses are consistent with these designations, and no General Plan Amendment would be required to implement the proposed project.

The project site is identified in the City's General Plan 2014–2021 Housing Element as accommodating 230 very-low-income units. The proposed project would develop the site with 118 market-rate units and 14 moderate-income affordable units on the site. As such, the project would result in fewer units by income category for the site than identified in the City's Housing Element. SB 166, which went into effect on January 1, 2018, requires a local jurisdiction to ensure that its Housing Element inventory can accommodate at all times its remaining unmet Regional Housing Needs Assessment (RHNA). To ensure compliance with SB 166, the Project Applicant and the City have identified a separate site to accommodate the "net loss" of 216 affordable housing units that would result from development of the site with the proposed project. The City identified an alternative site, which includes 9.3 acres designated as Very High Density Residential on the City's Land Use Map. This site, identified as APN 121-070-57, is entitled to be developed at a density of 30 dwelling units per acre, or 279 units. The 219 units which are no longer able to be accommodated by the proposed project can be accommodated on this alternative site. The City will notify the State Department of Housing and Community Development regarding the site identified to accommodate the replacement housing should the development be approved to ensure the project's compliance with SB 166.

The City of San Juan Capistrano General Plan also contains goals and policies that are considered applicable to the proposed project. These goals and policies are discussed in Table 4.9.A, General Plan Consistency Analysis, and a consistency analysis is provided for each applicable General Plan goal and policy. Goals and policies that are not applicable to the proposed project are not included in this table. This discussion is intended to provide a guide to the decision-makers for policy interpretation. As identified through this consistency analysis, the proposed project would not conflict with any applicable General Plan land use plan, policy, or regulation adopted by the City for the purpose of avoiding or mitigating an environmental impact.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Land Use Element	
Land Use Goal 1: Develop a balanced land use pattern to ensure that revenue generation matches the City's responsibility for provision and maintenance of public services and facilities.	**Consistent.** The proposed project would allow for the development of a 132-unit residential development consisting of 43 two-story detached single-family units and 89 three-story attached townhome units. In its existing condition, the proposed project site is vacant. Implementation of the proposed project would result in permanent occupants on the project site, which would promote economic activity in the City, thereby generating sales tax revenue for the City. The project would also be required to pay all applicable Development Impact Fees established by the City and public service providers to ensure the adequate provision and maintenance of public services and utilities. Therefore, the proposed project would be consistent with Land Use Goal 1.
Land Use Policy 1.1: Encourage a land use composition in San Juan Capistrano that provides a balance or surplus between the generation of public revenues and the cost of providing public facilities and services.	**Consistent.** As discussed above, the proposed project would generate sales tax revenue for the City, and would pay all applicable Development Impact Fees as established by the City and public service providers. As such, the proposed project would encourage a balanced land use composition. Therefore, the proposed project would be consistent with Land Use Policy 1.1.
Land Use Goal 2: Control and direct future growth within the City to preserve the rural village-like character of the community.	**Consistent.** The proposed project would introduce residential uses on a currently undeveloped and vacant site. However, the proposed project would not introduce any land uses on the site that would increase population growth in the City in a manner that would result in changes to the village-like character of the community. The residential development would be designed with California Spanish- and Farmhouse- style designs, which would be visually consistent with existing Spanish mission style character of San Juan Capistrano. Further, the styles are cohesive and would provide for consistent design throughout the project site. Moreover, the proposed project would be required to comply with all development standards outlined in the City's Municipal Code, including those with respect to density and scale. Compliance these standards would ensure consistency between the proposed project and surrounding uses, and would serve to preserve the character of the community. Therefore, the proposed project would be consistent with Land Use Goal 2.
Land Use Policy 2.1: Continue controlling growth through the implementation of the City's residential growth management program.	**Consistent.** As discussed later in this section, the proposed project would be consistent with all applicable Growth Management Element Goals and Policies. As such, growth associated with the proposed project would occur in a manner consistent with the City's established policies for residential growth management. Therefore, the proposed project would be consistent with Land Use Policy 2.1.
Land Use Policy 2.2: Assure that new development is consistent and compatible with the existing character of the City.	**Consistent.** The proposed residential development would be designed with California Spanish- and Farmhouse- style designs, which would be visually consistent with existing character of San Juan Capistrano. Further, the styles are cohesive and would provide for consistent design throughout the project site. Therefore, the proposed project would be consistent with Land Use Policy 2.2.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Land Use Policy 2.3: Ensure that development corresponds to the provision of public facilities and services.	**Consistent.** As discussed in Section 4.15, Public Services, in the Initial Study (included as Appendix A in this EIR), the proposed project's generated demand for public facilities and services would be minimal compared to the service capacities of existing facilities and providers. Furthermore, the Project Applicant would pay Development Impact Fees to the Capistrano Unified School District and in-lieu fees for the dedication of parkland, as established by the City's Municipal Code. As such, development associated with the proposed project would correspond to the provision of public facilities and services. Therefore, the proposed project would be consistent with Land Use Policy 2.3.
Land Use Goal 3: Distribute additional population within the City based on risk factors.	**Consistent.** As previously discussed, the proposed site has been identified in the City's Housing Element as a suitable location for residential units. As discussed in Section 4.9, Hazards and Hazardous Materials, in the Initial Study (Appendix A of this EIR), all project-related impacts with respect to hazards and safety would be less than significant. Furthermore, as established in Section 4.20, Wildfire, of the Initial Study (Appendix A of this EIR), the project site is not located within a High Fire Hazard Zone according to the Fire Hazards Area map in the City's General Plan public Safety Element (2002). Additionally, according to the CalFire Fire and Resources Assessment Program, the project site is not located within or near a Very High Fire Hazard Severity Zone (VHFHSZ) of State or Local Responsibility Area. As established in Section 4.6, Geology and Soils, and Section 4.8, Hydrology and Water Quality, of this EIR, risks related to seismicity, geology, and flooding would be less than significant with the incorporation of mitigation and adherence to regulatory compliance measures. Therefore, the proposed project would be consistent with Land Use Goal 3.
Land Use Policy 3.2: Limit density of development in the hillsides, floodplains, and other high risk areas.	**Consistent.** The proposed project would not be located in the hillsides or an area associated with high seismic, geologic, or wildfire risks. As discussed in Section 4.8, Hydrology and Water Quality, of this EIR, the proposed project site is within the 100-year floodplain Zone AE and Zone X. However, as established in Section 4.8, Hydrology and Water Quality, the proposed project would have a less than significant impact related to flood flows. With the incorporation of Regulatory Compliance Measures WQ-1 and WQ-2, impacts related to flood hazards would be less than significant. As such, the proposed project would be consistent with Land Use Policy 3.2.
Land Use Goal 4: Preserve major areas of open space and natural features.	**Consistent.** The proposed project would not develop any designate open space areas. The project proposes to designate 5.5 acres immediately south of the site as a conservation area. As discussed in Section 4.1, Aesthetics, in the Initial Study (Appendix A of this EIR), the proposed project would not visually interfere with any natural features, such as the ridgelines associated with the hillsides and scenic views to the south of the site. Therefore, the proposed project would be consistent with Land Use Goal 4.
Land Use Policy 4.3: Preserve designated ridgelines and the immediate adjacent area to maintain the open space character of the community.	**Consistent.** As discussed above, the proposed project would not develop and existing open space areas. The project proposes to designate 5.5 acres immediately south of the site as a conservation area. As discussed in Section 4.1, Aesthetics, in the Initial Study (Appendix A of this EIR), the proposed project would not visually interfere with any natural features, such as the ridgelines and immediate areas associated with the hillsides Therefore, the proposed project would be consistent with Land Use Policy 4.3.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Land Use Goal 7: Enhance and maintain the character of neighborhoods.	**Consistent.** Refer to the consistency discussion under Land Use Goal 2. All new buildings proposed as part of the project would be compatible the physical characteristics of surrounding land uses (e.g., density and scale). Development of the project site, which is currently undeveloped and vacant, would improve the visual character of the site and surrounding neighborhoods. As previously stated, the residential development would be designed with California Spanish- and Farmhouse- style designs, which would be visually consistent with existing character or San Juan Capistrano. Therefore, the proposed project would be consistent with Land Use Goal 7.
Land Use Policy 7.1: Preserve and enhance the quality of San Juan Capistrano neighborhoods by avoiding or abating the intrusion of non-conforming buildings and uses.	**Consistent.** The proposed project is surrounded by a variety of residential, commercial, recreational, and open space land uses. The proposed project would allow for the development of up to 132 residential units and recreational amenities on the project site. Additionally, the project would include a 20 ft wide multi-use trail along the southern boundary of the site, which would connect recreational amenities on the site (i.e., the gathering areas, climbing boulder, play areas, equestrian hitching post, and exercise stations) to off-site amenities (e.g., the Ortega Equestrian Center and Cook La Novia Park). Further, the proposed project would be consistent with the site's General Plan land use designations, and would also be consistent with development standards required by CDP 78-01 as amended by virtue of a concession and waivers requested by the Project Applicant under the State and local density bonus law. The waivers would not result in the intrusion of non-conforming buildings and uses. For the reasons stated above, the development of the proposed project would preserve and enhance the quality of the City's neighborhoods because it would not introduce incompatible land uses. Therefore, the proposed project would be consistent with Land Use Policy 7.1.
Land Use Policy 7.2: Ensure that new development is compatible with the physical characteristics of its site, surrounding land uses, and available public infrastructure.	**Consistent.** In its existing condition, the proposed project site is currently vacant and unimproved, and has been identified by the Housing Element as suitable for a residential development. As previously described, the proposed project is surrounded by a variety of residential, commercial, recreational, and open space land uses. The proposed project would introduce residential uses with recreational amenities and a multi-use trail utilizing the existing San Juan Creek Trail to the project site. As such, the proposed project would be compatible with the physical characteristics of the site, surrounding land uses, and available public infrastructure. Therefore, the proposed project would be consistent with Land Use Policy 7.2.
Housing Element	
Housing Goal 1: Provide a broad range of housing opportunities with emphasis on providing housing which meets the special needs of the community.	**Consistent.** The proposed project would provide both single-family detached and multi-family attached housing opportunities. Of the 132 residential units associated with the proposed project, 14 of the townhomes (or 10.6 of the total units), would be considered affordable. As such, the proposed project would provide a range of housing opportunities and would meet various housing needs. Therefore, the proposed project would be consistent with Housing Goal 1.
Housing Policy 1.1: Consistent with the Land Use Element, provide a range of different housing types and unit sizes for varying income ranges and lifestyles.	**Consistent.** The proposed project would provide single-family detached and multi-family attached housing opportunities. Of the 132 residential units associated with the proposed project, 14 of the townhomes (or 10.6 of the total units), would be considered affordable. As such, the proposed project would provide a range of housing opportunities and would meet various housing needs. Additionally, as previously established, the proposed project

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
	would be consistent with applicable goals and policies in the Land Use Element. Therefore, the proposed project would be consistent with Housing Policy 1.1.
Housing Goal 2: To the maximum extent feasible, encourage and provide housing opportunities for persons of lower and moderate incomes.	**Consistent.** The proposed project would provide single-family detached and multi-family attached housing opportunities. Of the 132 residential units associated with the proposed project, 14 of the townhomes (or 10.6 of the total units), would be considered affordable. As such, the proposed project would provide a range of housing opportunities and would meet various housing needs. Therefore, the proposed project would be consistent with Housing Goal 2.
Housing Policy 2.1: Encourage the development of affordable housing through the Density Bonus, Inclusionary Housing, and City financial assistance programs.	**Consistent.** The proposed project would include affordable units in exchange for which it would be entitled to a concession and waivers to development standards. As such, the proposed project would be consistent with Housing Policy 2.1.
Housing Policy 2.7: Promote the development of affordable and special needs housing near transit and/or "smart growth areas."	**Consistent.** The proposed project site is identified in the Housing Element as a potential site for housing due to access to transit and schools. Additionally, of the 132 residential units that would be developed as part of the proposed project, 14 units (or 10.6%), would be considered affordable. As such, the proposed project would result in the development of affordable housing near a "smart growth area." Therefore, the proposed project would consistent with Housing Policy 2.7.
Housing Policy 2.8: Encourage energy efficient design in new and rehabilitated development and in existing housing units as a means to lowering housing costs.	**Consistent.** The proposed project would be developed with energy efficient appliances and would comply with California State law regarding water conservation measures, including pertinent provisions of Title 24 of the California Government Code (Title 24) regarding the use of water-efficient appliances and low-flow plumbing fixtures. As such, the proposed project would be consistent with Housing Policy 2.8.
Housing Goal 4: Create and maintain decent housing and a suitable living environment for all households in the community.	**Consistent.** The proposed project would construct 132 new residential units on a currently undeveloped site. Implementation of the proposed project would create new housing in an area that is conducive for residential development due to the existing public infrastructure, including roadways and utilities. As such, the proposed project would create a suitable living environment for future occupants. Therefore, the proposed project is consistent with Housing Goal 4.
Housing Policy 4.4: Provide and maintain adequate level of services and facilities in all areas of the City.	**Consistent.** The proposed project would not impact the ability of service providers and facilities to maintain adequate levels of services. The project-generated increase in demand would be minimal and within the existing service capacities of all utility providers. As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would not interfere with the ability of OCSD, OCFA, or City libraries to provide sufficient levels of police protection, fire protection, and library services, respectively. The project would also be required to pay Development Impact Fees to the Capistrano Unified School District, and park in-lieu fees, established by the City, which would serve to ensure the provision of public services and infrastructure to the project. As such, the proposed project would not interfere with the provision and maintenance of adequate levels of services in facilities in all areas of the City. Therefore, the proposed project would be consistent with Housing Policy 4.4.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Circulation Element	
Circulation Goal 3: Provide an extensive public bicycle, pedestrian, and equestrian trails network.	**Consistent.** The proposed project includes improvements to the multi-use trail along the San Juan creek, and would allow for pedestrian, bicycle, and equestrian use of the portion of the project site along San Juan Creek. The existing trail provides connectivity from the eastern portion of the City to the City of Dana Point to the southwest. By providing a linkage to the existing trails network, the proposed project would be consistent with Circulation Goal 3.
Circulation Goal 4: Minimize the conflict between automobile, commercial vehicles, pedestrians, horses, and bicycles.	**Consistent.** Vehicular access to the project site would be provided at multiple access points on Calle Arroyo and Paseo Tirador. Pedestrian and bicycle access to the project site would be provided by sidewalks and a bicycle route on Calle Arroyo and Paseo Tirador. Pedestrian circulation within the project site would be provided with sidewalks, which would travel through the project's multiple drive aisles. A 20 ft multi-use trail would be installed along the project's southern boundary, and would support bicycle, pedestrian, and equestrian uses. As such, each mode of transportation would have multiple options for access and internal circulation to minimize the potential for conflict within the project site's circulation system. Therefore, the proposed project would be consistent with Circulation Goal 4.
Safety Element	
Safety Goal 1: Reduce the risk to the community from hazards related to geologic conditions, seismic activity, wildfires, structural fires, and flooding.	**Consistent.** Impacts with respect to geologic conditions and seismic activity are addressed in Section 4.6, Geology and Soils, of this EIR. As discussed in this section of the EIR, project-related impacts with respect to geology and soils would be less than significant following implementation of mitigation. Mitigation Measures GEO-1. GEO-2, and GEO-3 require the City to comply with recommendations of the project Geotechnical Investigation and the most current CBC, which stipulate appropriate design provisions that shall be implemented with project design and construction. Impacts with respect to wildfires are addressed in Section 4.20, Wildfire, of the Initial Study (Appendix A of this EIR). As described in the Initial Study, the project site is not located within a fire hazard zone as determined by the City or by CAL FIRE. However, in the event of a structural fire on the site, emergency vehicles would be able to access the property via project access points on Calle Arroyo and Paseo Tirador, and from a designated fire department emergency access point from the adjacent 24 Hour Fitness parking lot. Impacts with respect to flooding are addressed in Section 4.8, Hydrology and Water Quality, of this EIR. As discussed in this section of the EIR, project-related impacts with respect to flooding would be less than significant with the implementation of Regulatory Compliance Measures WQ-1 and WQ-2. Regulatory Compliance Measure WQ-1 requires an Elevation certificate to ensure compliance with community floodplain management ordinances governing the project site. Regulatory Compliance Measure WQ-2 ensures that construction of the proposed project would not begin until the required Conditional Letter of Map Revision (CLOMR-F) and Letter of Map Revision (LOMR-F) are approved by FEMA and the City, respectively. Therefore, the proposed project would be consistent with Safety Goal 1.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Safety Policy 1.1: Reduce the risk of impacts from geologic and seismic hazards by applying proper development engineering, building construction, and retrofitting requirements.	**Consistent.** Impacts with respect to geologic conditions and seismic activity are addressed in Section 4.6, Geology and Soils, of this EIR. As established above, project-related impacts with respect to geology and soils would be less than significant following implementation of mitigation. Mitigation Measures GEO-1 and GEO-2 require the City to comply with recommendations of the project Geotechnical Investigation and the most current CBC, which stipulate appropriate design provisions that shall be implemented with project design and construction. As such, risks or impacts from geologic or seismic hazards would be reduced on site by project adherence to proper development engineering, building construction, and retrofitting requirements. Therefore, the proposed project would be consistent with Safety Policy 1.1.
Safety Policy 1.2: Protect the community from flooding hazards by providing and maintaining flood control facilities and limiting development within the floodplain.	**Consistent.** As discussed in Section 4.8, Hydrology and Water Quality, of this EIR, although the proposed project would feature development within the 100-year flood zone located on the southern portion of the project site, the proposed project would not place improvements or structures within a regulatory floodway. In addition, in compliance with the City Municipal Code requirements, all new residential construction and substantial improvement of any structure in Zone AE on the project site shall have the lowest floor, including basement, elevated at least 1 foot above the base flood elevation (Regulatory Compliance Measure WQ-1). An existing scour protection wall within the project limits also provides flood protection and soil stability onsite. Furthermore, project-related impacts related to flood flows would be less than significant, and no mitigation is required. Therefore, the proposed project would be consistent with Safety Policy 1.2.
Safety Policy 1.3: Reduce the risk of wildfire hazards by requiring fire retardant landscaping and project design for development located in areas of high wildfire risk.	**Consistent.** The project site is not located within a High Fire Hazard Zone according to the Fire Hazards Area Map in the City's General Plan Public Safety Element (2002). In addition, according to the CalFire Fire and Resource Assessment Program, the project site is not located within or near a Very High Fire Hazard Severity Zone (VHFHSZ) of a State or Local Responsibility Area. Moreover, the proposed project design would conform to all standards for residential development in the 2016 California Fire Code (adopted in section 8-10.01 in the City's Municipal Code). As such, the design of the proposed project would reduce risks of hazards in the unlikely event of a wildfire on the project site. Therefore, the proposed project would be consistent with Safety Policy 1.3.
Safety Policy 1.5: All residential projects with more than 48 units should be required to provide a secondary access to the project site. The secondary access may be designated as emergency access only.	**Consistent.** The proposed project would contain more than 48 units, and would have primary and secondary access points on Calle Arroyo and Paseo Tirador. These access points would be ungated and therefore accessible to both the public and to emergency response personnel. The project would also contain a security gate with designated fire department emergency access, which would be located in the northwest portion of the project site, along the boundary shared with the 24 Hour Fitness Parking lot. Therefore, the proposed project meets the requirement to provide secondary access to the project site, and would be consistent with Safety Policy 1.5.
Safety Goal 2: Protect the community from hazards related to air pollution, nuclear power production, hazardous materials, and ground transportation.	**Consistent.** Impacts with respect to air quality are addressed in Section 4.2, Air Quality, of this EIR. As discussed in this section of the EIR, project-related impacts with respect to air quality would be less than significant with the implementation of Regulatory Compliance Measures AQ-1 through AQ-3, which require compliance with emission reduction measures during construction. The proposed project would develop the project site with residential uses.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
	However, the proposed project would not result in the introduction of new residents in the community that would be subject to risks related to nuclear power production because the project would not interfere with existing evacuation routes identified in the project area in the event of a nuclear emergency. The project site is not included on any hazardous materials site list pursuant to Government Code Section 65962.5 and would not result in a significant hazard to the public or the environment. Operation of the proposed project would not create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Adherence to applicable rules and regulations as required during construction regarding hazardous materials, including fugitive dust emissions, would reduce potential risks associated with the release of hazardous materials to the environment or public, including nearby schools, to less than a significant level. Access to the project site would be provided via Calle Arroyo and Paseo Tirador. The project would also include internal circulation routes. Pedestrian and bicycle access to the project site would be provided by sidewalks and a multi-use trail would be provided. As such, the project would result in the provision of an on-site circulation network that would promote connectivity with the surrounding network. No impacts with respect to increased risks related to ground transportation would occur as a result of project construction or implementation. Therefore, the proposed project would be consistent with Safety Goal 2.
Safety Goal 3: Protect citizens and business from criminal activity.	**Consistent.** As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would have a negligible impact on the Orange County Sheriff's Department goal of providing one police officer for every 1,300 residents. As such, the proposed project would not interfere with the ability of OCSD to protect citizens and business from criminal activity. New lighting proposed as part of the project would also provide additional security on the site as compared to existing conditions. Therefore, the proposed project would be consistent with Safety Goal 3.
Conservation and Open Space Element	
Conservation & Open Space Goal 1: Preserve and enhance open space resources.	**Consistent.** The project site is not located within an area identified for the preservation of open space. As such, the project would not result in the conversion of open space resources to a developed use. Therefore, the proposed project would be consistent with Conservation & Open Space Goal 1.
Conservation & Open Space Goal 2: Protect and preserve important ecological and biological resources.	**Consistent.** Impacts with respect to biological resources are addressed in Section 4.3, Biological Resources, of this EIR. As discussed in this section of the EIR, project-related impacts with respect to biological resources would be less than significant following implementation of mitigation. Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4 require worker environmental awareness training, erosion control and amphibian exclusionary fencing, construction site housekeeping, and preconstruction surveys for nesting birds. Furthermore, the project proposes a 5.5 acre area south of the project site along the San Juan Creek as a designated conservation area. No development would occur within this area. Therefore, the proposed project would be consistent with Conservation & Open Space Goal 2.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Conservation & Open Space Goal 5: Shape and guide development in order to achieve efficient growth and maintain community scale and identity.	**Consistent.** Refer to the consistency discussion under Land Use Goals 1 and 2. All new buildings proposed as part of the project would be compatible the scale and nature of surrounding land uses and would be served by existing public infrastructure. Therefore, the proposed project would be consistent with Conservation & Open Space Goal 5.
Conservation & Open Space Policy 5.1: Encourage high-quality design in new development and redevelopment to maintain the low-density character of the City.	**Consistent.** The proposed residential development would be constructed using high-quality building materials. The project would be designed with California Spanish- and Farmhouse-style architectural influences, and both designs would feature contemporary architectural elements, multi-level rooflines, and a complementary color scheme. The California Spanish-style units would feature tile roofs and accents, wrought-iron window planters, painted exteriors, steel garage doors, and a cement plaster exterior finish. The Farmhouse-style units would feature asphalt shingle roofing, wooden window planters and trim, horizontal siding, steel garage doors, and a cement plaster exterior finish. Further, the proposed project includes open space and recreation amenities, such as a multi-use trail, gathering areas, a climbing boulder, play areas, an equestrian hitching post, and exercise stations, which are representative of the low-density character of San Juan Capistrano. Therefore, the proposed project would be consistent with Conservation & Open Space Policy 5.1.
Conservation & Open Space Policy 5.3: Ensure that no buildings will encroach upon any ridgeline designated for preservation.	**Consistent.** According to Figure COS-2, Major Ridgelines, in the Conservation & Open Space Element, there are no major ridgelines in the vicinity of the project site. Therefore, the proposed project would be consistent with Conservation & Open Space Policy 5.3.
Conservation & Open Space Goal 6: Improve air quality.	**Consistent.** Impacts with respect to air quality are addressed in Section 4.2, Air Quality, of this EIR. As discussed in this section of the EIR, project-related impacts with respect to air quality would be less than significant with the implementation of Regulatory Compliance Measures AQ-1 through AQ-3, which require compliance with emission reduction measures during construction. Therefore, the proposed project would be consistent with Conservation & Open Space Goal 6.
Conservation & Open Space Policy 6.4: Achieve a greater balance between jobs and housing in San Juan Capistrano.	**Consistent.** The proposed project would 132 single-family residential units on the project site, thereby providing new housing opportunities near commercial uses and improving the jobs/housing balance in the City. Therefore, the proposed project would be consistent with Conservation & Open Space Policy 6.4.
Conservation & Open Space Goal 7: Protect water quality.	**Consistent**. As discussed in Section 4.8, Hydrology and Water Quality, of this EIR, project-related impacts to water quality would be less than significant because the proposed project would comply with NPDES and City requirements governing hydrology and water quality. In compliance with these requirements, drainage facilities to accommodate stormwater runoff and BMPs to reduce pollutants in stormwater runoff would be implemented. As such, impacts related to surface and groundwater quality would be less than significant. Therefore, the proposed project would be consistent with Conservation & Open Space Goal 7.
Conservation & Open Space Policy 7.2: Encourage the production and use of recycled water.	**Consistent**. As part of the proposed project, an off-site recycled water main would be installed to allow future recycled water service in the vicinity of the project. Additionally, the project would include the installation of on-site private recycled water lines to allow the future use of recycled water for irrigation of common landscaped areas. Therefore, the proposed project would be consistent with Conservation & Open Space Policy 7.2.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Conservation & Open Space Policy 7.3: Conserve and protect watershed areas.	**Consistent.** As discussed in Section 4.8, Hydrology and Water Quality, of this EIR, the proposed project is located within the San Juan Creek Watershed. As previously discussed, the proposed project would comply with NPDES and City requirements governing hydrology and water quality. In compliance with these requirements, the proposed drainage facilities and BMPs would accommodate additional stormwater runoff and reduce pollutants generated on the project site. As such, development of the proposed project would not interfere with the conservation and protection of watershed areas. Therefore, the proposed project would be consistent with Conservation & Open Space Policy 7.3.
Noise Element	
Noise Goal 1: Minimize the effects of noise through proper land use planning.	**Consistent**. Impacts with respect to Noise are addressed in Section 4.10, Noise, of this EIR. As discussed in this section of the EIR, project-related impacts with respect to noise would be less than significant following implementation of Mitigation. Mitigation Measure NOI-1 would require noise reduction measures during construction, such as restricting construction hours and requiring the staging of construction equipment in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors. Mitigation Measure NOI-2 would require an acoustical study to ensure that the exterior and interior noise levels would not exceed acceptable levels as defined by the California Building Code. As established in Section 4.10, Noise, of this EIR, operational noise impacts would be less than significant. Therefore, the proposed project would be consistent with Noise Goal 1.
Noise Policy 1.1: Utilize noise/land use compatibility standards as a guide for future planning and development decisions.	**Consistent.** As discussed in Section 4.10, Noise, of this EIR, the land use compatibility of the project site was assessed based on the City's exterior and interior noise standards. The City's exterior and interior noise standards are 65 dBA CNEL and 45 dBA CNEL, respectively, for single-family and multifamily residences. Based on the noise analysis results shown in Table 4.10.H, the City's noise standards would be exceeded at some receptors; however, with the implementation of Mitigation Measure NOI-2, noise levels would be reduced to a less than significant level and would be consistent with the City's Noise Element standards. Therefore, the proposed project would be consistent with Noise Policy 1.1.
Noise Goal 3: Minimize non-transportation-related noise impacts.	**Consistent**. Refer to the consistency analysis for Noise Goal 1. In addition to transportation-related noise in the project vicinity, the project site is subject to ambient noise associated with the operation of uses surrounding the site given its location in a highly developed area (e.g., operation of nearby commercial uses). Mitigation Measure NOI-2 would require an acoustical study to ensure that the exterior and interior noise levels would not exceed acceptable levels as defined by the California Building Code. Therefore, the proposed project would be consistent with Noise Goal 3.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Cultural Resources Element	
Cultural Resources Goal 1: Preserve and protect historical, archaeological, and paleontological resources.	**Consistent.** As described further in Section 4.5, Cultural Resources, of this EIR, there are no known historic resources on the sites. As such, the proposed project would not interfere the preservation of historical resources. Impacts with respect to archaeological and paleontological resources are addressed in Sections 4.5, Cultural Resources, and 4.6, Geology and Soils, of this EIR. As discussed in these sections of the EIR, project-related impacts with respect to archaeological and paleontological resources would be less than significant following implementation of mitigation. Mitigation Measures GEO-4, GEO-5, and CUL-1, which include measures to reduce potential impacts to archaeological and cultural resources and previously undiscovered buried human remains. Therefore, the proposed project would be consistent with Cultural Resources Goal 1.
Cultural Resource Policy 1.1: Balance the benefits of development with the project's potential impacts to existing cultural resources.	**Consistent.** As described further in Section 4.5, Cultural Resources, of this EIR, the project site is located in an area of the City of San Juan Capistrano that is archaeologically sensitive for cultural resources. Potential project-related impacts with respect to cultural resources would be less than significant following implementation of mitigation. Mitigation Measures CUL-1 and CUL-2 involve cultural resources monitoring during construction and procedures for the handling of any cultural artifact encountered during construction or operation. As such, potential impacts to cultural resources would be minimized, and the project would be consistent with Cultural Resource Policy 1.1.
Community Design Element	
Community Design Goal 1: Encourage and preserve a sense of place.	**Consistent.** The proposed residential development would be constructed using high-quality building materials. By incorporating both farmhouse style and a California Spanish architectural design, the project would be visually consistent with surrounding development and the general character of San Juan Capistrano. Further, the multi-use trail and associated recreation amenities proposed as part of the project would incorporate human-scale features, such as gathering areas, a climbing boulder, play areas, an equestrian hitching post, and exercise stations. All buildings and structures developed as part of the project would be a cohesive design and would be required to comply with development standards and regulations outlined in the City's Municipal Code. Therefore, the proposed project would be consistent with Community Design Goal 1.
Community Design Policy 1.2: Encourage high-quality and human scale design in development to maintain the character of the City.	**Consistent.** The proposed residential development would be constructed using high-quality building materials. By incorporating both farmhouse style and a California Spanish architectural design, the project would be visually consistent with surrounding development and the general character of San Juan Capistrano. Further, the multi-use trail and associated recreation amenities proposed as part of the project would incorporate human-scale features, such as gathering areas, a climbing boulder, play areas, an equestrian hitching post, and exercise stations. Therefore, the proposed project would be consistent with Community Design Policy 1.2.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Community Design Goal 2: Preserve the historic character of the community.	**Consistent.** The project site is not located within close proximity to buildings exhibiting the historic or traditional character of the community. Building design features as part of the project would feature California Spanish- and Farmhouse- style designs, which would be visually consistent with existing character of San Juan Capistrano and the setting of surrounding development (e.g., commercial uses developed with a similar architectural character and design). Therefore, the proposed project would be consistent with Community Design Goal 2.
Community Design Policy 2.1: Encourage the development which complements the City's traditional, historic character through site design, architecture, and landscaping.	**Consistent.** The proposed residential development would be designed with California Spanish- and Farmhouse- style elevations for both the single-family residential units and townhomes. Incorporation of this architectural style would ensure the project would be visually and historically consistent with San Juan Capistrano's character. Additionally, proposed improvements to the San Juan Creek Trail would include a multi-use trail and associated recreation amenities. Recreation amenities and landscaping improvements proposed as part of the project would enhance the existing natural features of the adjacent San Juan Creek. Further, the multi-use trail would allow equestrian use and would complement the City's equestrian heritage. Therefore, the proposed project would be consistent with Community Design Policy 2.1.
Community Design Goal 3: Preserve and enhance natural features.	**Consistent.** Although the project site is not considered to be a natural feature, the proposed project would enhance the existing visual setting of the project site by converting the existing underutilized property to a residential community featuring California Spanish- and Farmhouse- style designs, which would be visually consistent with existing character of San Juan Capistrano. Following development of the site, views of the property from the San Juan Creek trail and adjacent roadways would be improved. Furthermore, views of existing natural features, such as the San Juan Creek and adjacent hillsides, will be enhanced and more accessible during project operation. Therefore, the proposed project would be consistent with Community Design Goal 3.
Community Design Policy 3.1: Limit development of important natural characteristics such as ridgelines, unique hillside features and creeks.	**Consistent.** The existing project site is primarily characterized by dirt and scattered ruderal vegetation and is relatively flat with a slight slope to the east/southeast. Although the project site is located adjacent to San Juan Creek, the proposed residential development is located in a developed portion of San Juan Capistrano and would not infringe on the natural characteristics of the creek. As part of the project, proposed improvements to the San Juan Creek Trail would improve pedestrian, cyclist, and equestrian access and use of the trail. Further, proposed recreation amenities and landscaping improvements would enhance the existing natural features of San Juan Creek. Therefore, the proposed project would be consistent with Community Design Policy 3.1.
Community Design Policy 3.3: Preserve and enhance scenic transportation corridors, including Interstate 5 and the railroad.	**Consistent.** The project site is visible from I-5. Currently, views of the project site from I-5 consist of a vacant lot, as well as views of adjacent commercial uses and the Ortega Equestrian Center. Following project implementation, views of adjacent development across the site would be slightly obstructed compared to existing conditions, but views of the Santa Ana Mountains beyond would be preserved. All structures developed on the project site would be of either California Spanish or Farmhouse architectural styles. As such, the architectural style and design of the proposed residences would be consistent with the visual character of the surrounding area, including the nearby 24 Hour Fitness facility and senior apartments. Further, improvements associated with the proposed project are anticipated to enhance views of the

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
	project site from I-5 and would serve to provide increased visual cohesion between the project site and the surrounding area. Therefore, the proposed project would be consistent with Community Design Policy 3.3.
Community Design Policy 3.4: Preserve important viewsheds.	**Consistent.** The project site contains scenic views of the Colinas Hills, Saddleback Mountain, and the Santa Ana Mountains, and is near public scenic corridors associated with San Juan Creek Road and La Novia Avenue. Implementation of the proposed project would not substantially affect viewsheds in the vicinity of the project due to the prominence of the surrounding hillsides. Further, landscaping proposed throughout the project site would enhance and frame important viewsheds. Therefore, the proposed project is consistent with Community Design Policy 3.4.
Growth Management Element	
Growth Management Goal 1: Coordinate rational and orderly growth that assures the economic and efficient provision of public services and infrastructure to new development.	**Consistent.** As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would be served by existing public services and infrastructure. The project would also be required to pay Development Impact Fees to the Capistrano Unified School District, and park in-lieu fees, established by the City, which would serve to ensure the provision of public services and infrastructure to the project. In addition, the proposed residential uses are consistent with the allowable General Plan land use designations for the site, and would implement the orderly growth envisioned in the General Plan. Therefore, the proposed project would be consistent with Growth Management Goal 1.
Growth Management Policy 1.2: Approve only those development proposals for which there is sufficient funding through the developer, City, or other agency to provide a level of service and infrastructure which meet established goals.	**Consistent.** The Project Applicant would fund the proposed project and pay all applicable Development Impact fees. The project would comply with all regulations established in the City's Municipal Code, and would be consistent with the City's General Plan. As such, approval of the proposed project would be sufficiently funded such that existing services and infrastructure would meet established goals. Therefore, the proposed project would be consistent with Growth Management Policy 1.2.
Growth Management Policy 1.3: Monitor growth to ensure that service standards are achieved.	**Consistent.** As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would be served by existing public services and infrastructure. The project would also be required to pay Development Impact Fees established by the City, which would serve to ensure the provision of public services and infrastructure to the project. In addition, the proposed residential uses are consistent with the allowable General Plan land use designations for the site, and would implement the orderly growth envisioned in the General Plan. As such, the proposed project would not interfere with the ability of providers to achieve service standards. Therefore, the proposed project would be consistent with Growth Management Policy 1.3.
Growth Management Goal 3: Provide for a balance of jobs and housing through land use planning.	**Consistent.** The proposed project would result in population growth because the proposed project would provide 132 residential units on the project site. It is anticipated that some of these residents would find employment or have existing employment within the City. The City has been developed primarily with residential uses and some commercial and service sector uses. San Juan Capistrano and the surrounding subregions are considered "housing rich," and many residents drive to other parts of Orange County or neighboring counties for employment. SCAG applies the jobs-to-housing ratio at the regional and subregional level as a tool for analyzing the fit between jobs, housing, and infrastructure.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
	The American Planning Association (APA) is an authoritative resource for community-planning best practices, including recommendations for assessing jobs-to-housing ratios. The APA recognizes that an ideal jobs-to-housing ratio will vary from jurisdiction to jurisdiction. In general, the recommended target for an appropriate jobs-to-housing ratio is 1.5, with a recommended range of 1.3 to 1.7 (Weitz 2003). San Juan Capistrano is currently within the jobs-to-housing ratio range recommended by the APA. According to the 2016–2040 RTP/SCS Final Growth Forecast by Jurisdiction (SCAG 2016), San Juan Capistrano had a jobs-to-housing ratio of 1.28 in 2012 and is projected to have a jobs-to-housing ratio of 1.29 in 2020 and 1.35 in 2035 through 2040. Therefore, San Juan Capistrano is currently just below the jobs-to-housing ratio range recommended by the APA. The increase in the jobs-to-housing ratio suggests that the job growth expected in the region will be larger than the expected growth in housing. Due to the assumption that job growth in the region would be larger than the expected growth in housing, it is likely that the additional residents generated by the proposed project would contribute to a balance between jobs and housing. Additionally, the proposed project was identified in the Housing Element as a site suitable for residential development. As such, the proposed project has already been planned for in City planning documents, which take into account the need to provide a balance of jobs and housing. Therefore, the proposed project would be consistent with Growth Management Goal 3.
Growth Management Policy 3.1: Consider jobs/housing balance in the City and the region as a factor in land use decision making.	**Consistent.** As discussed above, the proposed project would provide housing on a site identified for residential development in the Housing Element of the City's General Plan. According to the 2016–2040 RTP/SCS Final Growth Forecast by Jurisdiction (SCAG 2016), it is anticipated that the region will experience job growth larger than the expected growth in housing. As such, project implementation would result in jobs/housing balance in the City and the region. Therefore, the proposed project would be consistent with Growth Management Policy 3.1.
Parks and Recreation Element	
Parks & Recreation Goal 1: Provide, develop, and maintain ample park and recreational facilities that provide a diversity of recreational activities.	**Consistent.** The proposed project would include a recreational area containing a gathering area with barbeques, seating, a shade structure, a climbing boulder, and a wishing well; an open play turf area with benches; an equestrian hitching post; and exercise stations. Additionally, the project would install a 20 ft wide multi-use trail for pedestrian, bicycle, and equestrian use along the San Juan Creek Trail. The Homeowner's Association (HOA) for the site would provide regular maintenance of the trail and recreation amenities. Therefore, the proposed project would be consistent with Parks & Recreation Goal 1.
Parks & Recreation Policy 1.6: Increase the accessibility of existing open space areas for recreational activities.	**Consistent.** The 20 ft wide multi-use trail proposed as part of the project would improve the connection to existing open space areas along the San Juan Creek trail for pedestrian, bicycle, and equestrian users. The trail provides access to the City of Dana Point and the Pacific Ocean, as well as linkages with other trails and recreational facilities along the trail. As such, implementation of the proposed project and the associated 20 ft multi-use trail would increase the accessibility of existing open space areas for recreational activities. Therefore, the proposed project would be consistent with Parks & Recreation Policy 1.6.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Parks & Recreation Policy 1.7: Provide parkland improvements and facilities that are durable and economical to maintain.	**Consistent.** Amenities included as the proposed project, such as a climbing boulder, an open play turf area, exercise stations, and a 20 ft wide multi-use trail, are typically long-lasting and do not require frequent maintenance or replacement. As such, the proposed project would provide parkland improvements and facilities that are durable and economical to maintain. Therefore, the proposed project would be consistent with Parks & Recreation Policy 1.7.
Parks & Recreation Goal 2: Develop and expand the existing bicycle, hiking, and equestrian trail system and facilities.	**Consistent.** As previously discussed, the project would install a 20 ft wide multi-use trail for pedestrian, bicycle, and equestrian use along the San Juan Creek Trail. This improvement would develop and expand the existing trail system for pedestrian, bicycle, and equestrian uses. Therefore, the proposed project would be consistent with Parks & Recreation Goal 2.
Parks & Recreation Policy 2.1: Develop and expand the existing trails network that supports bicycles, pedestrians, and horses, and coordinate linkages with those networks of adjacent jurisdictions.	**Consistent.** The proposed project would install a 20 ft wide multi-use trail along the southern boundary of the site along San Juan Creek. This multi-use trail would connect on-site recreational amenities to off-site locations via a linkage with the existing San Juan Creek Trail, which continues to the adjacent City of Dana Point. The proposed trail would support bicycles, pedestrians, and horses, and would provide access to the Ortega Equestrian Center to the east and the Trabuco Creek Trail to the west. Therefore, the proposed project would be consistent with Parks & Recreation Policy 2.1.
Parks & Recreation Policy 2.2: Preserve the equestrian lifestyle by designating land for the preservation or provision of new equestrian facilities.	**Consistent.** As discussed above, the proposed project would install a 20 ft wide multi-use trail along the southern boundary of the site, which would connect recreational amenities (such as an equestrian hitching post) to off-site amenities (e.g., the Ortega Equestrian Center). As such, project operation would encourage access to the multi-use trail and promote opportunities for equestrian activities by providing designated riding space along the San Juan Creek Trail, and provide connectivity to existing equestrian facilities such as the Ortega Equestrian Center. Therefore, the proposed project would be consistent with Parks & Recreation Policy 2.2.
Public Services Element	
Public Services & Utilities Goal 1: Work with the Orange County Sheriff's Department to provide a sufficient level of law enforcement.	**Consistent.** As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would have a negligible impact on the Orange County Sheriff's Department goal of providing one police officer for every 1,300 residents. As such, the proposed project would not interfere with the ability of OCSD to provide sufficient levels of law enforcement. Therefore, the proposed project would be consistent with Public Services & Utilities Goal 1.
Public Services & Utilities Policy 1.1: Work closely with the Orange County Sheriff's Department in determining and meeting community needs for law enforcement services.	**Consistent.** As established above, the increase in population associated with the proposed project would be minimal compared to the number of police officers currently employed by the City As established above, the proposed project would have a negligible impact on the Orange County Sheriff's Department goal of providing one police officer for every 1,300 residents. As such, the proposed project would not interfere with the ability of OCSD to provide sufficient levels of law enforcement. Therefore, the proposed project would be consistent with Public Services & Utilities Policy 1.1.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Public Services & Utilities Goal 2: Work with the Orange County Fire Authority to provide a sufficient level of fire protection.	**Consistent.** As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would result in a small increase in demand for fire protection services, but would not trigger the need for new or altered facilities. As such, the proposed project would not interfere with the ability of OCFA to provide sufficient levels of fire protection. Therefore, the proposed project would be consistent with Public Services & Utilities Goal 2.
Public Services & Utilities Policy 2.1: Work closely with the Orange County Fire Authority to ensure that San Juan Capistrano has appropriate levels of fire protection services.	**Consistent.** As established above, the proposed project would not interfere with the ability of OCFA to provide sufficient levels of fire protection. The design of the proposed project would comply all OCFA design and access requirements to facilitate the efficient use of fire protection services in the event of an emergency. Furthermore, the project would meet all California Fire Code Requirements, and Section R337, Materials and Construction Methods for Exterior Wildfire Exposure, of the 2016 California Residential Fire Code, to further minimize impacts related to wildfires. As such, the proposed project would not interfere with the ability of OCFA to maintain appropriate levels of fire protection services. Therefore, the proposed project would be consistent with Public Services & Utilities Policy 2.1.
Public Services & Utilities Goal 3: Work effectively with the Capistrano Unified School District to provide a sufficient level of public education.	**Consistent.** As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would generate approximately 48 new students. It is anticipated that 48 students generated by the proposed project would attend schools within the Capistrano Unified School District (CUSD). The Project Applicant would pay school impact fees pursuant to California Government Code Section 65996 to reduce any impacts of new residential development on school services. Through the payment of impact fees, the proposed project would not interfere with the capacity of CUSD to provide a sufficient level of public education. Therefore, the proposed project would be consistent with Public Services & Utilities Goal 3.
Public Services & Utilities Policy 3.1: Work closely with Capistrano Unified School District in determining and meeting community needs for public education and related activities.	**Consistent.** As discussed above, the project Application would pay the applicable school impact fees to CUSD to ensure that CUSD is able to continue to meet community needs for public education and related activities. Pursuant to California Government Code Section 65996, a project's impact on school facilities is fully mitigated through the payment of the requisite school facility development fees at the time a building permit is issues. As such, the proposed project would not interfere with the capacity of CUSD to continue to meet community needs for public education and related activities. Therefore, the proposed project would be consistent with Public Services & Utilities Policy 3.1.
Public Services & Utilities Goal 4: Provide sufficient community facilities.	**Consistent.** As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would not have a significant impact to community facilities. Currently, the City maintains a parkland standard of 5 acres of park space per 1,000 residents. The proposed project includes the development of recreation areas along the multi-purpose trail that would satisfy a portion of the total required parkland dedication. In combination with in-lieu park fees, the on-site parkland dedicate would satisfy City requirements for the provision of parkland. The proposed project's increase on library and other community facilities would be incremental and would not necessitate the need for expanded facilities or degrade the quality of existing facilities. As such, the proposed project would not interfere with the City's ability to provide sufficient community facilities. Therefore, the proposed project would be consistent with Public Services & Utilities Goal 4.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Public Services & Utilities Goal 5: Work with the Orange County Public Library to provide a sufficient level of library facilities and services.	**Consistent.** As described further in Section 4.15, Public Services, of the Initial Study (Appendix A of this EIR), the proposed project would result in an incremental increase in demand for library services or facilities, but would not necessitate the need for expanded library facilities or services. Therefore, the proposed project would be consistent with Public Services & Utilities Goal 5.
Public Services & Utilities Goal 6: Provide sufficient levels of water and sewer service.	**Consistent.** Impacts with respect to water and wastewater facilities are addressed in Section 4.19, Utilities and Service Systems, of the Initial Study (Appendix A of this EIR). As discussed in this section, project related impacts to water and sewer service would be less than significant. Existing water and sewer service providers would be able to accommodate project-generated water demand and sewer service demand. Receiving waters and existing downstream storm drainage facilities have sufficient capacity to accommodate project-generated increase in runoff. Furthermore, the Project Applicant would fund any required upgrades to adequately serve the project. Therefore, the proposed project would be consistent with Public Services & Utilities Goal 6.
Public Services & Utilities Goal 7: Work effectively with providers of natural gas, electricity, telephone, cable television, and solid waste disposal to provide sufficient levels of these services.	**Consistent.** As described further in Section 4.19, Utilities and Service Systems, of the Initial Study (Appendix A of this EIR), the proposed project would not impact the ability of providers of natural gas, electricity, telephone, cable television, and solid waste disposal to provide sufficient levels of these services. As discussed in Section 4.19 of the Initial Study, project-related demand for natural gas, electricity, telephone, cable, television, and solid waste disposal services would be minimal in comparison to the existing capacity of the respective providers. Moreover, the Project Applicant would pay all applicable fees for new connections to existing utility infrastructure. As such, the project would not interfere with the ability of existing service and utility providers to serve the project. Therefore, the proposed project would be consistent with Public Services & Utilities Goal 7.
Floodplain Management Element	
Floodplain Management Goal 1: Protect life and property from floodwaters.	**Consistent.** As discussed in Section 4.8, Hydrology and Water Quality, of this EIR, the proposed would project would comply with regulatory standards as specified in Regulatory Compliance Measures WQ-1 and WQ-2 to ensure that impacts related to flood flows on the project site would be less than significant. Regulatory Compliance Measure WQ-1 requires an Elevation certificate to ensure compliance with Section 8.11-115 of the City's Municipal Code. In addition, Regulatory Compliance Measure WQ-1 states that all new residential construction and substantial improvement of any structure in Zone AE of the project site shall have the lowest floor, including basement, elevated at least 1 foot above the base flood elevation. Regulatory Compliance Measure WQ-2 ensures that construction of the proposed project would not begin until the required CLOMR-F and LOMR-F are approved by the City, OCFCD, and FEMA and the City. These requirements and approvals would ensure that development of the proposed project would not interfere with the protection of life and property from floodwaters. Therefore, the proposed project would be consistent with Floodplain Management Goal 1.

Table 4.9.A: General Plan Policy Consistency Analysis

Policies	Consistency Analysis
Floodplain Management Goal 2: Preserve and enhance the natural character of the creeks and their floodplains.	**Consistent.** The proposed project would not include any features or characteristics that would interfere with the natural character or the San Juan Creek and its associated floodplain. As stated previously, the proposed project would install a 20 ft wide multi-use trail along the southern boundary of the site along the San Juan Creek. The design of the multi-use trail would not conflict with the natural character of the creek and its associated floodplain. The multi-use trail would encourage recreational use of the floodplain and open space adjacent to the creek, and as such enhance the natural character of the area. Therefore, the proposed project would be consistent with Floodplain Management Goal 2.
Floodplain Management Goal 3: Preserve and enhance the recreational opportunities and amenities provided by the creeks and their floodplains.	**Consistent.** The proposed project would include a 20 ft multi-use trail along the southern boundary of the project site. The multi-use trail would connect with the existing San Juan Creek Trail. This trail would provide additional public access to distant views of the surrounding hills. As such, the proposed project would enhance the recreational opportunities available in the San Juan Creek floodplain. Therefore, the proposed project is consistent with Floodplain Management Goal 3.

Source: City of San Juan Capistrano General Plan, as amended.
CAL FIRE = California Department of Forestry and Fire Protection
CBC = California Building Code
CDP = Comprehensive Development Plan
City = City of San Juan Capistrano
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel(s)
EIR = Environmental Impact Report
FEMA = Federal Emergency Management Agency
ft = foot/feet
I-5 = Interstate 5
NPDES = National Pollutant Discharge Elimination System
OCFA = Orange County Fire Authority
OCSD = Orange County Sheriff's Department
RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy
SCAG = Southern California Association of Governments

City of San Juan Capistrano Municipal Code. As previously stated, the site is zoned as a Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP) 78-01. The purpose of the Planned Community zone is to encourage the use of modern land planning and design techniques to create developments integrating a mixture of different types of land uses. As explained above, the Project Applicant would be entitled to a concession and waivers of certain development standards for providing restricted affordable units in the project.

Development Standards. Section 9-3.301 of the Municipal Code outlines permitted uses and minimum development standards allowed in residential zones. Section 9-3.315, Planned Community (PC) Districts, of the City's Zoning Code includes applicable development standards for the PC District zoning classification. According to CDP 78-01, development standards for the project site are governed by Planning Sectors B-3 and C.

As outlined in this section of the City's Municipal Code, the regulations for the PC District are designed to permit the adoption of a Comprehensive Development Plan (CDP) providing for a diversity of uses, building relationships, and open spaces within planned building groups, while insuring compliance with the General Plan and this Code.

According to CDP 78-01, design standards for the project site are governed by Planning Sectors B-3 and C. Table 4.9.B shows the proposed project's consistency with development standards outlined in CDP 78-01. As shown in Table 4.9.B, the proposed project would be consistent with development standards required by CDP 78-01 following approval of the affordable housing concession and waivers discussed above.

Table 4.9.B: Ortega Planned Community Development Standards Consistency Analysis

Development Standards	Proposed Project Consistency
CDP 78-01 Planning Sector B-3	
Maximum Density: 30 du/ac	**Consistent.** The project proposes a density of 8.2 du/ac, which would not exceed the maximum allowable density of 30 du/ac. Therefore, the proposed project is consistent with the maximum density requirement in CDP 78-01 Planning Sector B-3.
Minimum Lot Area: 1 acre	**Consistent.** The project site is 16.09 acres in size, which exceeds the minimum required lot area of 1 acre. Therefore, the proposed project is consistent with the minimum lot area requirement in CDP 78-01 Planning Sector B-3.
Minimum Street Frontage: 150 ft	**Consistent.** The project proposes a street frontage of approximately 635 ft. Therefore, the proposed project would be consistent with the minimum street frontage requirement in CDP 78-01 Planning Sector B-3.
Two-Story Minimum Front Yard: 20 ft	**Consistent.** The proposed residential development would include a minimum of 20 ft front yard setbacks, with exception to two units which are proposed to be located 0 ft from two different side yards. State law prohibits local agencies from applying development standards that would physically preclude construction of a development involving a request for incentives in exchange for the inclusion of restricted affordable units pursuant to Government Code Sections 65915(b) and 65915(e)(1). The standards governing the setbacks and distance between buildings of the project would physically preclude construction of the project. Without the requested waivers of those standards, the project would be physically precluded by a lack of space from providing the proposed number of restricted affordable units within the available building envelope. Reducing the setbacks will allow adequate space for construction of the planned 14 restricted affordable units. Under the provisions of Government Code Section 65915(e)(1), the City must therefore approve the waiver requested in order to prevent the physical preclusion of including affordable units and applying derivative incentives. Therefore, the proposed project is consistent with the minimum front yard requirement in CDP 78-01 Planning Sector B-3.
Two-Story Minimum Side Yard: 20 ft	**Consistent.** The proposed residential development would include a minimum of 20-ft side yard setbacks. Therefore, the proposed project is consistent with the minimum side yard requirement in CDP 78-01 Planning Sector B-3.
Two-Story Minimum Rear Yard: 20 ft	**Consistent.** The proposed residential development would include a minimum of 20 ft rear yard setbacks. Therefore, the proposed project is consistent with the minimum rear yard requirement in CDP 78-01 Planning Sector B-3.
Two-Story Maximum Lot Coverage Ratio: 35%	**Consistent.** The proposed residential development would cover 13% of the lot, which does not exceed the maximum lot coverage ratio of 35%. Therefore, the proposed project is consistent with the maximum lot coverage requirement in CDP 78-01 Planning Sector B-3.

Table 4.9.B: Ortega Planned Community Development Standards Consistency Analysis

Development Standards	Proposed Project Consistency
Second Story Maximum Floor Area Ratio Limitation of 80%	**Consistent.** Pursuant to the State Density Bonus Law (Government Code Section 65915) and the City's Municipal Code Section 9-3.505, the Project Applicant is entitled to one incentive or concession providing relief from site development standards, zoning code requirements, or architectural design requirements otherwise applicable to the project. The proposed project would request a concession rendering the restriction of second- story floor area to no more than 80% of the first-story floor area inapplicable to the project. Because the City is legally obligated to grant the concession, the project would be consistent with the maximum second floor/first floor ratio in CDP 78-01 Planning Sector B-3.
Maximum Building Height: 35 ft	**Consistent.** The project proposes to build three-story townhomes with a maximum height of approximately 40 ft, which exceeds the maximum building height requirement of 35 ft. However, the areas that exceed the 35 ft height limit consist of roof gables and non-living attic space, which are solely included as articulation of the roofline. The City's Municipal Code permits architectural projections to encroach into the height limit, and the encroachment of roof gables 5 ft above the height limit is approvable, with 40 ft maximum building heights allowed. Therefore, the proposed project is consistent with the maximum building height requirements in CDP 78-01 Planning Sector B-3.
CDP 78-01 Planning Sector C	
Minimum Lot Size: 15,000 sf	**Consistent.** The project site is approximately 16.09 acres, or 700,880 sf, which exceeds the minimum lot size requirement of 15,000 sf. Therefore, the proposed project is consistent with the minimum lot size requirements in CDP 78-01 Planning Sector C.

Sources: City of San Juan Capistrano, Ortega Planned Community (CDP) 78-01, Planning Sectors B-3 and C;
City of San Juan Capistrano Municipal Code Sections 9-3.301 and 9-3.535.
CDP = Comprehensive Development Plan
City = City of San Juan Capistrano
du/ac = dwelling units per acre
ft = foot/feet
sf = square foot/feet

As shown in Table 4.9.A, the proposed project would be consistent with development standards required by CDP 78-01 following approval of the waiver discussed above.

Parking Standards. The proposed project would provide parking spaces along Paseo Tirador in the southern portion of the project site and along the western boundary.

Section 9-.535, Parking, in the City's Municipal Code, requires 2 covered spaces per single-family and multi-family residential unit, and 0.8 guest spaces per residential unit. By this standard, the proposed project would require a minimum of 369 parking spaces, including 120 single-family unit spaces and 249 townhome spaces. The project proposes to provide 389 on-site parking spaces, including 139 single-family unit spaces and 250 townhome spaces. Five guest spaces would be Americans with Disabilities Act (ADA) accessible, including one van-accessible space and four standard spaces. To comply with 2019 California Green Building Standards Code (CALGreen Code), 8 of the 72 multi-family guest stalls would be capable of supporting future electric vehicle (EV) connections. The project would satisfy the City's parking requirements and would provide a surplus of 20 parking spaces on the

project site. Therefore, the project would comply with the City's parking requirements as established in Section 9-5.535 in the City's Municipal Code.

For the reasons discussed above, the proposed project would result in less than significant impacts related to potential conflicts with applicable land use plans, policies, and regulations, and no mitigation is required.

4.9.7 Level of Significance Prior to Mitigation

There would be no potentially significant impacts related to land use and planning.

4.9.8 Regulatory Compliance Measures and Mitigation Measures

4.9.8.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the proposed project.

4.9.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.9.9 Level of Significance after Mitigation

There would be no significant unavoidable adverse impacts of the proposed project related to land use and planning. No mitigation would be required.

4.9.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines,* cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for land use. The cumulative impact area for land use for the proposed project is the City of San Juan Capistrano. Several residential and commercial development projects are approved and/or pending within the City. Each of these projects, as well as all proposed development in the City, would be subject to its own General Plan consistency analysis and would be reviewed for consistency with adopted land use plans and policies.

The City of San Juan Capistrano is an urbanized area with a wide variety of established land uses. The land around the project site has been developed with a variety of residential, business park, open space, commercial, and equestrian uses. The area immediately south of the project site contains the San Juan Creek channel and a hillside area, and is primarily undeveloped.

As previously stated, the project site is designated for Planned Community uses on the City's General Plan Land Use Map. There are also small portions of the project site designated as General Open Space and Community Park. The proposed land uses are consistent with these designations, and no General Plan Amendment or zoning changes would be required to implement the proposed project. While the proposed project does not require a Zone Change, the Project Applicant would request a concession and waivers to development standards in exchange for providing affordable units restricted to households of moderate income. In total, 14 of the townhomes, or approximately

10.6 percent of the total units, would be designated affordable and would allow the Project Applicant to apply for a concession and waivers to development standards. Following approval of the requested concession and waivers, the project would be consistent with the City's Zoning Ordinance, and cumulative land use impacts would be considered less than significant.

The proposed project would include land uses that are consistent with the surrounding neighborhoods, and therefore would not contribute to a pattern of development that adversely impacts adjacent land uses or conflicts with existing or planned development. As discussed further above, proposed on-site improvements would be consistent with the long-range planning goals of local and regional governing plans and policies for the surrounding area.

There are no incompatibilities between the proposed project and planned future projects in the City, which primarily include residential and commercial developments. All identified City-related projects would be reviewed for consistency with adopted land use plans and policies by the City. For this reason, the related projects are anticipated to be consistent with applicable General Plan and zoning requirements, or would be subject to allowable exceptions; further, they would be subject to CEQA, mitigation requirements, and design review as applicable. Therefore, the proposed project would not contribute to a cumulatively significant land use compatibility impact in the study area, and no mitigation is required.

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4.10 NOISE

This section evaluates the potential short-term and long-term noise impacts associated with the construction and operation of the Tirador Residential Development Project (proposed project). This section is based on information provided in the *Noise and Vibration Impact Analysis Memorandum for the Proposed Tirador Residential Development Project in San Juan Capistrano* (LSA, December 2019a), which is provided in Appendix G of this Draft Environmental Impact Report (EIR).

4.10.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. None of the comment letters included comments related to noise.

4.10.2 Methodology

Evaluation of noise impacts associated with the proposed project includes the following:

- Determination of the short-term construction noise levels at off-site noise-sensitive uses and comparison to the City of San Juan Capistrano Noise Ordinance requirements.

- Determination of the long-term noise levels from vehicular traffic using the Federal Highway Administration (FHWA) approved method and from on-site stationary sources using empirical noise data obtained in field measurements, as well as their impact at on- and off-site noise-sensitive uses, and comparison of these levels to the City's pertinent noise standards in the City of San Juan Capistrano General Plan Noise Element and Noise Ordinance.

- Determination of the required mitigation measures to reduce on-site noise levels and short-term construction-related noise impacts.

The evaluation of noise and vibration impacts was prepared in conformance with appropriate standards, utilizing procedures and methodologies in the City of San Juan Capistrano Noise Element and Municipal Code. The FHWA Traffic Noise Prediction Model (FHWA-RD-77-108), was used to determine traffic noise impacts. On-site stationary source noise levels were also evaluated. Ground-borne vibration levels associated with construction-related activities for the project were evaluated utilizing typical ground-borne vibration levels associated with construction equipment obtained from the California Department of Transportation (Caltrans) guidelines set forth, above. Please refer to the *Noise and Vibration Impact Analysis Memorandum for the Proposed Tirador Residential Development Project in San Juan Capistrano* (LSA 2019a) for additional details on the noise and vibration modeling methodology and assumptions used to estimate construction and operation impacts of the proposed project.

4.10.2.1 Characteristics of Sound

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

4.10.2.2 Measurement of Sound

Sound intensity is measured through the A-weighted decibel (dBA) scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units, such as inches or pounds, decibels (dB) are measured on a logarithmic scale representing points on a sharply rising curve. For example, 10 dB is 10 times more intense than 1 dB, 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Thirty dB represents 1,000 times as much acoustic energy as 1 dB. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source, noise in a relatively flat environment with absorptive vegetation, decreases 4.5 dB for each doubling of distance.

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. However, the predominant rating scales for human communities in the State of California are the equivalent continuous sound level (L_{eq}) and the Community Noise Equivalent Level (CNEL) or the day-night average level (L_{dn}) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a weighting factor of 5 dBA applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and with a weighting factor of 10 dBA 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 normally exchangeable and within 1 dBA of each other. The City uses the CNEL noise scale for long-term noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous 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 for short-term

noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

4.10.2.3 Physiological Effects of Noise

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

4.10.2.4 Vibration

Sources of earthborn vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, and landslides) or manmade causes (e.g., explosions, machinery, traffic, trains, and construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints. Ground vibration can be a concern in instances where buildings shake and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for ground-borne vibration are planes, trains, and construction activities such as earth-moving, which requires the use of heavy-duty earth-moving equipment.

4.10.3 Existing Environmental Setting

4.10.3.1 Existing Project Site

The project site is located on the south side of Calle Arroyo, adjacent to a 24 Hour Fitness facility located directly northwest of the site. The project site is irregular in shape and is currently undeveloped and vacant. As such, the existing project site is primarily characterized by dirt and scattered ruderal vegetation and is relatively flat with a slight slope to the east/southeast. The eastern portion of the project site, which is the lowest topographic area on site, is adjacent to San Juan Creek and El Horno Creek and associated trails and vegetation.

In its existing condition, access to the northwestern portion of the site is restricted due to the presence of a chain-link fence along the perimeter. However, the San Juan Creek Trail is publicly accessible; the trail begins at the intersection of Calle Arroyo and Paseo Tirador, traverses the project site in a southwest direction, and terminates at the Pacific Ocean in the City of Dana Point.

4.10.3.2 Existing Sensitive Land Uses in the Project Vicinity

Certain land uses are considered more sensitive to noise than others. Examples of these land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. Land uses in the vicinity of the project area include an industrial park to the north, an equestrian center to the east, open space to the south, and I-5 to the west. The closest sensitive receptor locations to the project site are residences associated with an assisted living facility located approximately 200 feet (ft) northeast of the project site, across Calle Arroyo.

4.10.3.3 Overview of the Existing Noise Sources

The primary existing noise sources in the project area are transportation facilities. Traffic on I-5, Calle Arroyo, Paseo Tirador, and other local streets contributes to the ambient noise levels in the project vicinity. Noise from motor vehicles is generated by engines, the interaction between the tires and the road, and the vehicles' exhaust systems.

Existing Ambient Noise Environment. Three short-term (20-minute) and one long-term (24-hour) noise level measurements were conducted at the project site on November 21 and 22, 2019, to establish the existing ambient noise environment. Table 4.10.A shows the results of the short-term noise level measurements along with a description of the measurement location and noise sources that occurred during the measurement.

As shown in Table 4.10.A, noise levels on the project site range from 61.2 to 63.5 dBA L_{eq}. Traffic on I-5 was reported as the primary noise source. Table 4.10.B shows the hourly L_{eq} results from the long-term noise level measurement. Based on the results shown in Table 4.10.B, the calculated CNEL from the long-term noise level measurement is 78.8 dBA.

Table 4.10.A: Short-Term Ambient Noise Monitoring Results

Location Number	Location Description	Start Time	L_{eq}	L_{max}	L_{min}	Primary Noise Sources
ST-1	End of Paseo Tirador cul-de-sac, on sidewalk.	2:20 PM	63.5	69.5	59.5	Traffic on I-5.
ST-2	Northeast side of the project, approximately 20 ft south of the sidewalk along Calle Arroyo, across from and between 27123 and 27125 Calle Arroyo.	2:56 PM	61.7	72.0	57.2	Traffic on I-5 and light traffic on Calle Arroyo.
ST-3	East side of the project, approximately 5 ft north of the sidewalk along Paseo Tirador.	3:22 PM	61.2	69.1	57.6	Traffic on I-5 and faint traffic on Calle Arroyo.

Source: Compiled by LSA (2019).
ft = foot/feet
I-5 = Interstate 5
L_{eq} = equivalent continuous sound level
L_{max} = the highest sound level measured during the measurement time period
L_{min} = the lowest sound level measured during the measurement time period

Table 4.10.B: Long-Term (24-Hour) Noise Level Measurement Results at LT-1

	Start Time	Date	Noise Level (dBA L_{eq})
1	4:00 PM	11/21/19	74.9
2	5:00 PM	11/21/19	74.5
3	6:00 PM	11/21/19	74.4
4	7:00 PM	11/21/19	74.0
5	8:00 PM	11/21/19	73.3
6	9:00 PM	11/21/19	72.5
7	10:00 PM	11/21/19	71.8
8	11:00 PM	11/21/19	70.5
9	12:00 AM	11/22/19	68.4
10	1:00 AM	11/22/19	66.7
11	2:00 AM	11/22/19	67.0
12	3:00 AM	11/22/19	68.2
13	4:00 AM	11/22/19	71.1
14	5:00 AM	11/22/19	73.8
15	6:00 AM	11/22/19	76.0
16	7:00 AM	11/22/19	76.5
17	8:00 AM	11/22/19	75.8
18	9:00 AM	11/22/19	75.4
19	10:00 AM	11/22/19	74.4
20	11:00 AM	11/22/19	74.1
21	12:00 PM	11/22/19	74.2
22	1:00 PM	11/22/19	74.0
23	2:00 PM	11/22/19	74.2
24	3:00 PM	11/22/19	74.7

Source: Compiled by LSA (2019).
dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels

Existing Roadway Noise Levels. Existing traffic noise levels in the project area were assessed using the United States FHWA Highway Traffic Noise Prediction Model (FHWA RD-77-108). This model uses a typical vehicle mix for urban/suburban areas in California and requires parameters, including traffic volumes, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Existing traffic volumes were obtained from the project's Traffic Impact Analysis (TIA).[1] The standard vehicle mix for Orange County roadways was used for traffic on these roadway segments. Existing traffic noise contours along roadways within the project vicinity are shown in Table 4.10.C. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. Appendix G of this Draft EIR provides the specific assumptions used in developing these noise levels and model printouts.

Table 4.10.C: Existing Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Outermost Lane
Calle Arroyo west of Paseo Tirador	940	<50	<50	<50	53.9
Calle Arroyo between Paseo Tirador and Rancho Viejo Road	1,655	<50	<50	<50	56.4
Calle Arroyo east of Rancho Viejo Road	5,950	<50	<50	79	60.4
Rancho Viejo Road between Calle Arroyo and Paseo Espada	6,795	<50	<50	66	59.8
Rancho Viejo Road between Paseo Espada and Ortega Highway	10,855	<50	<50	90	61.4
Rancho Viejo Road between Ortega Highway and Golf Club Drive	10,530	<50	80	167	65.6
Ortega Highway between I-5 SB Ramps and I-5 NB Ramps	37,110	<50	78	153	64.2
Ortega Highway between I-5 NB Ramps and Rancho Viejo Road	38,175	66	125	260	67.8
Ortega Highway between Rancho Viejo Road and La Novia Avenue	31,630	71	136	285	68.4
La Novia Avenue between Ortega Highway and Calle Arroyo	6,735	<50	<50	85	61.0
La Novia Avenue between Calle Arroyo and San Juan Creek Road	9,910	<50	<50	105	64.2
San Juan Creek Road east of Valle Road	10,760	<50	79	168	66.6
San Juan Creek Road west of La Novia Avenue	8,700	<50	68	146	66.3

Source: Compiled by LSA (2019).
Note: Traffic noise within 50 ft of the roadway centerline should be evaluated with site-specific information.
ADT = average daily trips
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet
I-5 = Interstate 5
NB = northbound
SB = southbound

[1] LSA Associates, Inc. (LSA). 2019b. *Traffic Impact Analysis, Tirador Residential Development Project*. December.

4.10.4 Regulatory Setting

4.10.4.1 Federal Regulations

United States Noise Control Act. In 1972, Congress enacted the United States Noise Control Act. This act authorized the United States Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels). For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to 70 dBA during a 24-hour period of time. At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 11 ft, with no community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance. The EPA cautions that these identified levels are guidelines, not standards.

4.10.4.2 State Regulations

State Noise Insulation Standard. The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

California Health and Safety Code, Division 28, Noise Control Act. The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare and that it is the policy of the State to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare. The goal is to minimize the number of people that would be exposed to excessive noise but not create an environment completely free from any noise.

State of California General Plan Guidelines. The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California Governor's Office of Planning and Research (OPR) 2017 *General Plan Guidelines* (OPR 2017), also provide guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The General Plan Guidelines present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

4.10.4.3 Regional Regulations

There are no regional regulations related to noise that are applicable to the proposed project.

4.10.4.4 Local Regulations

City of San Juan Capistrano General Plan. The Noise Element of the City's General Plan[2] works to minimize the effects of noise through proper land use planning, minimize transportation-related noise impacts, and minimize non-transportation-related noise impacts. Applicable Noise Element policies include the following:

- **Policy 1.1:** Utilize noise/land use compatibility standards as a guide for future planning and development decisions.
- **Policy 1.2:** Provide noise control measures and sound-attenuating construction in areas of new construction or rehabilitation.
- **Policy 2.1:** Reduce transportation-related noise impacts to sensitive land uses through the use of noise control measures.
- **Policy 2.3:** Incorporate sound-reduction design in development projects impacted by transportation-related noise.
- **Policy 3.1:** Reduce the impacts of noise-producing land uses and activities on noise-sensitive land uses.
- **Policy 3.2:** Incorporate sound-reduction design in new construction or rehabilitation projects impacted by non-transportation-related noise.

In addition, noise standards specified in Table N-2 of the City's General Plan Noise Element (shown in Table 4.10.D of this document) are used as a basis for development. These standards represent the maximum acceptable noise level, are used to determine noise impacts, and are a product of the Noise/Land Use Compatibility Matrix in Table N-3 of the City's General Plan Noise Element (shown in Table 4.10.E of this document). The Noise/Land Use Compatibility Matrix is a planning tool used by the City's planning department to decide if a proposed project is likely to be consistent with the policies and standards established by the City.

Table 4.10.D: Interior and Exterior Noise Standards

Land Use	Noise Standards[1]	
	Exterior	Interior
Residential (All)—Single Family, Multifamily, Duplex, Mobile Home	65 dBA	45 dBA
Residential—Transient Lodging, Hotels, Motels, Nursing Homes, Hospitals, Assisted-Care Facilities	65 dBA	45 dBA
Private Offices, Churches, Libraries, Theaters, Concert Halls, Meeting Halls, Schools	65 dBA	45 dBA
General Commercial, Retail, Reception, Restaurant	65 dBA	50 dBA
Manufacturing, Industrial[2]	—	—
Parks, Playgrounds	65 dBA[3]	—
Golf Courses, Outdoor Spectator Sports	70 dBA[3]	—

Source: City of San Juan Capistrano General Plan, Noise Element (1999).
[1] In Community Noise Level Equivalent (CNEL).
[2] Noise standards not applied to Industrial districts.
[3] Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.
dBA = A-weighted decibels

[2] City of San Juan Capistrano. 1999. San Juan Capistrano General Plan Noise Element. December 14.

Table 4.10.E: Noise/Land Use Compatibility Matrix

Land Use Category	Community Noise Equivalent Level CNEL (dB)						
	55		60	65	70	75	80
Residential—Single Family, Multifamily, Duplex	A	A	B	B	C	—	—
Residential—Mobile Homes	A	A	B	C	C	—	—
Transient Lodging—Motels, Hotels	A	A	B	B	C	C	---
Schools, Libraries, Churches, Hospitals, Nursing Homes	A	A	B	C	C	—	---
Auditoriums, Concert Halls, Amphitheaters, Meeting Halls	B	B	C	C	—	—	—
Sports Arenas, Outdoor Spectator Sports, Amusement Parks	A	A	A	B	B	—	—
Playgrounds, Neighborhood Parks	A	A	A	B	C	—	—
Golf Courses, Riding Stables, Cemeteries	A	A	A	A	B	C	C
Office and Professional Buildings	A	A	A	B	B	C	—
Commercial Retail, Banks, Restaurants, Theaters	A	A	A	A	B	B	C
Industrial, Manufacturing, Utilities, Wholesale, Service Stations	A	A	A	A	B	B	B
Agriculture	A	A	A	A	A	A	A

Source: City of San Juan Capistrano General Plan, Noise Element (1999).

A = Normally Acceptable—Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

B = Conditionally Acceptable—New construction or development should be undertaken only after a detailed analysis of the noise requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

C = Normally Unacceptable—New construction or development should generally be discouraged. If it does proceed, a detailed analysis of the noise reduction requirements must be made, and needed noise insulation features must be included in the design.

— = Clearly Unacceptable—New construction or development should generally not be undertaken.

CNEL = Community Noise Equivalent Level

dB = decibel(s)

City of San Juan Capistrano Municipal Code. Section 9-3.531 of the City's Municipal Code,[3] Noise Standards (residential and non-residential), addresses the creation or permitting the creation of any noise that exceed the standards shown in Table 4.10.F within a residential, public and institutional, or commercial district.

In addition, Section 9-3.531 of the City's Municipal Code addresses construction noise and states that construction activity noise is exempt from the City's noise standards if conducted between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday or between the hours of 8:30 a.m. and 4:30 p.m. on Saturday. Construction noise is prohibited on Sundays and national holidays.

[3] City of San Juan Capistrano. 2019b. *San Juan Capistrano Municipal Code Section 9-3.531, Noise Standards.* October.

Table 4.10.F: Maximum Exterior Noise Standards

Land Use	Location	Time Period	L_{50} (30 mins)[1]	L_{25} (15 mins)[2]	L_8 (5 mins)[3]	L_2 (1 min)[4]	L_{max} (Anytime)[5]
Residential and Public and Institutional Districts	Exterior	7:00 AM to 7:00 PM	65	70	75	80	85
		7:00 PM to 10:00 PM	55	65	70	75	80
		10:00 PM to 7:00 AM	45	50	55	65	70
Residential	Interior	10:00 PM to 7:00 AM	—	—	45	50	55
Commercial Districts	Exterior	At any time during the day	65	70	75	80	85

Source: City of San Juan Capistrano Municipal Code (October 2019).
Note: No person at any location within San Juan Capistrano, including the industrial and open-space districts, shall create any noise, or permit the creation of any noise, which causes the noise level within a residential, public and institutional, or commercial district to exceed the standards by the amount and for the period of time identified above. Each of the noise levels set forth in this subsection shall be reduced by 5 dBA for impacts of simple tone noises or noises consisting of speech or music.
[1] The noise standard for a cumulative period of more than 30 minutes in any hour.
[2] The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour.
[3] The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour.
[4] The noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour.
[5] The noise standard plus 20 dBA or the maximum measured ambient noise level for any period of time.
dBA = A-weighted decibels
min/mins = minute(s)
L_{max} = maximum instantaneous noise level

4.10.5 Thresholds of Significance

The thresholds for noise impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing CEQA* (2019a). The proposed project may be deemed to have a significant impact with respect to noise if it would result in:

Threshold 4.10.1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Threshold 4.10.2: Generation of excessive ground-borne vibration or ground-borne noise levels.

Threshold 4.10.3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

In *California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, the California Supreme Court[4] concluded that CEQA generally does not require analysis

[4] California Supreme Court, 2015. *California Building Industry Association v. Bay Area Air Quality Management District 62 Cal.4th 369, Case No. S213478*. December.

or mitigation of the impact of existing environmental conditions on a project, including a project's future users or residents. However, as with other laws and regulations enforced by other agencies that protect public health and safety, the City as the lead agency has authority, other than CEQA, to require measures to protect public health and safety. Therefore, this document includes an evaluation of the environment's impacts on the project. The evaluation includes an assessment of the project's potential to locate residential land uses in an area considered to be "clearly unacceptable" in the City's noise/land use compatibility standards.

In addition, the Initial Study, included as Appendix A, substantiates that there would be no impact associated with Threshold 4.10.3 because the project site is not located within the vicinity of a private airstrip. The project is approximately 16 miles southeast of John Wayne Airport and does not fall within the John Wayne Airport Planning Area. Due to the distance of the airport from the project site, there would be no noise-related impacts due to airport activities following project implementation, and no mitigation would be required. This threshold will not be addressed in the following analysis.

4.10.6 Project Impacts

Threshold 4.10.1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant with Mitigation Incorporated.

Construction Noise Impacts. Two types of short-term noise impacts could occur during construction of the project site. First, construction crew commutes and the transport of construction equipment and materials to the site would incrementally increase noise levels on roads leading to the site. The pieces of heavy equipment for construction activities would be moved on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the project vicinity. As shown in Table 4.10.G, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA L_{max} with trucks passing at 50 ft. Project construction would consist of site preparation, grading, building construction, paving, and architectural coating. During construction activities, building construction, paving, and architectural-coating phases would overlap, which would result in a temporary trip generation of 281 average daily trips (ADT), with 10 trips occurring in the a.m. peak hour and 47 trips occurring in the p.m. peak hour for up to 7 months. However, the effect on longer-term (hourly or daily) ambient noise levels would be small when compared to existing hourly and daily traffic volumes of 166/1,655 (hourly/daily) vehicles on Calle Arroyo and 680/6,795 (hourly/daily) vehicles on Rancho Viejo Road. Calle Arroyo and Rancho Viejo Road would be used to access the project site. Based on the information above, construction-related traffic would increase noise by up to 1.1 dBA. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term, construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

Table 4.10.G: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (L_{max}) at 50 ft[2]
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006b).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Usage factor is the percentage of time during a construction noise operation when a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Spec 721.560 from the CA/T program to be consistent with the City of Boston, Massachusetts, Noise Code for the "Big Dig" project.
CA/T = Central Artery/Tunnel
FHWA = Federal Highway Administration
ft = foot/feet
L_{max} = maximum instantaneous noise level

The second type of short-term noise impact is related to noise generated during site preparation, grading, building construction, paving, and architectural coating on the project site. Construction is performed in discrete steps, or phases, each with 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. Therefore, the noise levels vary 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 4.10.G lists maximum noise levels recommended for noise impact assessments for typical construction equipment included in the FHWA's 2006 *Construction Noise Handbook,*[5] based on a distance of 50 ft between the equipment and a noise receptor.

[5] Federal Highway Administration (FHWA). 2006a. *Construction Noise Handbook.* Final Report. August.

Typical maximum noise levels range up to 88 dBA L_{max} at 50 ft during the noisiest construction phases. The site preparation phase, including excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes 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.

Project construction is expected to require the use of scrapers, bulldozers, and water trucks/ pickup trucks. Noise associated with the use of each piece of construction equipment for the grading phase is estimated to be between 55 dBA L_{max} and 85 dBA L_{max} at a distance of 50 ft from the active construction area. As shown in Table 4.10.G, the maximum noise level generated by each scraper is assumed to be approximately 85 dBA L_{max} at 50 ft. Each bulldozer would generate approximately 85 dBA L_{max} at 50 ft. The maximum noise level generated by water trucks/pickup trucks is approximately 55 dBA L_{max} at 50 ft from these vehicles. Each doubling of the 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, the worst-case combined noise level during this phase of construction would be 88 dBA L_{max} at a distance of 50 ft from the active construction area. Based on a usage factor of 40 percent, the worst-case combined noise level during this phase of construction would be 84 dBA L_{eq} at a distance of 50 ft from the active construction area.

The closest residence is located approximately 220 ft from the project construction boundary and may be subject to short-term construction noise reaching 75 dBA L_{max} (71 dBA L_{eq}) generated by construction activities in the project area. Ambient noise levels at the closest residences are approximately 63.5 dBA L_{eq}, based on the short-term noise level measurement at ST-1 shown in Table 4.10.A. Although noise levels generated by project construction would be higher than ambient noise levels, increases in ambient noise levels would be minimal and would no longer occur once project construction is completed. The implementation of Mitigation Measure NOI-1 would be required to minimize construction noise impacts at the nearest sensitive receptors to a less-than-significant level.

Long-Term Noise Impacts. Operation of the proposed project would result in the generation of noise levels above Existing conditions. Noise-generating uses associated with residential uses typically include vehicle traffic and operational noise, such as heating, ventilation, and air conditioning (HVAC) equipment and typical motor vehicle/parking area activities.

Traffic Noise Impacts. Traffic noise levels under the existing and General Plan Buildout were assessed using the FHWA Highway Traffic Noise Prediction Model (FHWA RD 77-108). This model uses a typical vehicle mix for urban/suburban areas in California and requires parameters, including traffic volumes, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Existing traffic

volumes were obtained from the proposed project's TIA.[6] The standard vehicle mix for Orange County roadways was used for traffic on these roadway segments. Existing and General Plan Buildout without and with project traffic noise levels at 50 ft from the centerline of the outermost travel lane for each roadway segment in the project vicinity are shown in Table 4.10.H. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. Appendix G provides the specific assumptions used in developing these noise levels and model printouts.

As shown in Table 4.10.H, the project-related traffic noise increase would reach up to 2.2 dBA. Noise level increases below 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from project-related traffic on off-site sensitive receptors would be less than significant. No mitigation measures are required.

Operational Noise Impacts. As identified above, the proposed project would generate operational noise, such as from HVAC equipment. Noise generated from HVAC equipment could affect off-site noise-sensitive receptors in the project vicinity.

HVAC Equipment. The proposed residential project would include ground-floor HVAC equipment. Ground-floor HVAC equipment would generate noise levels of 43 dBA at 50 ft. It is assumed that HVAC equipment would operate 24 hours a day as a worst-case scenario.

The closest sensitive receptors to the project site are multifamily residences located approximately 220 ft northeast of the project site, across Calle Arroyo. At a distance of 220 ft, noise would be attenuated by 13 dBA compared to the noise level measured at 50 ft from the source. Noise levels from HVAC at the closest residence would be 30 dBA L_{eq} (43 dBA – 13 dBA = 30 dBA). This noise level would be lower than existing noise levels at the project site. In addition, this noise level would not exceed the City's day (7:00 a.m. to 7:00 p.m.), evening (7:00 p.m. to 10:00 p.m.), and nighttime (10:00 p.m. to 7:00 a.m.) exterior noise level standards of 65, 55, and 45 dBA, respectively. In addition, this noise level would not exceed the City's interior noise standard of 45 dBA for residences. Therefore, noise generated from on-site HVAC equipment would be less than significant. No mitigation measures are required.

6 LSA. 2019b. *Traffic Impact Analysis, Tirador Residential Development Project*. December.

Table 4.10.H: Existing and Buildout Traffic Noise Levels Without and With Proposed Project

Roadway Segment	Existing Conditions					General Plan Buildout Conditions					
	Without Project		With Project			Without Project		With Project			
	ADT	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from No Project Conditions	ADT	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Existing Conditions	Increase from No Project Conditions
Calle Arroyo west of Paseo Tirador	940	53.9	1,550	56.1	2.2	1,060	54.4	1,670	56.4	2.5	2.0
Calle Arroyo between Paseo Tirador and Rancho Viejo Road	1,655	56.4	2,475	58.1	1.7	2,460	58.1	3,280	59.4	3.0	1.3
Calle Arroyo east of Rancho Viejo Road	5,950	60.4	6,140	60.6	0.2	14,580	64.3	14,770	64.4	4.0	0.1
Rancho Viejo Road between Calle Arroyo and Paseo Espada	6,795	59.8	7,435	60.2	0.4	13,240	62.7	13,880	62.9	3.1	0.2
Rancho Viejo Road between Paseo Espada and Ortega Highway	10,855	61.4	11,405	61.7	0.3	18,445	63.7	18,995	63.9	2.5	0.2
Rancho Viejo Road between Ortega Highway and Golf Club Drive	10,530	65.6	10,675	65.7	0.1	14,280	66.9	14,425	67.0	1.4	0.1
Ortega Highway between I-5 SB Ramps and I-5 NB Ramps	37,110	64.2	37,455	64.2	0.0	46,725	65.2	47,070	65.2	1.0	0.0
Ortega Highway between I-5 NB Ramps and Rancho Viejo Road	38,175	67.8	38,635	67.8	0.0	48,035	68.8	48,495	68.8	1.0	0.0
Ortega Highway between Rancho Viejo Road and La Novia Avenue	31,630	68.4	31,750	68.4	0.0	39,970	69.4	40,090	69.4	1.0	0.0
La Novia Avenue between Ortega Highway and Calle Arroyo	6,735	61.0	6,765	61.0	0.0	8,400	61.9	8,430	61.9	0.9	0.0
La Novia Avenue between Calle Arroyo and San Juan Creek Road	9,910	64.2	10,080	64.2	0.0	16,680	66.4	16,850	66.5	2.3	0.1
San Juan Creek Road east of Valle Road	10,760	64.1	10,000	64.2	0.1	20,200	67.2	20,360	67.3	3.2	0.1
San Juan Creek Road west of La Novia Avenue	8,700	66.6	10,850	66.7	0.1	12,690	67.3	12,780	67.4	0.8	0.1

Source: Compiled by LSA (2019).
Note: Traffic noise within 50 ft of the roadway centerline should be evaluated with site-specific information.
ADT = average daily trips
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet
I-5 = Interstate 5
NB = northbound
SB = southbound

Threshold 4.10.2: Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Less Than Significant Impact.

Construction Vibration Impacts. Construction of the proposed project could result in the generation of ground-borne vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB (vibration velocity decibels) and will assess the potential for building damages using vibration levels in PPV (in/sec) because vibration levels calculated in RMS velocity are best for characterizing human response to building vibration, while vibration levels in PPV are best used to characterize potential for damage. The Federal Transit Administration's (FTA) 2018 *Transit Noise and Vibration Impact Assessment Manual* guidelines indicate that a vibration level up to 102 VdB (equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered-timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

Table 4.10.I shows the PPV and VdB values at 25 ft from a construction vibration source. As shown in Table 4.10.I, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of ground-borne vibration when measured at 25 ft, based on the *Transit Noise and Vibration Impact Assessment Manual*. Outdoor site preparation for the proposed project is expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated to occur during the site preparation and grading phase. All other phases are expected to result in lower vibration levels.

Table 4.10.I: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS VdB is 1 µin/sec.
µin/sec = micro-inches per second
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment

would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below:

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$
$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

As identified in the Project Description, the project site is bordered on the north by Calle Arroyo, with commercial and institutional uses located beyond. El Horno Creek (a tributary of San Juan Creek) and San Juan Creek are adjacent to the south of the project site; a portion of the San Juan Creek Trail is located along the southern portion of the project site. The San Juan Hills Golf Club and multifamily residential developments are located further south of the project site. Paseo Tirador is located along a portion of the eastern boundary of the project site, with the Ortega Equestrian Center located further east. I-5 forms the western boundary of the project site, with the Del Obispo Shopping Center located beyond.

The closest buildings to the project site are commercial uses located northwest and north of the project site, which are located approximately 55 ft and 100 ft, respectively, from the project construction boundary. At 55 ft and 100 ft, the closest commercial buildings would experience vibration levels of up to 77 VdB (0.027 PPV [in/sec]) and 69 VdB (0.011 PPV [in/sec]), respectively. Other buildings surrounding the project site are located farther away and would experience lower vibration levels. Vibration levels at the closest commercial buildings would not exceed the FTA community annoyance threshold of 84 VdB for land uses similar to office uses. In addition, this vibration level would not exceed the FTA damage threshold of 94 VdB (0.2 in/sec PPV) for buildings constructed of non-engineered timber and masonry. Therefore, ground-borne vibration generated from construction activities associated with the proposed project would be less than significant. No mitigation measures are required.

Operational Vibration Impacts. The proposed residential project would not generate vibration. In addition, vibration levels generated from project-related traffic on the adjacent roadways (Calle Arroyo and Rancho Viejo Road) are unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Therefore, vibration generated from project-related traffic on the adjacent roadways would be less than significant. No mitigation measures are required.

Threshold 4.10.3: Would the project expose persons to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant with Mitigation Incorporated. The land use compatibility of the project site was assessed based on the City's exterior and interior noise standards shown in Table 4.10.E. As shown in Table 4.10.E, the City's exterior and interior noise standards are 65 dBA CNEL and 45 dBA CNEL, respectively, for single-family and multifamily residences.

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to evaluate the proposed on-site uses, which would be exposed to traffic noise on I-5. Traffic noise on Calle Arroyo and Paseo Tirador were not evaluated for the proposed on-site uses because traffic noise on these

roadways is low and its contribution to the noise environment is small. Traffic volumes on I-5 were obtained from Caltrans[7] and were adjusted to 2019 traffic using a 1 percent growth each year (total 2 percent growth) and a project trip generation of 890 ADT for the proposed on-site noise assessment.

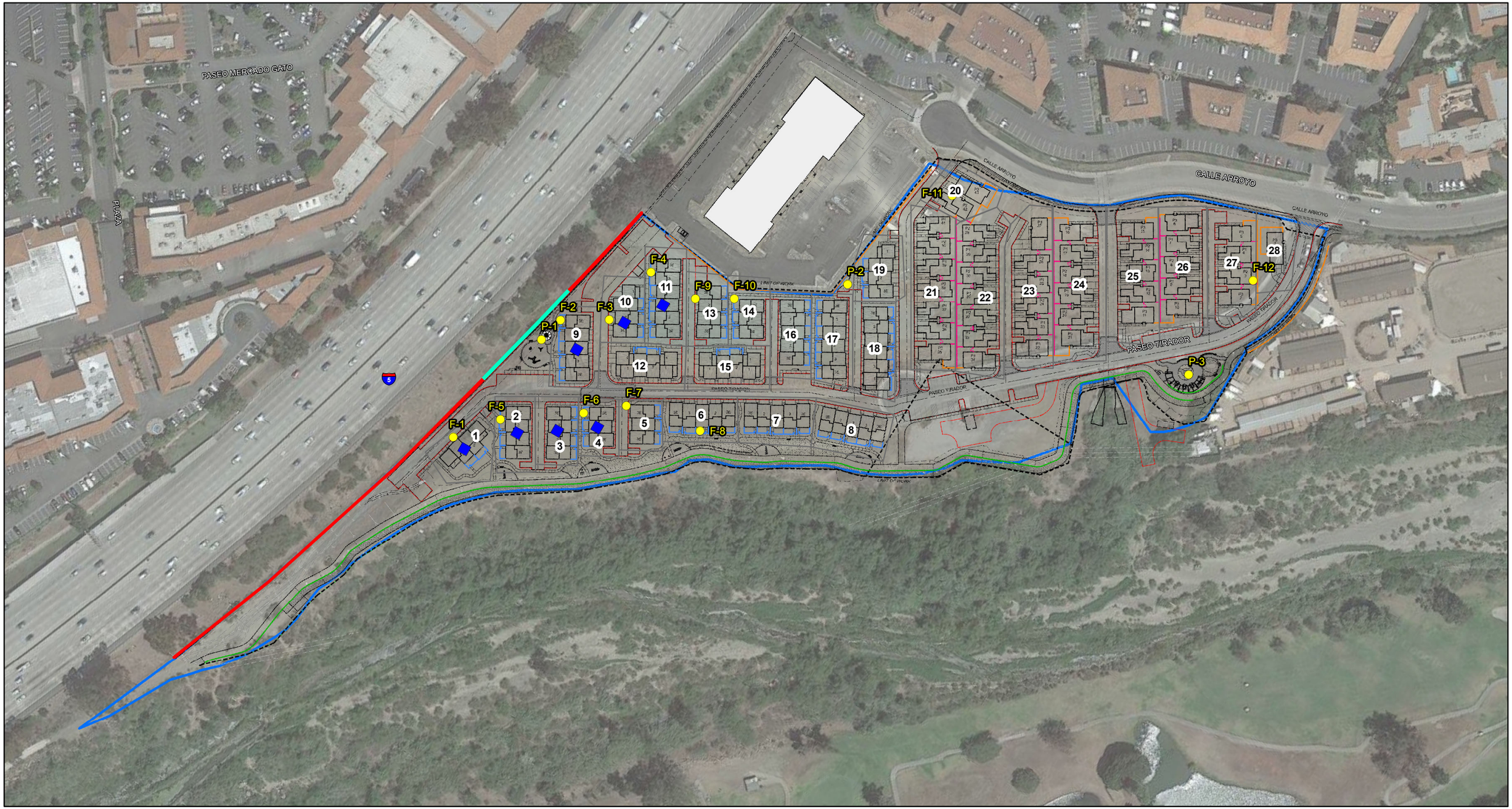
As noted above, under the description of the *CBIA v. BAAQMD* decision, impacts of the environment on a project are not subject to CEQA review. However, based on the noise analysis conducted for the project in order to comply with the City of San Juan Capistrano, the exterior noise level at the common outdoor areas shall not exceed 65 dBA CNEL and that interior noise levels in habitable rooms shall not exceed 45 dBA CNEL. The following recommendations are based on broad assumptions for typical residential uses. The recommendations should be considered preliminary and confirmed upon final plan approval.

Exterior Noise Assessment. For the purposes of this analysis, the noise-sensitive areas which are required to meet the City's exterior standard of 65 dBA CNEL include the private rear yards of the single-family homes and the common use areas such as the tot lot and gathering areas. The first-floor courtyard areas of the multi-family residences serve as a point of access to the units which are not typically considered private and therefore noise-sensitive; furthermore, solid noise barriers are not feasible as they would limit access. Lastly, the City exempts balconies of multi-family uses from the 65 dBA CNEL standard. To assess potential exterior noise level impacts at the noise-sensitive areas within the proposed project, receptor locations were evaluated.

Single-Family Homes. Due to the orientation of the rear-yards associated with the single-family homes on the eastern portion of the project site, the noise reduction associated with distance propagation, the 6 ft high property line wall, and the noise reduction provided by intervening buildings, exterior noise levels would range from 57.1 dBA CNEL to 59.2 dBA CNEL. With noise levels below 65 dBA CNEL at these single-family home rear-yards, no further noise reduction measures are necessary.

Tot Lot and Gathering Areas. Noise levels at the proposed tot lot and gathering areas are projected to results in noise levels ranging from 56.9 dBA CNEL to 73.5 dBA CNEL with the incorporation of the 6 ft high property line wall along the western property line and perimeter of the fitness center parking lot. Noise levels at the tot lot will exceed the 65 dBA CNEL exterior noise standard; therefore, an increased height of the perimeter wall is necessary. With the incorporation of a minimum 14 ft high wall near the proposed tot lot, noise levels would be reduced to 64.7 dBA CNEL and all noise-sensitive receptors would be below the City's exterior noise level standard for playground and park uses. Figure 4.10.1 shows the location and limitations of the increased wall height along with the tot lot and gathering area locations.

[7] California Department of Transportation (Caltrans). 2017. *Traffic Volumes: Annual Average Daily Traffic (AADT)*. Website: https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017/route-5-6 (accessed December 2019).



LSA

LEGEND

- Project Site
- Modeled Receptor Locations
- Buildings Requiring Façade Upgrades
- Proposed 6’ High Property Line Wall
- Minimum 14’ High Wall (Tot Lot)
- 5'-6" High Block Wall - 2 Sided Precision Scored with Precision Cap
- 5'-6" High Privacy Fence - Vinyl
- 3'-6" Courtyard Wall
- 3'-6" Equestrian Wood Rail Fence
- Courtyard Gate - Farmhouse Architecture - Wood, Spanish Architecture - Iron
- Privacy Fence and Gate - Vinyl

0 75 150
FEET

SOURCE: Nearmap (09/30/2019)

I:\JCA1802\GIS\MXD\Receptors_TotWall_Facade.mxd (1/24/2020)

FIGURE 4.10.1

Tirador Residential Development Project

Modeled Receptor, Tot Lot Wall, and Façade Upgrade Locations

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Interior Noise Assessment. In order to assess the interior noise levels throughout the proposed project, noise levels at both first and third floor heights for various façade locations were calculated to determine which buildings would need upgraded building components. Based on the EPA Protective Noise Levels,[8] with a combination of exterior walls, doors, and windows, standard construction for Southern California (warm climate) buildings would provide approximately 24 dBA in exterior-to-interior noise reduction with windows and doors closed. Table 4.10.J shows the façade noise levels with a 6 ft high wall at the western property line along I-5 and, where applicable, the reduction provided by intervening buildings is incorporated. Details of the interior noise calculations at each receptor location and at each floor are provided in Appendix B.

Table 4.10.J: Modeled Interior Noise Levels

Receptor No.	Floor	Exterior Facade Noise Level (dBA CNEL)	Interior Noise Level With Standard Building Construction (dBA CNEL)[1]	Addition Noise Reduction Require Beyond Standard Construction (dBA CNEL)
F-1	1	72.5	**48.5**	3.5
	3	77.4	**53.4**	8.4
F-2	1	73.0	**49.0**	4.0
	3	78.1	**54.1**	9.1
F-3	1	67.7	43.7	-
	3	72.8	**48.8**	3.8
F-4	1	71.3	**47.3**	2.3
	3	76.1	**52.1**	7.1
F-5	1	71.6	**47.6**	2.6
	3	76.5	**52.5**	7.5
F-6	1	66.1	42.1	-
	3	71.0	**47.0**	2.0
F-7	1	60.2	36.2	-
	3	65.0	41.0	-
F-8	1	61.4	37.4	-
	3	66.2	42.2	-
F-9	1	64.1	40.1	-
	3	68.9	44.9	-
F-10	1	63.1	39.1	-
	3	68.0	44.0	-
F-11	1	59.2	35.2	-
	2	65.2	41.2	-
F-12	1	57.1	33.1	-
	2	60.6	36.6	-

Source: Compiled by LSA (2019).

[1] Numbers in **bold** represent noise levels that would exceed the City of San Juan Capistrano's interior noise standard of 45 dBA CNEL.

CNEL = Community Noise Equivalent Level

dBA = A-weighted decibels

[8] United States Environmental Protection Agency (EPA). 1978. *Protective Noise Levels, Condensed Version of EPA Levels Document*. November.

The results of the analysis show that some of the buildings on the western portion of the project site would need to upgrade the exterior façades in order to achieve adequate noise reduction. This can be accomplished by installing upgraded windows, improving wall construction, or a combo of both. Figure 4.10.1 shows the locations at which façade upgrades are required.

Once final architectural plans are available with the exterior wall details and window types, a Final Acoustic Report shall be prepared to confirm that the interior living spaces of residential dwelling units would meet the City's interior noise standard of 45 dBA CNEL with windows and doors closed. Mechanical ventilation such as air conditioning would be required for all residential dwelling units so that windows and doors can remain closed for a prolonged period of time. With implementation of Mitigation Measure NOI-2, on-site interior noise levels would be consistent with the City's Noise Element standards for residential interior areas.

4.10.7 Level of Significance Prior to Mitigation

Prior to the implementation of mitigation measures, the project could potentially result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of established noise standards during construction. The project would not result in significant operational noise impacts. The project would result in less than significant impacts related to ground-borne vibration and ground-borne noise levels and no impact related to the exposure of people to excessive noise levels within the vicinity of an airport or private airstrip. The project could result in the exposure of persons to noise levels in excess of standards established in the local general plan or noise ordinance.

4.10.8 Regulatory Compliance Measures and Mitigation Measures

4.10.8.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the proposed project.

4.10.9 Mitigation Measures

The proposed project is required to implement the following mitigation measures to reduce potential impacts to noise.

Mitigation Measure NOI-1 The project contractor shall implement the following measures during construction of the proposed project:

- Limit construction activities to between the hours of 7:00 a.m. and 6:00 p.m. Mondays through Fridays and between the hours of 8:30 a.m. and 4:30 p.m. on Saturdays. Construction noise is prohibited on Sundays and national holidays.

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.

- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.

- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.

- Designate a "disturbance coordinator" at the City of San Juan Capistrano (City) who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early or a bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

Mitigation Measure NOI-2

Prior to the approval of final building plans for the project, the City shall confirm that the project plans include a 14-foot-high soundwall along the western boundary of the project site adjacent to the tot lot. The Project Applicant shall prepare an acoustic study for approval by the Director of Development Services, or designee, that demonstrates that the exterior noise level at the common outdoor areas (tot lot and gathering areas) shall not exceed the 65 A-weighted decibel Community Noise Equivalent Level (dBA CNEL) and that interior noise levels in habitable rooms shall not exceed 45 dBA CNEL, as defined by the California Building Code. Acoustical design features shall be incorporated into the proposed project design, which may include a combination of exterior features to reduce noise, such as berms/walls and/or architectural features such as Sound Transmission Class (STC) rated windows and doors. All STC ratings shall be shown on the building plans and incorporated into the construction of the proposed project. Once final architectural plans with the exterior-wall details and window types are available, a Final Acoustic Report shall be prepared by a qualified consultant to confirm that the interior living spaces of residential dwelling units would meet the City interior noise standard of 45 dBA CNEL with windows and doors closed. If interior noise level thresholds are still exceeded after the Final Acoustic Report is completed, additional acoustical design features, including façade and window upgrades, shall be incorporated in the building plans in order to meet the interior noise standard.

4.10.10 Level of Significance after Mitigation

With the implementation of mitigation measures, all impacts would be reduced to a less than significant level.

4.10.11 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects. A cumulative noise or vibration impact would occur if multiple sources of noise and vibration combine to create impacts in close proximity to a sensitive receptor. Therefore, the cumulative area for noise impacts is the project site and any sensitive receptors in the immediately surrounding.

Less Than Significant with Mitigation Incorporated.

Construction Noise. Construction activities associated with the proposed project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to each construction site. Construction noise for the proposed project was determined to be less than significant with the implementation of Mitigation Measure NOI-1, which requires compliance with the construction hour restrictions in the City's Municipal Code. Cumulative development in the vicinity of the project site could result in elevated construction noise levels at sensitive receptors in the project area. However, each project would be required to comply with the applicable City's Municipal Code limitations on construction. Therefore, cumulative construction noise impacts would be less than significant with the implementation of Mitigation Measure NOI-1.

Less Than Significant Impact.

Long-Term Traffic Noise Impacts. According to the EPA, cumulative noise impacts represent the combined and incremental effects of human activities that accumulate over time. While the incremental impacts may be insignificant by themselves, the combined effect may result in a significant impact. Conversely, although there may be a significant noise increase due to the proposed project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project.

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to operation of the project and other projects in the vicinity. A project's contribution to a cumulative traffic noise increase could be considered significant when the combined effect exceeds the perception level (i.e., auditory level increase) threshold. The combined effect compares the General Plan Buildout With Project condition to Existing conditions. This comparison accounts for the traffic noise increase generated by a project combined with the traffic noise increase generated by projects in the area. The incremental effect compares the General Plan Buildout With Project condition to the General Plan Buildout Without Project

condition. The following combined effect and incremental effect criteria have been utilized to evaluate the overall effect of the cumulative noise increase.

- **Combined Effect.** The General Plan Buildout With Project noise level would cause a significant cumulative impact if a 3.0 dB increase over Existing conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to the proposed project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project.

  and

- **Incremental Effects.** The General Plan Buildout With Project noise level causes a 1.0 dBA increase in noise over the General Plan Buildout Without Project noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded at a single roadway segment, since such an occurrence would indicate that there is a significant noise increase due to the proposed project in combination with other related projects and a significant portion of the noise increase is due to the proposed project. Noise by definition is a localized phenomenon and reduces as distance from the source increases. Consequently, only the proposed project and growth due to occur in the project site's general vicinity would contribute to cumulative noise impacts. Table 4.10.K lists the traffic noise effects along roadway segments in the project vicinity for existing and General Plan buildout traffic noise levels without and with proposed project, including incremental and net cumulative impacts.

As shown in Table 4.10.K, Calle Arroyo between Paseo Tirador and Rancho Viejo Road would surpass the combined effect threshold of 3.0 dBA over Existing conditions and incremental effect threshold of 1.0 dBA over General Plan No Project conditions; however, the resulting noise level would be 59.4 dBA CNEL at the closest sensitive receptors. In addition, this noise level would not exceed the City's daytime (7:00 a.m. to 7:00 p.m.), evening (7:00 p.m. to 10:00 p.m.), and nighttime (10:00 p.m. to 7:00 a.m.) exterior noise level standards of 65, 55, and 45 dBA, respectively. In addition, this noise level would not exceed the City's interior noise standard of 45 dBA for residences. Therefore, no significant cumulative traffic noise impact would result. In addition, while traffic noise at the segments of Calle Arroyo east of Rancho Viejo Road, Rancho Viejo Road between Calle Arroyo and Paseo Espada, and San Juan Creek Road east of Valle Road would surpass the combined effect threshold of 3.0 dBA over Existing conditions, there is no significant increase in noise beyond the General Plan No Project scenario as a result of the project, and thus no incremental effect. Furthermore, while traffic noise at the segments of Calle Arroyo west of Paseo Tirador and Calle Arroyo between Paseo Tirador and Rancho Viejo Road would surpass the incremental effect threshold of 1.0 dBA over General Plan No Project conditions, there is no significant incremental effect increase. Therefore, cumulative operational mobile source noise impacts would be less than significant. No mitigation is required.

Table 4.10.K: Cumulative Traffic Noise Scenario

Roadway Segment	CNEL (dBA) 50 ft from Centerline of Outermost Lane			Combined Effects[1]	Incremental Effects[2]	Cumulatively Significant Impact?
	Existing	General Plan Buildout No Project	General Plan Buildout Plus Project			
Calle Arroyo west of Paseo Tirador	53.9	54.4	56.4	2.5	2.0	No
Calle Arroyo between Paseo Tirador and Rancho Viejo Road	56.4	58.1	59.4	3.0	1.3	No
Calle Arroyo east of Rancho Viejo Road	60.4	64.3	64.4	4.0	0.1	No
Rancho Viejo Road between Calle Arroyo and Paseo Espada	59.8	62.7	62.9	3.1	0.2	No
Rancho Viejo Road between Paseo Espada and Ortega Highway	61.4	63.7	63.9	2.5	0.2	No
Rancho Viejo Road between Ortega Highway and Golf Club Drive	65.6	66.9	67.0	1.4	0.1	No
Ortega Highway between I-5 SB Ramps and I-5 NB Ramps	64.2	65.2	65.2	1.0	0.0	No
Ortega Highway between I-5 NB Ramps and Rancho Viejo Road	67.8	68.8	68.8	1.0	0.0	No
Ortega Highway between Rancho Viejo Road and La Novia Avenue	68.4	69.4	69.4	1.0	0.0	No
La Novia Avenue between Ortega Highway and Calle Arroyo	61.0	61.9	61.9	0.9	0.0	No
La Novia Avenue between Calle Arroyo and San Juan Creek Road	64.2	66.4	66.5	2.3	0.1	No
San Juan Creek Road east of Valle Road	64.1	67.2	67.3	3.2	0.1	No
San Juan Creek Road west of La Novia Avenue	66.6	67.3	67.4	0.8	0.1	No

Source: Compiled by LSA (2019).
Note: Traffic noise within 50 ft of the roadway centerline should be evaluated with site-specific information.
[1] Difference in CNEL between Existing and General Plan Buildout With Project.
[2] Difference in CNEL between General Plan Buildout Without Project and General Plan Buildout With Project.
ADT = average daily trips
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet
I-5 = Interstate 5
NB = northbound
SB = southbound

Long-Term Operational Noise Impacts. Long-term stationary noise sources associated with the development at the proposed project, combined with other cumulative projects, could cause local noise level increases. Noise levels associated with the proposed project and related cumulative projects together could result in higher noise levels than considered separately. As previously described, on-site noise sources associated with the proposed project would not exceed any applicable noise standards. Additionally, related cumulative projects would be required to comply with the City's noise level standards and include mitigation measures if standards are exceeded. Therefore, cumulative noise impacts from stationary noise sources would be less than significant.

4.11 TRANSPORTATION

This section analyzes the existing and planned transportation and circulation conditions for the proposed Tirador Residential Development Project (proposed project) and the surrounding area, and identifies circulation impacts that may result during, or subsequent to, the development of the proposed project. The analysis contained in this section is based on the *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (TIA) (LSA, February 2020), which is provided in Appendix H of this Environmental Impact Report (EIR).

4.11.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. Two of the comment letters included comments related to Transportation. The letter from the California Department of Transportation (Caltrans) received on December 6, 2019 requested preparation of a Traffic Impact Study to analyze potential short-term and long-term impacts to the State Highway System, including Interstate 5 (I-5) and State Route 74 (SR-74). The letter from the Orange County Transportation Authority (OCTA) received on December 6, 2019, requested that the TIA prepared for the proposed project be consistent with the latest *Orange County Congestion Management Program* (CMP) (OCTA November 2019).

4.11.2 Methodology

The TIA prepared for the project is consistent with the objectives and requirements of City of San Juan Capistrano Administrative Policy No. 310 (revised 1998), the City's General Plan Circulation and Growth Management Elements (1999), the Orange County CMP (2019), and applicable provisions of the California Environmental Quality Act (CEQA), including disclosure of project impacts in both existing and cumulative horizon years. The scope of work, including the project study area, was reviewed and approved by the City's Traffic Engineer. As shown in Table 4.11.A, the study area analyzed in the project TIA includes the following 19 intersections and 11 roadway segments:

Table 4.11.A: Study Area Intersections and Roadways

Intersections	Roadway Segments
1. Rancho Viejo Road/Junipero Serra Road	1. Rancho Viejo Road between Junipero Serra Road and Ortega Highway
2. I-5 northbound ramps/Junipero Serra Road	2. Ortega Highway between La Novia Avenue and Rancho Viejo Road (CMP Monitoring Location)
3. I-5 southbound ramps/Junipero Serra Road	3. Ortega Highway between Rancho Viejo Road and I-5 Northbound Ramps (CMP Monitoring Location)
4. Rancho Viejo Road/Golf Club Drive	4. Ortega Highway between I-5 Northbound Ramps and I-5 Southbound Ramps (CMP Monitoring Location)
5. La Novia Avenue/Ortega Highway	5. Ortega Highway between I-5 Southbound Ramps and Del Obispo Street
6. Rancho Viejo Road/Ortega Highway	6. Ortega Highway between Del Obispo Street and Camino Capistrano
7. I-5 Northbound Ramps/Ortega Highway (CMP Monitoring Location)	7. Del Obispo Street between Ortega Highway and Camino Capistrano
8. I-5 Southbound Ramps/Ortega Highway (CMP Monitoring Location)	8. Camino Capistrano between Ortega Highway and Del Obispo Street
9. Del Obispo Street/Ortega Highway	9. Camino Capistrano between Del Obispo Street and San Juan Creek Road
10. Camino Capistrano/Ortega Highway	10. San Juan Creek Road between Valle Road and Camino Capistrano
11. Rancho Viejo Road/Paseo Espada	11. Valle Road between San Juan Creek Road and I-5 northbound ramps
12. La Novia Avenue/Calle Arroyo	
13. Rancho Viejo Road/Calle Arroyo	
14. Paseo Tirador-San Juan Creek Trail/Calle Arroyo	
15. Camino Capistrano/Del Obispo Street	
16. La Novia Avenue/San Juan Creek Road	
17. Valle Road/San Juan Creek Road	
18. Camino Capistrano/San Juan Creek Road	
19. Valle Road/I-5 Northbound Ramps-La Novia Avenue (roundabout)	

Source: *Traffic Impact Analysis* (LSA, February 2020).
CMP = Congestion Management Program
I-5 Interstate 5

All of the study area intersections and roadway segments are located within the City of San Juan Capistrano's jurisdiction.

4.11.2.1 Intersection Level of Service Methodologies

Per City of San Juan Capistrano Administrative Policy No. 310, intersections are evaluated using both the intersection capacity utilization (ICU) and *Highway Capacity Manual* (HCM), 6th Edition (Transportation Research Board 2016) methodologies. The ICU methodology for signalized intersections compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums up these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of level of service (LOS), where LOS A represents free-flow activity and LOS F represents overcapacity operation.

The relationship between LOS and the ICU value (i.e., v/c ratio) is shown in Table 4.11.B:

Table 4.11.B: Level of Service and Volume-to-Capacity

Level of Service	Volume-to-Capacity (ICU Methodology)
A	≤0.60
B	>0.60 and ≤0.70
C	>0.70 and ≤0.80
D	>0.80 and ≤0.90
E	>0.90 and ≤1.00
F	>1.00

Source: *Traffic Impact Analysis* (LSA, February 2020).
ICU = intersection capacity utilization

In addition to the ICU methodology for calculating intersection LOS, the HCM methodology was used. The HCM intersection methodology presents LOS in terms of delay (in seconds per vehicle). The resulting delay is expressed in terms of LOS, as in the ICU methodology. The HCM methodology was also used to evaluate the roundabout (Valle Road/I-5 northbound ramps – La Novia Avenue). The relationship between LOS and the delay (at signalized and unsignalized intersections) is shown in Table 4.11.C:

Table 4.11.C: Level of Service and Intersection Delay

Level of Service	Intersection Delay (seconds) per Vehicle (HCM Methodology)	
	Signalized	Unsignalized
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: *Traffic Impact Analysis* (LSA, February 2020).
HCM = *Highway Capacity Manual* (Transportation Research Board 2017)

The study area intersection LOS analysis was conducted for the weekday a.m. and p.m. peak hours. The City requires an HCM operational analysis of study area intersections designated as "hot spots" using the *Synchro* computer software package. Intersections designated as hot spots are closely spaced and experience high volumes during the peak hours. Based on discussion with City staff, the peak 30-minute volumes in the a.m. and p.m. peak-hour periods are multiplied by 2 to represent the peak-hour volumes at the hot spot intersections. This analysis is conducted to evaluate the impacts of the proposed project on the signal operations of these locations. In addition to the hot spot locations, LSA utilized *Synchro* (version 10) for the HCM analyses of all other study area intersections.

4.11.2.2 Roadway Segment Level of Service Methodology

Roadway segment v/c ratios were determined using the daily capacities contained in the OCTA's *Guidance for Administration of the Orange County Master Plan of Arterial Highways* (MPAH) (OCTA 2018). Table 4.11.D illustrates daily capacities for roadways in the study area:

Table 4.11.D: Daily Roadway Capacities

Facility Type	Number of Lanes	Capacity
Major	8	75,000
Major	6	56,300
Primary	4 (Divided)	37,500
Secondary	4 (Undivided)	25,000
Limited Secondary	2 (Divided)	20,000
Local Arterial	2 (Undivided)	12,500

Source: *Traffic Impact Analysis* (LSA, February 2020).

4.11.2.3 City of San Juan Capistrano Thresholds of Significance

The City of San Juan Capistrano considers LOS D as the upper limit of satisfactory operations for intersections and roadway segments. However, as indicated in the City of San Juan Capistrano General Plan Circulation Element, the following intersections and roadway segments are identified as hot-spot locations where LOS E is considered satisfactory:

- Hot-Spot Intersections
    - I-5 northbound ramps/Ortega Highway
    - I-5 southbound ramps/Ortega Highway
    - Del Obispo Street/Ortega Highway
    - La Novia Avenue/Calle Arroyo
    - Camino Capistrano/Del Obispo Street
    - Camino Capistrano/San Juan Creek Road

- Hot-Spot Roadway Segments
    - Ortega Highway between I-5 northbound ramps and I-5 southbound ramps
    - Ortega Highway between I-5 southbound ramps and Del Obispo Street
    - Del Obispo Street between Ortega Highway and Camino Capistrano

Ortega Highway is an Orange County CMP roadway. LOS E is considered acceptable at this location, consistent with the City's target LOS for hot spot locations.

Based on the City's Administration Policy No. 310, a project impact occurs at a non-hot spot intersection (or roadway segment) when the project's increase in ICU (or v/c ratio) is 0.01 or greater and the resulting LOS is E or F (ICU methodology). A project impact also occurs at a non-hot spot intersection when the project's increase in delay is 1.0 second or greater and the resulting LOS is E or F (HCM methodology).

A project impact occurs at a hot spot intersection (or roadway segment) when the project's increase in ICU (or v/c ratio) is 0.01 or greater and the resulting LOS is F. A project impact also occurs at a hot spot intersection when the project's increase in delay is 1.0 second or greater and the resulting LOS is F.

A cumulative impact occurs at a non-hot spot intersection (or roadway segment) when the project's increase in ICU (or v/c) between Existing Baseline and Existing Plus Project conditions is 0.01 or greater and the Existing Plus Project LOS is A, B, C, or D, and the Existing Plus Project Plus Cumulative LOS is E or F. A cumulative impact also occurs at a non-hot spot intersection when the project's increase in delay between Existing Baseline and Existing Plus Project conditions is 1.0 second or greater and the Existing Plus Project LOS is A, B, C, or D, and the Existing Plus Project Plus Cumulative LOS is E or F.

A cumulative impact occurs at a hot spot intersection (or roadway segment) when the project's increase in ICU (or v/c) between Existing Baseline and Existing Plus Project conditions is 0.01 or greater and the Existing Plus Project LOS is A, B, C, D, or E, and the Existing Plus Project Plus Cumulative LOS is F. A cumulative impact also occurs at a hot spot intersection when the project's increase in delay between Existing Baseline and Existing Plus Project conditions is 1.0 second or greater and the Existing Plus Project LOS is A, B, C, D, or E, and the Existing Plus Project Plus Cumulative LOS is F.

A buildout impact is the same as the cumulative criteria above for hot spot and non-hot spot locations.

4.11.3 Existing Environmental Setting

The 16.1-acre undeveloped project site is located on the south side of Calle Arroyo. The project site is bordered on the north by Calle Arroyo, on the east by Paseo Tirador, and on the west by the I-5 freeway. Paseo Tirador, an existing street within the project site, has been vacated by the City, and it will become a private road as part of the proposed project.

4.11.3.1 Existing Circulation System

Regional access to the project site is provided by Interstate 5 (I-5), State Route 73 (SR-73), State Route 74 (SR-74, also known as Ortega Highway), and Pacific Coast Highway (PCH, also known as State Route 1). The I-5 freeway bisects the central portion of the City in a north-south direction and is directly adjacent to the west of the project site; SR-73 extends in an east-west direction in the northern portion of the City and is located approximately 3.2 miles northwest of the project site; Ortega Highway extends in an east-west direction approximately 0.2 mile north of the project site; and PCH extends in a north-south direction and is approximately 2.8 miles south of the project site. Vehicular, pedestrian, and bicycle access to the project site is currently provided via Calle Arroyo. Primary access to the project site would be provided via driveways on Paseo Tirador, and secondary access would be provided via two driveways on Calle Arroyo.

Key roadways in the vicinity of the project site are as follows:

- **Paseo Tirador:** Paseo Tirador is an undivided two-lane local street that provides direct access to the project site. It extends south from Calle Arroyo to San Juan Creek Trail. Paseo Tirador is currently a private road and will remain a private road as a part of the proposed development.

- **Calle Arroyo:** Calle Arroyo is an east-west roadway that provides direct access to the project site. Calle Arroyo is a two-lane undivided roadway west of Rancho Viejo Road and east of La Novia Avenue, and a four-lane divided roadway between Rancho Viejo Road and La Novia Avenue. It extends from east of San Juan Capistrano to its terminus east of I-5. The speed limit along Calle Arroyo east and west of Rancho Viejo Road is 35 miles per hour (mph) and 30 mph, respectively. Curbside parking is permitted along this roadway on select locations.

- **La Novia Avenue:** La Novia Avenue is a north-south roadway east of the project site, and an east-west roadway south of the project site. It is a divided four-lane roadway north of Calle Arroyo and south of San Juan Creek Road on its north-south portion. La Novia Avenue is an undivided two-lane, east-west roadway east of the I-5 northbound ramps at Valle Road, south of the project site. It extends south from Ortega Highway to the I-5 northbound ramps at Valle Road. La Novia Avenue is designated as a Primary Arterial north of San Juan Creek Road, and a Collector between San Juan Creek Road and the I-5 northbound ramps at Valle Road. The speed limit along La Novia Avenue north and south of San Juan Creek Road is 35 mph and 40 mph, respectively (25 mph adjacent to St. Margaret's Episcopal School when children are present). Curbside parking is not permitted on either side of La Novia Avenue, with the exception of the east side of the street north of Calle Arroyo.

- **Rancho Viejo Road:** Rancho Viejo Road is a four-lane, north-south roadway located northeast of the project site. It is generally divided with a raised median (and left-turn lanes for access to local streets) north of Ortega Highway and undivided south of Ortega Highway. It extends south from Mission Viejo to its terminus at Calle Arroyo. Rancho Viejo Road is designated as a Secondary Arterial north of Ortega Highway and a Collector south of Ortega Highway in the City's Circulation Element. The speed limit along Rancho Viejo Road north and south of Ortega Highway is 45 mph and 30 mph, respectively. Curbside parking is not permitted on either side of Rancho Viejo Road.

- **Camino Capistrano:** Camino Capistrano is a divided north-south roadway located west of the project site. It is a two-lane roadway north of Del Obispo Street, and a four-lane roadway south of Del Obispo Street. It extends south from Laguna Niguel, through the City, to its terminus in Dana Point. Camino Capistrano is designated as a Primary Arterial between San Juan Creek Road and Del Obispo Street, and a Secondary Arterial north of Del Obispo Street in the City's Circulation Element. The speed limits along Camino Capistrano north of Del Obispo Street vary from 25 mph to 45 mph, and south of Del Obispo Street, the limit is 35 mph. Curbside parking is permitted on both sides of this roadway in select locations.

- **Del Obispo Street**: Del Obispo Street is a four-lane divided roadway located west of the project site. It is a north-south roadway at its intersection with Ortega Highway, and becomes an east-west roadway at its intersection with Camino Capistrano to the west. Del Obispo Street is designated as a Secondary Arterial in the City's Circulation Element. The speed limit along Del Obispo Street is 35 mph. Curbside parking is not permitted on either side of the street.

- **Ortega Highway (SR-74):** Ortega Highway is a divided four-lane, east-west roadway north of the project site. It extends east from Camino Capistrano to Interstate 215 (I-215) in Perris. Ortega Highway is designated as a Primary Arterial east of the I-5 southbound ramps and as a Secondary Arterial west of the I-5 southbound ramps to Camino Capistrano. Between the I-5 northbound and southbound ramps, Ortega Highway functions as an eight-lane facility due to the dual left-turn lanes at the signalized I-5 southbound ramp/Ortega Highway intersection. East of the I-5 northbound ramps, and between the I-5 southbound ramps and Del Obispo Street, Ortega Highway is built as a six-lane facility. It is designated as a hot spot between I-5 and Del Obispo Street. The speed limit along Ortega Highway is 25 mph between Camino Capistrano and I-5 and 35–45 mph east of I-5. Curbside parking is permitted on both sides of this roadway in select locations.

- **Junipero Serra:** Junipero Serra is an undivided four-lane, east-west roadway north of the project site. It extends from Rancho Viejo Road to the east, to Camino Capistrano to the west. Junipero Serra is designated as a Primary Arterial in the City's Circulation Element. The speed limit along Junipero Serra is 35 mph. Curbside parking is not permitted on either side of Junipero Serra.

Pedestrian Circulation. In support of the City's General Plan Circulation Goal 3 to "provide an extensive public bicycle, pedestrian, and equestrian trails network," the project will incorporate a continuous system of sidewalks within the project site. The pedestrian amenities within the site and at its adjacencies have been designed to comply with the City's objective. Safe access to the public street system will be provided.

Sidewalks currently exist on both sides of Calle Arroyo (south side provides an off-street bike and pedestrian trail) in the project vicinity.

Bicycle Circulation. Adjacent to the project site, San Juan Creek Trail provides a bicycle trail. San Juan Creek Trail begins at the intersection of Calle Arroyo and Paseo Tirador, traverses the project site in a southwest direction, and terminates at the Pacific Ocean in the City of Dana Point. Rancho Viejo Road south of Ortega Highway (located west of the project site) provides an on-street (class II) bike lane on the west side of the street and a separated bike trail on the east side of the street. North of Ortega Highway, Rancho Viejo Road provides a two-way separated bike trail on the east side of the street.

Transit Facilities. An OCTA bus stop is provided approximately 1 mile west of I-5 on Camino Capistrano north of Ortega Highway. OCTA Route 91 provides transportation to/from the Laguna Hills Transportation Center and the San Clemente Metrolink Station with a stop at the San Juan Capistrano Train Depot.

With access to the San Juan Capistrano Train Depot approximately 1 mile west of the project site, Amtrak's Pacific Surfliner and Metrolink's Inland Empire-Orange County and Orange County Lines connect transit users to the larger Southern California region from the project site.

4.11.3.2 Existing Traffic Volumes and LOS Analysis

Consistent with City Administrative Policy 310, existing traffic volumes were collected over 3 consecutive days (Tuesday through Thursday, when schools were in session) by National Data & Surveying Services (NDS) in November 2018 for the study area intersections and roadway segments. The TIA, provided in Appendix H of this EIR, includes the existing traffic volume data.

Tables 4.11.E and 4.11.F summarize the results of the existing peak-hour LOS analysis for the study area intersections using the ICU and HCM methodologies, respectively. The ICU methodology for signalized intersections compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums up these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The HCM intersection methodology presents LOS in terms of delay (in seconds per vehicle). The resulting delay is expressed in terms of LOS, as in the ICU methodology. As shown in Table 4.11.E and 4.11.F, all study area intersections, including the hot-spot intersections, currently operate at satisfactory LOS based on the ICU methodology and the HCM methodology, respectively.

Existing roadway segment average daily trips (ADT) volumes (average of 3 days), v/c ratios, and LOS are presented in Table 4.11.G. As Table 4.11.G indicates, all study area roadway segments, including the hot-spot roadway, currently operate at satisfactory LOS, with the exception of Valle Road between San Juan Creek Road and I-5 northbound ramps (LOS F).

4.11.4 Regulatory Setting

4.11.4.1 Federal Regulations

No federal policies or regulations pertaining to transportation are applicable to the proposed project.

4.11.4.2 State Regulations

Senate Bill 743. On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law and started a process that changes the methodology of a transportation impact analysis as part of CEQA requirements. SB 743 directed the California Office of Planning and Research (OPR) to establish new CEQA guidance for jurisdictions that removes the level of service (LOS) method, which focuses on automobile vehicle delay and other similar measures of vehicular capacity or traffic congestion, from CEQA transportation analysis. Rather, vehicle miles traveled (VMT), or other measures that promote "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses," are now be used as the basis for determining significant transportation impacts in the State. While the requirement to measure transportation impacts via VMT analysis does not go into effect until July 1, 2020, a VMT analysis for the project is presented below for information purposes.

Table 4.11.E: Existing Intersection Level of Service Summary (ICU)

Intersection		Control	Peak Hour	Existing	
				ICU	LOS
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	0.421	A
			PM	0.408	A
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	0.674	B
			PM	0.595	A
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	0.781	C
			PM	0.724	C
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	0.295	A
			PM	0.299	A
5	La Novia Avenue/Ortega Highway	Signal	AM	0.650	B
			PM	0.707	C
6	Rancho Viejo Road/Ortega Highway	Signal	AM	0.650	B
			PM	0.789	C
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	0.717	C
			PM	0.688	B
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	0.653	B
			PM	0.681	B
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	0.528	A
			PM	0.506	A
10	Camino Capistrano/Ortega Highway	Signal	AM	0.508	A
			PM	0.476	A
11	Rancho Viejo Road/Paseo Espada	Signal	AM	0.292	A
			PM	0.338	A
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	N/A	N/A
			PM	N/A	N/A
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	0.165	A
			PM	0.205	A
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	N/A	N/A
			PM	N/A	N/A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	0.615	B
			PM	0.598	A
16	La Novia Avenue/San Juan Creek Road	Signal	AM	0.475	A
			PM	0.423	A
17	Valle Road/San Juan Creek Road	Signal	AM	0.489	A
			PM	0.614	B
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	0.375	A
			PM	0.495	A
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Roundabout	AM	N/A	N/A
			PM	N/A	N/A

Source: *Traffic Impact Analysis,* Table A (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
NB = northbound
OWSC = one-way stop control
SB = southbound
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)

Table 4.11.F: Existing Intersection Level of Service Summary (HCM)

Intersection		Control	Peak Hour	Existing	
				Delay	LOS
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	29.5	C
			PM	27.6	C
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	29.3	C
			PM	28.1	C
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	42.4	D
			PM	36.0	D
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	18.3	B
			PM	20.0	C
5	La Novia Avenue/Ortega Highway	Signal	AM	23.9	C
			PM	29.2	C
6	Rancho Viejo Road/Ortega Highway	Signal	AM	47.7	D
			PM	53.4	D
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	44.5	D
			PM	35.8	D
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	25.6	C
			PM	27.4	C
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	15.6	B
			PM	15.1	B
10	Camino Capistrano/Ortega Highway	Signal	AM	18.5	B
			PM	13.8	B
11	Rancho Viejo Road/Paseo Espada	Signal	AM	13.4	B
			PM	39.4	D
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	31.1	D
			PM	20.5	C
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	5.4	A
			PM	7.2	A
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	9.4	A
			PM	9.4	A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	34.4	C
			PM	35.0	C
16	La Novia Avenue/San Juan Creek Road	Signal	AM	32.6	C
			PM	34.4	C
17	Valle Road/San Juan Creek Road	Signal	AM	12.2	B
			PM	19.9	B
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	13.1	B
			PM	15.2	B
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Roundabout	AM	7.7	A
			PM	9.7	A

Source: *Traffic Impact Analysis,* Table B (LSA, February 2020).
[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).
AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.G: Existing Roadway Segment Level of Service Summary

Roadway	Segment	No. of Lanes	LOS E Capacity	Existing		
				ADT	V/C	LOS
Rancho Viejo Road	Junipero Serra to Ortega	4D	37,500	10,507	0.280	A
Ortega Highway	La Novia to Rancho Viejo[1]	5D	46,900	42,410	0.904	E
	Rancho Viejo to I-5 NB Ramps[1]	6D	56,300	49,586	0.881	D
	I-5 NB Ramps to I-5 SB Ramps[1,2]	8D	75,000	43,468	0.580	A
	I-5 SB Ramps to Del Obispo[1,2]	6D	56,300	37,390	0.664	B
	Del Obispo to Camino Capistrano[1]	4D	37,500	11,705	0.312	A
Del Obispo Street	Ortega to Camino Capistrano[2]	4D	37,500	27,817	0.742	C
Camino Capistrano	Ortega to Del Obispo	2D	22,000	14,073	0.640	B
	Del Obispo to San Juan Creek	4D	37,500	19,064	0.508	A
San Juan Creek Road	Valle to Camino Capistrano	4U	25,000	19,470	0.779	C
Valle Road	San Juan Creek to I-5 NB Ramps - La Novia	2U	12,500	12,701	1.016	F

Source: *Traffic Impact Analysis*, Table C (LSA, February 2020).
[1] Segment is a "CMP" (Congestion Management Program) location (LOS E is acceptable).
[2] Segment is considered a "Hot Spot" location (LOS E is acceptable).
= exceeds City's Level of Service criteria
For No. of Lanes: D = divided, and U = undivided
ADT = average daily trips
I-5 = Interstate 5
LOS = level of service
NB = northbound
SB = southbound
V/C = volume-to-capacity ratio

***State CEQA Guidelines* Section 15064.3, Subdivision (b).** In January 2018, the State of California Office of Planning and Research (OPR) submitted a proposal for comprehensive updates to the *State CEQA Guidelines* to the California Natural Resources Agency. The submittal included proposed updates related to the analysis of greenhouse gas (GHG) emissions, energy, transportation impacts pursuant to SB 743, and wildfires, as well as revisions to Section 15126.2(a) in response to the California Supreme Court's decision in California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal. 4th 369. On December 28, 2018, the updated *State CEQA Guidelines* went into effect.

As part of the update to the *State CEQA Guidelines*, Section 15064.3 was added and codifies that project-related transportation impacts are typically best measured by evaluating the project's VMT. Specifically, subdivision (b) focuses on specific criteria related to transportation analysis and is divided into four subdivisions: (1) land use projects, (2) transportation projects, (3), qualitative analysis, and (4) methodology. Subdivision (b)(1) provides guidance on determining the significance of transportation impacts of land use projects using VMT; projects located within 0.5 mile of high quality transit should be considered to have a less than significant impact. Subdivision (b)(2) addresses VMT associated with transportation projects and states that projects that reduce VMT, such as pedestrian, bicycle, and transit projects, should be presumed to have a less than significant impact. Subdivision (b)(3) acknowledges that Lead Agencies may not be able to quantitatively estimate VMT for every project type; in these cases, a qualitative analysis may be used. Subdivision (b)(4) stipulates that Lead Agencies have the discretion to formulate a methodology that would

appropriately analyze a project's VMT. Although an agency may elect to be governed by the provisions of this section immediately, it is not required until July 1, 2020.

4.11.4.3 Regional Regulations

Orange County Congestion Management Program. OCTA is a multimodal transportation agency that began in 1991 with the consolidation of seven separate agencies. OCTA serves Orange County residents and travelers by providing the following: countywide bus and paratransit service; Metrolink rail service; the 91 Express Lanes; freeway, street, and road improvement projects; individual and company commuting solutions; motorist aid services; and regulation of taxi operations. State law requires that a CMP be developed, adopted, and updated biennially for every county that includes an urbanized area, and requires that it include every city and the county government within that county. As the Congestion Management Agency for Orange County, OCTA is responsible for implementing the Orange County CMP.

OCTA adopted the CMP in 1991 to reduce traffic congestion and to provide a mechanism for coordinating land use and development decisions in Orange County. Compliance with the CMP requirements ensures a city's eligibility to compete for State gas tax funds for local transportation projects. The CMP was updated most recently in November 2019.

4.11.4.4 Local Regulations

City of San Juan Capistrano General Plan. The City of San Juan Capistrano General Plan was approved by the City Council in December 1999, with the exception of the Housing Element, which was updated and adopted by the City Council in January 2014. In May 2002, the City Council approved a General Plan Amendment, which included a variety of changes to several of the General Plan Elements.

The City's General Plan is the principal land use document guiding development within the City. The City's General Plan is a comprehensive plan that establishes goals, objectives, and policies intended to guide growth and development in the City. The General Plan also serves as a blueprint for development throughout the community and is the vehicle through which the community needs, desires, and aspirations are balanced. The San Juan Capistrano General Plan is the fundamental tool for influencing the quality of life in the City.

> ***Circulation Element.*** The Circulation Element (1999) aims to guide the continued development and implementation of the circulation system to support existing and planned development. The Circulation Element also established acceptable roadway service levels and identifies improvements required to maintain these service levels. It is the stated goal of the City to maintain traffic and transportation LOS at LOS D, with the exception of Camino Capistrano/San Juan Creek Road and Camino Capistrano/I-5 southbound ramps (hot-spot intersections) and Camino Capistrano between the I-5 southbound ramps and Avenida Aeropuerto (hot-spot roadway segment), where LOS E is considered satisfactory. The Circulation Element also encourages the use of other transportation modes, including transit, walking, bicycling, and equestrian riding to reduce the demand on the transportation system and improve air quality. The following goals and policies applicable to the proposed project are presented in the Circulation Element:

Circulation Goal 1: Provide a system of roadways that meets the needs of the community.

Policy 1.1: Provide and maintain a City circulation system that is in balance with the land uses in San Juan Capistrano.

Policy 1.4: Improve the San Juan Capistrano circulation system roadways in concert with land development to ensure sufficient levels of service.

Circulation Goal 3: Provide an extensive public bicycle, pedestrian, and equestrian trails network.

Policy 3.1: Provide and maintain an extensive trails network that supports bicycles, pedestrians, and horses and is coordinated with those networks of adjacent jurisdictions.

Circulation Goal 4: Minimize the conflict between the automobile, commercial vehicles, pedestrians, horses, and bicycles.

Policy 4.1: Provide sufficient right-of-way widths along roadways to incorporate features that buffer pedestrians, horses, and bicycles from vehicular traffic.

Policy 4.3: Install additional street improvements within areas where necessary to improve vehicular and non-vehicular safety.

City Council Policy No. 310. City Council Policy No. 310 requires development projects to conduct a transportation impact analysis to analyze conformance with the transportation strategies, goals, and policies in the General Plan and address adverse impacts to the transportation system. Refer to Section 4.11.2.3, City of San Juan Capistrano Thresholds of Significance, which explains how project-related impacts are determined.

4.11.5 Thresholds of Significance

The thresholds for transportation impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to transportation if it would:

Threshold 4.11.1: **Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.**

Threshold 4.11.2: **Conflict or be inconsistent with CEQA Guidelines section 15064.3 or will conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.**

Threshold 4.11.3: **Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

Threshold 4.11.4: **Result in inadequate emergency access.**

The Initial Study, provided in Appendix A, substantiates that there would be no impacts associated with Threshold 4.11.3 as vehicular traffic to and from the project site would utilize the existing network of regional and local roadways that currently serve the project site area. Further, design of the proposed project's internal private roadways, ingress, egress, and other streetscape changes, would be subject to review by the City's Department of Public Works for compliance with City regulations. Therefore, the proposed project would not impact traffic safety due to a design feature. In addition, the Initial Study substantiates that impacts associated with Threshold 4.11.4 would be less than significant as access to the project site would be provided via three driveways on Calle Arroyo, and one fire department emergency access point would connect the project site to the adjacent 24 Hour Fitness parking lot. Therefore, emergency access to and from the project site would be improved as compared to existing conditions, and impacts related to emergency access would be less than significant. Therefore, these thresholds will not be addressed in the following analysis.

4.11.6 Project Impacts

Threshold 4.11.1: **Would the project conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

Less Than Significant Impact.

Construction. As described further in Section 3.0, Project Description, construction equipment and vehicles will be staged on site. Although the project does not include any characteristics (e.g., permanent road closure or long-term blocking of road access) that would physically impair or otherwise interfere with transit, roadways, bicycle facilities, and/or pedestrian facilities in the project vicinity, the project would require temporary lane closures on Calle Arroyo to allow for utility connections on the project site.

Project construction would take approximately 20 months. Project construction will consist of the five phases (including average duration, number of employees, and trucks) listed below. It should be noted that Phases 3–5 would overlap for a period of 7 months.

- **Phase 1 – Site Preparation (1 month):** 9 workers
- **Phase 2 – Grading (5 months):** 10 workers and 38 haul trucks
- **Phase 3 – Building Construction (13 months):** 71 workers and 19 vendor trucks
- **Phase 4 – Paving (8 months):** 8 workers
- **Phase 5 – Architectural Coatings (8 months):** 14 workers
- **Overlapping Phases 3–5 (7 months):** 93 workers and 19 vendor trucks

Typical construction hours are 7:00 a.m. to 5:00 p.m., consistent with the City's Municipal Code (Section 8-2.04). Each worker will arrive between 6:30 a.m. and 7:00 a.m. (outside of the a.m. peak hour). Approximately 60 percent of the workers will leave between 3:30 p.m. and 4:00 p.m. (outside the p.m. peak hour) and the remaining 40 percent will leave after 4:00 p.m. (during the p.m. peak hour). To present a conservative analysis, all workers are assumed to drive themselves to/from the project site. Vendor truck trips will occur throughout the day (between 7:00 a.m. and 5:00 p.m.) and haul truck trips will occur outside of the peak hours (between 9:00 a.m. and 4:00 p.m.).

As determined in the TIA, the most intense period of construction (i.e., the overlap of Phases 3–5) would generate 10 a.m. peak-hour trips (5 inbound and 5 outbound) and 47 p.m. peak-hour trips (5 inbound and 42 outbound) in passenger car equivalents (PCEs). Because operations associated with the proposed project (64 a.m. peak-hour trips and 82 p.m. peak-hour trips [discussed in further detail below]) would generate more trips than construction (10 a.m. peak-hour trips and 47 p.m. peak-hour trips) and the LOS analyses have determined that the project would not result in any significant traffic impacts, it can be concluded that construction traffic impacts would be less than significant.

Although construction traffic would be less than traffic generated by project operation, the project would be required to adhere to all applicable City requirements to reduce potential impacts on the local circulation system during project construction. Therefore, construction of the project would result in less than significant traffic impacts related to potential conflicts with plans, programs, ordinances, or policies addressing the local circulation system, and no mitigation would be required.

Operation. The proposed project would be required to comply with General Plan policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The project would also be required to comply with City Council Policy No. 310, which establishes metrics for determining traffic impacts, consistent transportation-related goals and policies in the City's General Plan, and the Orange County CMP (2019). The project's consistency with these plans is described in detail below.

Conformance with the General Plan. The proposed project would be required to comply with transportation related goals and policies in the City's General Plan (refer to Section 4.11.4.4, above, for a list of goals and policies applicable to the proposed project) as described below.

As previously stated, primary access to the project site would be provided via driveways on Paseo Tirador, and secondary access would be provided via two driveways on Calle Arroyo. An LOS analysis was conducted at the intersection of Paseo Tirador-San Juan Creek Trail/ Calle Arroyo, which confirmed that this intersection would operate at LOS B or better during both peak hours using the ICU methodology.

As part of the project, a multi-purpose pedestrian, equestrian, and bicycle trail would be constructed along the project site's southern boundary. The multi-purpose trail would connect to the existing sidewalk along Calle Arroyo directly east of the project site, traverse along the site's southern boundary, and connect to the existing San Juan Creek Trail southwest of the site. Implementation of the multi-purpose trail would be consistent with the intention to expand the existing bicycle, pedestrian, and equestrian trails network (Circulation Element Goal 3 and Policy 3.1), as well as the intention to minimize the conflict between bicycle, pedestrian, and equestrian uses and vehicular traffic (Circulation Element Goal 4 and Policy 4.1).

The proposed project would also connect the project site to nearby sidewalks and bicycle routes on Calle Arroyo through the installation of new internal sidewalks serving the residential development. The project would also allow for the continuation of existing on-street (Class II) bike lanes provided on Rancho Viejo Road (located west of the project site), as well as continuation of the existing bicycle, pedestrian, and equestrian trail located along the San Juan Creek. The existing bicycle, pedestrian, and equestrian network also serve to connect the project area with the surrounding residential, employment, commercial, and recreational destinations. As such, the project would be consistent with the City's goals of proving a circulation system that meets the needs of the community and minimize conflicts between vehicles, pedestrians, equestrians, and bicycles (Circulation Element Goals 1 and 4). In addition, the development of an internal, private circulation system serving the residential development would be consistent with the intention of installing street improvements within areas where necessary to improve the circulation system in concert with land development (Circulation Element Policies 1.1 and 1.4). As such, the proposed project would not conflict with applicable provisions in the City's General Plan Circulation Element.

Conformance with Administration Policy No. 310. City Council Policy No. 310 requires development projects to conduct a transportation impact analysis to analyze conformance with the transportation strategies, goals, and policies in the General Plan and address adverse impacts to the transportation system.

In order to assess the project's consistency with City Administrative Policy 310, a trip generation analysis was first conducted to determine the number of trips that would occur following implementation of the project. As shown in Table 4.11.H, the project has the potential to generate approximately 890 ADT, including 64 trips (16 inbound and 48 outbound) in the a.m. peak hour and 82 trips (51 inbound and 31 outbound) in the p.m. peak hour.

Table 4.11.H: Trip Generation Summary

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates									
Single-Family Detached Housing		DU	9.44	0.19	0.55	0.74	0.62	0.37	0.99
Multifamily Housing		DU	5.44	0.09	0.27	0.36	0.27	0.17	0.44
Project Trip Generation									
Single-Family Detached Housing	43	DU	406	8	24	32	27	16	43
Multifamily Housing	89	DU	484	8	24	32	24	15	39
Total Trip Generation	**132**	**DU**	**890**	**16**	**48**	**64**	**51**	**31**	**82**

Source: *Traffic Impact Analysis*, Table D (LSA, February 2020).
[1] Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 10th Edition (2017):
Land Use Code 210 - Single-Family Detached Housing
Land Use Code 221 - Multifamily Housing (Mid-Rise)
ADT = average daily trips
DU = dwelling unit

In order to determine impacts at roadway intersections associated with implementation of the project (i.e., the Existing Plus Project condition), the results of the trip generation analysis for the proposed project were added to existing baseline traffic volumes at the study area intersections. Tables 4.11.I and 4.11.J summarize the results of the Existing Plus Project peak-hour LOS analysis using the ICU and HCM methodologies, respectively. As shown in Table 4.11.I, all study area intersections, including the hot-spot intersections, are anticipated to operate at satisfactory LOS based on the ICU methodology. As shown in Table 4.11.J, all study area intersections, including the hot-spot intersections, are anticipated to operate at satisfactory LOS based on the HCM methodology. Therefore, a significant impact would not occur at any study area intersection based on the ICU and HCM methodologies. No mitigation would be required.

In addition to assessing project impacts on roadway intersections, project-related impacts to roadway segments were also evaluated for conformance with City Administrative Policy No. 310. As part of this assessment, the trip generation results for the proposed project were added to existing baseline traffic volumes at study area roadway segments. Existing Plus Project roadway segment ADT volumes, v/c ratios, and LOS are presented in Table 4.11.K. As Table 4.11.K indicates, all study area roadway segments, including the hot-spot roadways, are anticipated to operate at satisfactory LOS with the project, except for Valle Road between San Juan Creek Road and the I-5 northbound ramps (LOS F). However, the roadway segment v/c ratio does not increase by 0.01 or greater in the Existing Plus Project condition. Therefore, consistent with City Administrative Policy No. 310, impacts would be considered less than significant under Existing Plus Project conditions. No mitigation would be required.

In summary, the project would not result in conflicts with City Administrative Policy No. 310 because the addition of project traffic would not result in impacts to the surrounding roadway system in the Existing Plus Project condition. Therefore, impacts would be less than significant, and no mitigation is required.

Table 4.11.I: Existing Plus Project Intersection Level of Service Summary (ICU)

Intersection		Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Project Impact[2]	
				ICU	LOS	ICU	LOS	ICU	Yes/ No
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	0.421	A	0.421	A	0.000	No
			PM	0.408	A	0.410	A	0.002	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	0.674	B	0.674	B	0.000	No
			PM	0.595	A	0.595	A	0.000	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	0.781	C	0.781	C	0.000	No
			PM	0.724	C	0.724	C	0.000	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	0.295	A	0.296	A	0.001	No
			PM	0.299	A	0.302	A	0.003	No
5	La Novia Avenue/Ortega Highway	Signal	AM	0.650	B	0.650	B	0.000	No
			PM	0.707	C	0.709	C	0.002	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	0.650	B	0.657	B	0.007	No
			PM	0.789	C	0.794	C	0.005	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	0.717	C	0.721	C	0.004	No
			PM	0.688	B	0.692	B	0.004	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	0.653	B	0.654	B	0.001	No
			PM	0.681	B	0.687	B	0.006	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	0.528	A	0.530	A	0.002	No
			PM	0.506	A	0.508	A	0.002	No
10	Camino Capistrano/Ortega Highway	Signal	AM	0.508	A	0.509	A	0.001	No
			PM	0.476	A	0.478	A	0.002	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	0.292	A	0.296	A	0.004	No
			PM	0.338	A	0.345	A	0.007	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	0.165	A	0.189	A	0.024	No
			PM	0.205	A	0.226	A	0.021	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	0.615	B	0.615	B	0.000	No
			PM	0.598	A	0.599	A	0.001	No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	0.475	A	0.478	A	0.003	No
			PM	0.423	A	0.431	A	0.008	No
17	Valle Road/San Juan Creek Road	Signal	AM	0.489	A	0.489	A	0.000	No
			PM	0.614	B	0.615	B	0.001	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	0.375	A	0.375	A	0.000	No
			PM	0.495	A	0.495	A	0.000	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A

Source: *Traffic Impact Analysis*, Table E (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A significant project impact occurs when the ICU in (2) minus the ICU in (1) is 0.01 or greater, and the LOS in (2) is E or F.

AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.J: Existing Plus Project Intersection Level of Service Summary (HCM)

	Intersection	Control	Peak Hour	1 Existing Delay	1 Existing LOS	2 Existing Plus Project Delay	2 Existing Plus Project LOS	3 Project Impact[2] Delay	3 Project Impact[2] Yes/No
1	Rancho Viejo Road/ Junipero Serra Road	Signal	AM	29.5	C	29.5	C	0.0	No
			PM	27.6	C	27.6	C	0.0	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	29.3	C	29.3	C	0.0	No
			PM	28.1	C	28.1	C	0.0	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	42.4	D	42.4	D	0.0	No
			PM	36.0	D	36.0	D	0.0	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	18.3	B	18.4	B	0.1	No
			PM	20.0	C	20.2	C	0.2	No
5	La Novia Avenue/Ortega Highway	Signal	AM	23.9	C	23.9	C	0.0	No
			PM	29.2	C	29.3	C	0.1	No
6	Rancho Viejo Road/ Ortega Highway	Signal	AM	47.7	D	47.7	D	0.0	No
			PM	53.4	D	53.4	D	0.0	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	44.5	D	44.7	D	0.2	No
			PM	35.8	D	36.0	D	0.2	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	25.6	C	25.7	C	0.1	No
			PM	27.4	C	27.6	C	0.2	No
9	Del Obispo Street/ Ortega Highway[1]	Signal	AM	15.6	B	15.6	B	0.0	No
			PM	15.1	B	15.1	B	0.0	No
10	Camino Capistrano/ Ortega Highway	Signal	AM	18.5	B	18.6	B	0.1	No
			PM	13.8	B	13.9	B	0.1	No
11	Rancho Viejo Road/ Paseo Espada	Signal	AM	13.4	B	13.5	B	0.1	No
			PM	39.4	D	38.2	D	-1.2	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	31.1	D	31.5	D	0.4	No
			PM	20.5	C	20.9	C	0.4	No
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	5.4	A	6.6	A	1.2	No
			PM	7.2	A	8.0	A	0.8	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	9.4	A	10.0	B	0.6	No
			PM	9.4	A	10.5	B	1.1	No
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	34.4	C	34.4	C	0.0	No
			PM	35.0	C	35.0	C	0.0	No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	32.6	C	32.7	C	0.1	No
			PM	34.4	C	34.5	C	0.1	No
17	Valle Road/San Juan Creek Road	Signal	AM	12.2	B	12.1	B	-0.1	No
			PM	19.9	B	19.8	B	-0.1	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	13.1	B	13.1	B	0.0	No
			PM	15.2	B	15.9	B	0.7	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Roundabout	AM	7.7	A	7.7	A	0.0	No
			PM	9.7	A	9.8	A	0.1	No

Source: *Traffic Impact Analysis*, Table F (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A significant project impact occurs when the delay in (2) minus the delay in (1) is 1.0 seconds or greater, and the LOS in (2) is E or F.

AWSC = all-way stop control
ICU = Intersection Capacity Utilization
I-5 Interstate 5
LOS = level of service
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.K: Existing Plus Project Roadway Segment Level of Service Summary

Roadway	Segment	No. of Lanes	LOS E Capacity	1 Existing			Project ADT	2 Existing Plus Project			3 Project Impact[3]	
				ADT	V/C	LOS		ADT	V/C	LOS	Δ V/C	Yes/No
Rancho Viejo Rd	Junipero Serra to Ortega	4D	37,500	10,507	0.280	A	0	10,507	0.280	A	0.000	No
Ortega Hwy	La Novia to Rancho Viejo[1]	5D	46,900	42,410	0.904	E	162	42,572	0.908	E	0.004	No
	Rancho Viejo to I-5 NB Ramps[1]	6D	56,300	49,586	0.881	D	162	49,748	0.884	D	0.003	No
	I-5 NB Ramps to I-5 SB Ramps[1,2]	8D	75,000	43,468	0.580	A	97	43,565	0.581	A	0.001	No
	I-5 SB Ramps to Del Obispo[1,2]	6D	56,300	37,390	0.664	B	32	37,422	0.665	B	0.001	No
	Del Obispo to Camino Capistrano[1]	4D	37,500	11,705	0.312	A	32	11,737	0.313	A	0.001	No
Del Obispo St	Ortega to Camino Capistrano[2]	4D	37,500	27,817	0.742	C	0	27,817	0.742	C	0.000	No
Camino Capistrano	Ortega to Del Obispo	2D	22,000	14,073	0.640	B	32	14,105	0.641	B	0.001	No
	Del Obispo to San Juan Creek	4D	37,500	19,064	0.508	A	130	19,194	0.512	A	0.004	No
San Juan Creek Rd	Valle to Camino Capistrano	4U	25,000	19,470	0.779	C	16	19,486	0.779	C	0.000	No
Valle Rd	San Juan Creek to I-5 NB Ramps - La Novia	2U	12,500	12,701	1.016	F	16	12,717	1.017	F	0.001	No

Source: *Traffic Impact Analysis*, Table G (LSA, February 2020).

[1] Segment is a "CMP" (Congestion Management Program) location (LOS E is acceptable).

[2] Segment is considered a "Hot Spot" location (LOS E is acceptable).

[3] A significant project impact occurs when the V/C in (2) minus the V/C in (1) is 0.01 or greater, and the LOS in (2) is E or F.

= exceeds City's Level of Service criteria

For No. of Lanes, D = divided, and U = undivided

ADT = average daily trips
I-5 = Interstate 5
LOS = level of service
NB = northbound
SB = southbound
V/C = volume-to-capacity ratio

Conformance with the Orange County CMP. Ortega Highway is an Orange County CMP roadway. LOS E is considered acceptable at this location, consistent with the City's target LOS for hot spot locations. The TIA included two intersections (I-5 northbound ramps/ Ortega Highway and I-5 southbound ramps/Ortega Highway) and three roadway segments (Ortega Highway between La Novia Avenue and Rancho Viejo Road, Ortega Highway between Rancho Viejo Road and I-5 northbound ramps, and Ortega Highway between I-5 northbound ramps and I-5 southbound ramps) considered CMP monitoring locations. As stated above, the addition of project traffic would not result in impacts to the surrounding roadway system in the Existing Plus Project condition, and therefore, the CMP monitoring locations included in the study area would not be significantly impacted. As such, no further analysis of project-related impacts on CMP roadway segments and/or intersections is required. Therefore, the proposed project would not result in conflicts with the Orange County CMP, and no mitigation would be required.

Queueing Analysis. The TIA analyzed the 95th percentile queues of the I-5 northbound and southbound ramps at Ortega Highway using the HCM 6th Edition methodology. The purpose of this analysis was to determine the adequacy of the existing turn-lane storage capacity and identify the potential for vehicles to spill back into the through lanes at these ramp intersections. The 95th-percentile queue is defined as the queue length that has only a 5 percent probability of being exceeded during the analysis time period. It is a useful parameter for determining the appropriate length of turn pockets, but it is not typical of what an average driver would experience. Table 4.11.L summarizes the queueing analysis for Existing, Existing Plus Project, Existing Plus Cumulative No Project, Existing Plus Cumulative Plus Project, Buildout No Project, and Buildout Plus Project conditions.

As shown in Table 4.11.L, the storage length of the dual westbound turn lanes at the I-5 southbound ramps at Ortega Highway will be exceeded under the Existing Plus Cumulative Plus Project condition. However, the project would only contribute 2 ft to the queue. Therefore, the project would not contribute significant queues under the Existing Plus Cumulative condition.

Similar to the Existing Plus Cumulative Plus Project condition, the storage lengths of four turn lanes at the I-5 northbound and southbound ramps at Ortega Highway will be exceeded under the Buildout Plus Project condition. However, the project would only contribute 6 ft or less to each of these queues. Therefore, the project would not contribute significant queues under the Buildout condition.

Table 4.11.L: I-5 Ramps/Ortega Highway Queueing Summary

ID	Intersection	Turn Movement	Storage Length (feet per lane)	Existing				Existing Plus Cumulative				Buildout			
				No Project		Plus Project		No Project		Plus Project		No Project		Plus Project	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
7	I-5 Northbound Ramps and Ortega Highway	NBR	740	396	193	398	193	438	246	443	244	540	283	540	288
		NBLTR	740	606	394	605	406	693	484	693	495	762	534	768	536
		EBR	385	62	53	62	53	113	54	115	54	226	167	227	172
8	I-5 Southbound Ramps and Ortega Highway	Dual SBL	400	267	340	268	344	273	349	274	354	428	554	429	559
		Dual SBR	400	248	192	251	193	373	276	374	277	426	313	428	314
		Dual WBL[1]	215	144	201	146	204	156	217	160	219	170	237	174	239

Source: *Traffic Impact Analysis*, Table O (LSA, February 2020).
= 95th Percentile Queue exceeds storage length expressed in feet per lane.
[1] Storage length is the average of the two left-turn lanes.
EBR = Eastbound Right
I-5 = Interstate 5
NBR = Northbound Right
NBLTR = Northbound Left-Through-Right
SBL = Southbound Left
SBR = Southbound Right
WBL = Westbound Left

Threshold 4.11.2: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 or will conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. According to *State CEQA Guidelines* Section 15064.3(a), project-related transportation impacts are generally best measured by evaluating the project's vehicle miles traveled (VMT). VMT refers to the amount and distance of automobile travel attributable to a project.

State CEQA Guidelines Section 15064.3(b) sets forth criteria for analyzing transportation impacts, breaking down the methodology based on project type and specifying other criteria for conducting VMT analysis.

For land use projects, VMT exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects located within 0.5 mile of an existing high-quality transit corridor should be considered to have a less than significant impact. *State CEQA Guidelines* Section 15064.3(b)(2) addresses VMT associated with transportation projects and states that projects that reduce VMT, such as pedestrian, bicycle, and transit projects, should be presumed to have a less than significant impact. Subdivision (b)(3) of the *State CEQA Guidelines*, Section 15064.3, acknowledges that Lead Agencies may not be able to quantitatively estimate VMT for every project type; in these cases, a qualitative analysis may be used. The regulation goes on to state that Lead Agencies have the discretion to formulate a methodology that would appropriately analyze a project's VMT. (*State CEQA Guidelines* Section 15064.3(b)(4)). It is important to note that *State CEQA Guidelines* Section 15064.3(c) states that while an agency may elect to be governed by the provisions of this section immediately, it is not required until July 1, 2020.

The City has not yet established thresholds or standards related to VMT. However, State law provides sufficient guidance to evaluate the project's impacts related to VMT.

The Governor's Office of Planning and Research (OPR) Technical Advisory (TA) states that existing VMT for residential projects may be measured at the regional or City level. For purposes of this vehicle miles traveled (VMT) evaluation, the City has been considered as the Region.

The OPR TA on Evaluating Transportation Impacts in CEQA for residential projects, December 2018: Page - 15 states the following:

> *"Recommended threshold for residential projects:*
>
> *A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the SCS for that city, and should be consistent with the SCS."*

The proposed project will not cumulatively exceed the number of units specified in the Orange County Sustainable Community Strategies (SCS) for the City. Therefore, for purposes of the VMT evaluation and as suggested in the TA, the project VMT per capita has been compared with the City's (Region) VMT per capita to determine whether the project will have a significant transportation impact.

The Orange County Transportation Analysis Model (OCTAM) has been used to estimate both the regional and project VMT, since it is consistent with the forecasts included in the 2018 Orange County Long Range Transportation Plan. The OCTAM socioeconomic database for both base (2012) and future (2040) scenarios was updated with the project land uses to calculate project VMT. Regional and project VMT were calculated from the OCTAM model runs as described below.

- **Project Traffic Analysis Zone Update:** The first step in preparation of the VMT evaluation was to update the traffic analysis zones (TAZs) in the model that include the project area. LSA converted the project land use into model socioeconomic categories. The OCTAM socioeconomic database for both base (2012) and future (2040) scenarios was updated with the project land uses to calculate project VMT. A separate TAZ was created and updated with the socioeconomic data developed for the proposed residential use.

- **Select Zone Model Runs:** Upon completion of the socioeconomic data update, LSA conducted model runs for both 2012 and 2040 scenarios. The model runs included select zone model runs for the project TAZ. The select zone runs have been utilized in determining project-specific VMT data from the model outputs.

In the TIA, regional and project VMT were calculated from the OCTAM runs, as described below. The regional (City) VMT per capita for both base (2012) and future (2040) model scenarios were obtained from the model. Existing (2019) VMT per capita was developed by interpolating between base and future year VMT data obtained from the model. The regional VMT is 24.2 per capita. Project select zone model runs were utilized to develop project VMT. Project VMT per capita was calculated for both base (2012) and future (2040) model scenarios. The existing (2019) project VMT per capita was developed by interpolating between the base and future year VMT per capita for the project. The project-related VMT is 11.7 per capita. As such, the VMT per capita for the project is 51 percent less than the regional VMT per capita under existing (2019) conditions (detailed VMT development calculations are included in Appendix G of the TIA). Therefore, based on the OPR TA guidance, the project will not have a significant VMT transportation impact.

At this time, the City has not adopted a methodology to analyze VMT impacts within its jurisdiction. Therefore, since the City does not currently have thresholds or standards in place for assessing potential VMT impacts, this information is provided for disclosure purposes only, and the analysis of traffic impacts in this Draft EIR for CEQA purposes are based on the City's LOS thresholds. Further, according to the TIA, implementation of the proposed project would not result in any significant project-related impacts to the surrounding roadway system. No mitigation would be required.

4.11.7 Level of Significance Prior to Mitigation

There would be no potentially significant impacts related to transportation.

4.11.8 Regulatory Compliance Measures and Mitigation Measures

4.11.8.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the proposed project.

4.11.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.11.9 Level of Significance after Mitigation

There would be no significant unavoidable adverse impacts of the proposed project related to transportation. No mitigation would be required.

4.11.10 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects. The cumulative impact area for transportation is the City of San Juan Capistrano. A list of approved/pending projects provided by the City was reviewed to determine whether projects in the vicinity of the project site (if any) should be included in the cumulative condition. With concurrence from the City, the approved/pending projects listed in Table H in the TIA were identified as cumulative projects.

4.11.10.1 Project Plus Cumulative (Opening Year 2021) Condition

Less Than Significant Impact. According to the Project Applicant, the project will open in 2021. To develop a Year 2021 condition, an ambient growth rate of 0.5 percent per year (i.e., 1.5 percent total growth) was applied to the existing 2018 traffic counts. This condition also included the proposed project trips and manually assigned trips generated by approved/pending (cumulative) projects. Application of a 0.5 percent per year growth rate to the existing traffic volumes is considered conservative and would account for any additional future development in the project vicinity.

Refer to Table H in the TIA for the list of approved/pending projects provided by City staff. This list was reviewed to identify projects in the vicinity of the project site that would contribute traffic in the study area beyond the ambient growth already assumed.

Tables 4.11.M and 4.11.N summarize the results of the Existing Plus Project Plus Cumulative peak hour LOS analysis for the study area intersections using the ICU and HCM methodologies, respectively. As shown in Tables 4.11.M and 4.11.N, all study area intersections, including the hot spot intersections, are forecast to operate at satisfactory LOS, with the exception of Rancho Viejo Road/Ortega Highway (LOS E in the p.m. peak hour based on the HCM methodology). However, the delay does not increase by 1.0 second or greater. Therefore, consistent with City Administrative Policy No. 310, a significant project or cumulative impact would not occur at any study area intersection based on the ICU and HCM methodologies.

Table 4.11.M: Existing Plus Project Plus Cumulative Intersection Level of Service Summary (ICU)

Intersection		Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Existing Plus Project Plus Cumulative		4 Cumulative Impact[2]	
				ICU	LOS	ICU	LOS	ICU	LOS	Δ ICU	Yes/No
1	Rancho Viejo Road/ Junipero Serra Road	Signal	AM	0.421	A	0.421	A	0.439	A	0.000	No
			PM	0.408	A	0.410	A	0.423	A	0.002	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	0.674	B	0.674	B	0.684	B	0.000	No
			PM	0.595	A	0.595	A	0.603	B	0.000	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	0.781	C	0.781	C	0.792	C	0.000	No
			PM	0.724	C	0.724	C	0.734	C	0.000	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	0.295	A	0.296	A	0.304	A	0.001	No
			PM	0.299	A	0.302	A	0.310	A	0.003	No
5	La Novia Avenue/Ortega Highway	Signal	AM	0.650	B	0.650	B	0.723	C	0.000	No
			PM	0.707	C	0.709	C	0.780	C	0.002	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	0.650	B	0.657	B	0.709	C	0.007	No
			PM	0.789	C	0.794	C	0.846	D	0.005	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	0.717	C	0.721	C	0.781	C	0.004	No
			PM	0.688	B	0.692	B	0.747	C	0.004	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	0.653	B	0.654	B	0.715	C	0.001	No
			PM	0.681	B	0.687	B	0.735	C	0.006	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	0.528	A	0.530	A	0.593	A	0.002	No
			PM	0.506	A	0.508	A	0.583	A	0.002	No
10	Camino Capistrano/Ortega Highway	Signal	AM	0.508	A	0.509	A	0.756	C	0.001	No
			PM	0.476	A	0.478	A	0.584	A	0.002	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	0.292	A	0.296	A	0.304	A	0.004	No
			PM	0.338	A	0.345	A	0.358	A	0.007	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	0.165	A	0.189	A	0.207	A	0.024	No
			PM	0.205	A	0.226	A	0.263	A	0.021	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	0.615	B	0.615	B	0.715	C	0.000	No
			PM	0.598	A	0.599	A	0.688	B	0.001	No

Table 4.11.M: Existing Plus Project Plus Cumulative Intersection Level of Service Summary (ICU)

Intersection		Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Existing Plus Project Plus Cumulative		4 Cumulative Impact[2]	
				ICU	LOS	ICU	LOS	ICU	LOS	Δ ICU	Yes/No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	0.475	A	0.478	A	0.511	A	0.003	No
			PM	0.423	A	0.431	A	0.478	A	0.008	No
17	Valle Road/San Juan Creek Road	Signal	AM	0.489	A	0.489	A	0.563	A	0.000	No
			PM	0.614	B	0.615	B	0.722	C	0.001	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	0.375	A	0.375	A	0.423	A	0.000	No
			PM	0.495	A	0.495	A	0.560	A	0.000	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: *Traffic Impact Analysis*, Table I (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A cumulative impact occurs when the ICU in (2) minus the ICU in (1) is 0.01 or greater, and the LOS in (3) is E or F.

AWSC = all-way stop control
ICU = Intersection Capacity Utilization
I-5 = Interstate 5
LOS = level of service
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.N: Existing Plus Project Plus Cumulative Intersection Level of Service Summary (HCM)

	Intersection	Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Existing Plus Project Plus Cumulative		4 Cumulative Impact[2]	
				Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Yes/No
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	29.5	C	29.5	C	29.5	C	0.0	No
			PM	27.6	C	27.6	C	27.6	C	0.0	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	29.3	C	29.3	C	29.7	C	0.0	No
			PM	28.1	C	28.1	C	28.3	C	0.0	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	42.4	D	42.4	D	45.0	D	0.0	No
			PM	36.0	D	36.0	D	38.2	D	0.0	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	18.3	B	18.4	B	18.3	B	0.1	No
			PM	20.0	C	20.2	C	20.1	C	0.2	No
5	La Novia Avenue/Ortega Highway	Signal	AM	23.9	C	23.9	C	23.9	C	0.0	No
			PM	29.2	C	29.3	C	29.8	C	0.1	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	47.7	D	47.7	D	52.5	D	0.0	No
			PM	53.4	D	53.4	D	59.7	E	0.0	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	44.5	D	44.7	D	49.9	D	0.2	No
			PM	35.8	D	36.0	D	39.2	D	0.2	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	25.6	C	25.7	C	30.4	C	0.1	No
			PM	27.4	C	27.6	C	30.6	C	0.2	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	15.6	B	15.6	B	18.9	B	0.0	No
			PM	15.1	B	15.1	B	18.0	B	0.0	No
10	Camino Capistrano/Ortega Highway	Signal	AM	18.5	B	18.6	B	33.6	C	0.1	No
			PM	13.8	B	13.9	B	17.2	B	0.1	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	13.4	B	13.5	B	13.7	B	0.1	No
			PM	39.4	D	38.2	D	37.7	D	-1.2	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	31.1	D	31.5	D	44.2	E	0.4	No
			PM	20.5	C	20.9	C	31.9	D	0.4	No
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	5.4	A	6.6	A	7.2	A	1.2	No
			PM	7.2	A	8.0	A	9.2	A	0.8	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	9.4	A	10.0	B	10.5	B	0.6	No
			PM	9.4	A	10.5	B	11.8	B	1.1	No
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	34.4	C	34.4	C	37.4	D	0.0	No
			PM	35.0	C	35.0	C	38.0	D	0.0	No

Table 4.11.N: Existing Plus Project Plus Cumulative Intersection Level of Service Summary (HCM)

	Intersection	Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Existing Plus Project Plus Cumulative		4 Cumulative Impact[2]	
				Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Yes/No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	32.6	C	32.7	C	33.5	C	0.1	No
			PM	34.4	C	34.5	C	34.9	C	0.1	No
17	Valle Road/San Juan Creek Road	Signal	AM	12.2	B	12.1	B	12.0	B	-0.1	No
			PM	19.9	B	19.8	B	18.1	B	-0.1	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	13.1	B	13.1	B	14.0	B	0.0	No
			PM	15.2	B	15.9	B	17.6	B	0.7	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	7.7	A	7.7	A	11.1	B	0.0	No
			PM	9.7	A	9.8	A	19.6	C	0.1	No

Source: *Traffic Impact Analysis,* Table J (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A cumulative impact occurs when the delay in (2) minus the delay in (1) is 1.0 seconds or greater, and the LOS in (3) is E or F.

AWSC = all-way stop control
ICU = Intersection Capacity Utilization
I-5 = Interstate 5
LOS = level of service
NB = northbound
OWSC = one-way stop control
SB = southbound

Existing Plus Project Plus Cumulative roadway segment ADT volumes, v/c ratios, and LOS are presented in Table 4.11.O. As Table 4.11.O indicates, all study area roadway segments, including the hot spot roadways, are forecast to operate at satisfactory LOS, with the exception of the following roadway segments:

- Camino Capistrano between Ortega Highway and Del Obispo Street (LOS E)
- San Juan Creek Road between Valle Road and Camino Capistrano (LOS E)
- Valle Road between San Juan Creek Road and I-5 northbound ramps (LOS F)

However, the v/c ratio does not increase by 0.01 or greater at these roadway segments. As such, consistent with City Administrative Policy No. 310, a significant project or cumulative impact would not occur at any study area roadway segment. Therefore, implementation of the proposed project under Existing Plus Project Plus Cumulative conditions would not result in a significant cumulative impact related to transportation. No mitigation is required.

4.11.10.2 General Plan Buildout (Year 2040) Condition

Less Than Significant Impact. The General Plan Buildout (2040) condition includes all planned circulation improvements consistent with the City's General Plan and all known cumulative projects in the project vicinity.

Tables 4.11.P and 4.11.Q summarize the results of the General Plan Buildout (2040) peak-hour LOS analysis for the study area intersections using the ICU and HCM methodologies, respectively. As shown in Table 4.11.P, all study area intersections, including the hot spot intersections, are forecast to operate at satisfactory LOS based on the ICU methodology, with the exception of La Novia Avenue/Ortega Highway (LOS E in the p.m. peak hour) and Rancho Viejo Road/Ortega Highway (LOS F in the p.m. peak hour). However, the v/c ratio does not increase by 0.01 or greater. Therefore, consistent with City Administrative Policy No. 310, a significant project or buildout impact would not occur at any study area intersection based on the ICU methodology.

As shown in Table 4.11.Q, all study area intersections, including the hot spot intersections, are forecast to operate at satisfactory LOS based on the HCM methodology, with the exception of the following intersections:

- I-5 southbound ramps/Junipero Serra Road (LOS E in the a.m. peak hour)
- Rancho Viejo Road/Ortega Highway (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- La Novia Avenue/Calle Arroyo (LOS F in the a.m. and p.m. peak hour)

However, the delay does not increase by 1.0 second or greater at these intersections. Therefore, consistent with City Administrative Policy No. 310, a significant project or buildout impact would not occur at any study area intersection based on the HCM methodology.

Table 4.11.O: Existing Plus Project Plus Cumulative Roadway Segment Level of Service Summary

				1				2			3			4	
				Existing			Project	Existing Plus Project			Existing Plus Project Plus Cumulative			Cumulative Impact[3]	
Roadway	Segment	No. of Lanes	LOS E Capacity	ADT	V/C	LOS	ADT	ADT	V/C	LOS	ADT	V/C	LOS	Δ V/C	Yes/No
Rancho Viejo Road	Junipero Serra to Ortega	4D	37,500	10,507	0.280	A	0	10,507	0.280	A	11,159	0.298	A	0.000	No
Ortega Highway	La Novia to Rancho Viejo[1]	5D	46,900	42,410	0.904	E	162	42,572	0.908	E	46,008	0.981	E	0.004	No
	Rancho Viejo to I-5 NB Ramps[1]	6D	56,300	49,586	0.881	D	162	49,748	0.884	D	54,178	0.962	E	0.003	No
	I-5 NB Ramps to I-5 SB Ramps[1,2]	8D	75,000	43,468	0.580	A	97	43,565	0.581	A	48,992	0.653	B	0.001	No
	I-5 SB Ramps to Del Obispo[1,2]	6D	56,300	37,390	0.664	B	32	37,422	0.665	B	42,042	0.747	C	0.001	No
	Del Obispo to Camino Capistrano[1]	4D	37,500	11,705	0.312	A	32	11,737	0.313	A	14,995	0.400	A	0.001	No
Del Obispo Street	Ortega to Camino Capistrano[2]	4D	37,500	27,817	0.742	C	0	27,817	0.742	C	30,744	0.820	D	0.000	No
Camino Capistrano	Ortega to Del Obispo	2D	22,000	14,073	0.640	B	32	14,105	0.641	B	20,320	0.924	E	0.001	No
	Del Obispo to San Juan Creek	4D	37,500	19,064	0.508	A	130	19,194	0.512	A	21,603	0.576	A	0.004	No
San Juan Creek Road	Valle to Camino Capistrano	4U	25,000	19,470	0.779	C	16	19,486	0.779	C	23,340	0.934	E	0.000	No
Valle Road	San Juan Creek to I-5 NB Ramps - La Novia	2U	12,500	12,701	1.016	F	16	12,717	1.017	F	16,753	1.340	F	0.001	No

Source: *Traffic Impact Analysis,* Table K (LSA, February 2020).

[1] Segment is a "CMP" (Congestion Management Program) location (LOS E is acceptable).

[2] Segment is considered a "Hot Spot" location (LOS E is acceptable).

[3] A cumulative impact occurs when the V/C in (2) minus the V/C in (1) is 0.01 or greater, and the LOS in (3) is E or F.

= exceeds City's Level of Service criteria

For No. of Lanes, D = divided, and U = undivided

ADT = average daily trips

I-5 Interstate 5

LOS = level of service

NB = northbound

SB = southbound

V/C = volume-to-capacity ratio

Table 4.11.P: Buildout Intersection Level of Service Summary (ICU)

	Intersection	Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Buildout		4 Buildout Impact[2]	
				ICU	LOS	ICU	LOS	ICU	LOS	Δ ICU	Yes/ No
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	0.421	A	0.421	A	0.489	A	0.000	No
			PM	0.408	A	0.410	A	0.531	A	0.002	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	0.674	B	0.674	B	0.732	C	0.000	No
			PM	0.595	A	0.595	A	0.636	B	0.000	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	0.781	C	0.781	C	0.842	D	0.000	No
			PM	0.724	C	0.724	C	0.784	C	0.000	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	0.295	A	0.296	A	0.380	A	0.001	No
			PM	0.299	A	0.302	A	0.409	A	0.003	No
5	La Novia Avenue/Ortega Highway	Signal	AM	0.650	B	0.650	B	0.899	D	0.000	No
			PM	0.707	C	0.709	C	0.976	E	0.002	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	0.650	B	0.657	B	0.889	D	0.007	No
			PM	0.789	C	0.794	C	1.025	F	0.005	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	0.717	C	0.721	C	0.829	D	0.004	No
			PM	0.688	B	0.692	B	0.792	C	0.004	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	0.653	B	0.654	B	0.790	C	0.001	No
			PM	0.681	B	0.687	B	0.859	D	0.006	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	0.528	A	0.530	A	0.625	B	0.002	No
			PM	0.506	A	0.508	A	0.623	B	0.002	No
10	Camino Capistrano/Ortega Highway	Signal	AM	0.508	A	0.509	A	0.798	C	0.001	No
			PM	0.476	A	0.478	A	0.618	B	0.002	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	0.292	A	0.296	A	0.591	A	0.004	No
			PM	0.338	A	0.345	A	0.587	A	0.007	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	0.165	A	0.189	A	0.340	A	0.024	No
			PM	0.205	A	0.226	A	0.411	A	0.021	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	0.615	B	0.615	B	0.766	C	0.000	No
			PM	0.598	A	0.599	A	0.729	C	0.001	No

Table 4.11.P: Buildout Intersection Level of Service Summary (ICU)

	Intersection	Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Buildout		4 Buildout Impact[2]	
				ICU	LOS	ICU	LOS	ICU	LOS	Δ ICU	Yes/ No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	0.475	A	0.478	A	0.603	B	0.003	No
			PM	0.423	A	0.431	A	0.584	A	0.008	No
17	Valle Road/San Juan Creek Road	Signal	AM	0.489	A	0.489	A	0.645	B	0.000	No
			PM	0.614	B	0.615	B	0.810	D	0.001	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	0.375	A	0.375	A	0.447	A	0.000	No
			PM	0.495	A	0.495	A	0.599	A	0.000	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: *Traffic Impact Analysis*, Table L (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A buildout impact occurs when the ICU in (1) minus the ICU in (2) is 0.01 or greater, and the LOS in (3) is E or F.

AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.Q: Buildout Intersection Level of Service Summary (HCM)

Intersection		Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Buildout		4 Buildout Impact[2]	
				Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Yes/ No
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	29.5	C	29.5	D	32.0	C	0.0	No
			PM	27.6	C	27.6	C	29.9	C	0.0	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	29.3	C	29.3	C	32.8	C	0.0	No
			PM	28.1	C	28.1	C	28.7	C	0.0	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	42.4	D	42.4	D	57.8	E	0.0	No
			PM	36.0	D	36.0	D	50.1	D	0.0	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	18.3	B	18.4	B	21.6	C	0.1	No
			PM	20.0	C	20.2	C	21.1	C	0.2	No
5	La Novia Avenue/Ortega Highway	Signal	AM	23.9	C	23.9	C	31.2	C	0.0	No
			PM	29.2	C	29.3	C	45.4	D	0.1	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	47.7	D	47.7	D	69.0	E	0.0	No
			PM	53.4	D	53.4	D	>80.0	F	0.0	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	44.5	D	44.7	D	58.9	E	0.2	No
			PM	35.8	D	36.0	D	45.0	D	0.2	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	25.6	C	25.7	C	38.6	D	0.1	No
			PM	27.4	C	27.6	C	43.0	D	0.2	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	15.6	B	15.6	B	20.3	C	0.0	No
			PM	15.1	B	15.1	B	19.7	B	0.0	No
10	Camino Capistrano/Ortega Highway	Signal	AM	18.5	B	18.6	B	38.2	D	0.1	No
			PM	13.8	B	13.9	B	18.0	B	0.1	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	13.4	B	13.5	B	20.4	C	0.1	No
			PM	39.4	D	38.2	D	43.7	B	-1.2	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	31.1	D	31.5	D	>80.0	F	0.4	No
			PM	20.5	C	20.9	C	>80.0	F	0.4	No
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	5.4	A	6.6	A	7.4	A	1.2	No
			PM	7.2	A	8.0	A	9.0	A	0.8	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	9.4	A	10.0	B	10.7	B	0.6	No
			PM	9.4	A	10.5	B	12.0	B	1.1	No
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	34.4	C	34.4	C	41.9	D	0.0	No
			PM	35.0	C	35.0	C	40.9	D	0.0	No

Table 4.11.Q: Buildout Intersection Level of Service Summary (HCM)

	Intersection	Control	Peak Hour	1 Existing Delay	1 Existing LOS	2 Existing Plus Project Delay	2 Existing Plus Project LOS	3 Buildout Delay	3 Buildout LOS	4 Buildout Impact[2] Δ Delay	4 Buildout Impact[2] Yes/ No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	32.6	C	32.7	C	37.4	D	0.1	No
			PM	34.4	C	34.5	C	38.7	D	0.1	No
17	Valle Road/San Juan Creek Road	Signal	AM	12.2	B	12.1	B	13.1	B	-0.1	No
			PM	19.9	B	19.8	B	19.8	B	-0.1	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	13.1	B	13.1	B	14.5	B	0.0	No
			PM	15.2	B	15.9	B	18.9	B	0.7	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	7.7	A	7.7	A	13.9	B	0.0	No
			PM	9.7	A	9.8	A	31.4	D	0.1	No

Source: *Traffic Impact Analysis*, Table M (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A buildout impact occurs when the delay in (2) minus the delay in (1) is 1.0 seconds or greater, and the LOS in (3) is E or F.

AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)
NB = northbound
OWSC = one-way stop control
SB = southbound

Buildout roadway segment ADT volumes, v/c ratios, and LOS are presented in Table 4.11.R. As this table indicates, all study area roadway segments, including the hot spot roadways, are forecast to operate at satisfactory LOS, with the exception of the following roadway segments:

- Ortega Highway between La Novia Avenue and Rancho Viejo Road (LOS F)
- Ortega Highway between Rancho Viejo Road and I-5 northbound ramps LOS F)
- Camino Capistrano between Ortega Highway and Del Obispo Street (LOS E)
- San Juan Creek Road between Valle Road and Camino Capistrano (LOS E)
- Valle Road between San Juan Creek Road and I-5 northbound ramps (LOS F)

However, the v/c ratio does not increase by 0.01 or greater at these roadway segments. As such, consistent with City Administrative Policy No. 310, a significant project or buildout impact would not occur at any study area roadway segment. Therefore, implementation of the proposed project under General Plan Buildout conditions would not result in a significant cumulative impact related to transportation. No mitigation is required.

Table 4.11.R: Buildout Roadway Segment Level of Service Summary

				1				2			3			4	
				Existing				Existing Plus Project			Existing Plus Project Plus Cumulative			Cumulative Impact[3]	
Roadway	Segment	No. of Lanes	LOS E Capacity	ADT	V/C	LOS	Project ADT	ADT	V/C	LOS	ADT	V/C	LOS	Δ V/C	Yes /No
Rancho Viejo Rd	Junipero Serra to Ortega	4D	37,500	10,507	0.280	A	0	10,507	0.280	A	13,207	0.352	A	0.000	No
Ortega Hwy	La Novia to Rancho Viejo[1]	5D	46,900	42,410	0.904	E	162	42,572	0.908	E	51,338	1.095	F	0.004	No
	Rancho Viejo to I-5 NB Ramps[1]	6D	56,300	49,586	0.881	D	162	49,748	0.884	D	67,801	1.204	F	0.003	No
	I-5 NB Ramps to I-5 SB Ramps[1,2]	8D	75,000	43,468	0.580	A	97	43,565	0.581	A	55,651	0.742	C	0.001	No
	I-5 SB Ramps to Del Obispo[1,2]	6D	56,300	37,390	0.664	B	32	37,422	0.665	B	44,725	0.794	C	0.001	No
	Del Obispo to Camino Capistrano[1]	4D	37,500	11,705	0.312	A	32	11,737	0.313	A	15,925	0.425	A	0.001	No
Del Obispo St	Ortega to Camino Capistrano[2]	4D	37,500	27,817	0.742	C	0	27,817	0.742	C	32,715	0.872	D	0.000	No
Camino Capistrano	Ortega to Del Obispo	2D	22,000	14,073	0.640	B	32	14,105	0.641	B	21,556	0.980	E	0.001	No
	Del Obispo to San Juan Creek	4D	37,500	19,064	0.508	A	130	19,194	0.512	A	22,975	0.613	B	0.004	No
San Juan Creek Rd	Valle to Camino Capistrano	4U	25,000	19,470	0.779	C	16	19,486	0.779	C	24,811	0.992	E	0.000	No
Valle Rd	San Juan Creek to I-5 NB Ramps - La Novia	2U	12,500	12,701	1.016	F	16	12,717	1.017	F	17,787	1.423	F	0.001	No

Source: *Traffic Impact Analysis,* Table N (LSA, February 2020).

[1] Segment is a "CMP" (Congestion Management Program) location (LOS E is acceptable).

[2] Segment is considered a "Hot Spot" location (LOS E is acceptable).

[3] A buildout impact occurs when the V/C in (2) minus the V/C in (1) is 0.01 or greater, and the LOS in (3) is E or F.

= exceeds City's Level of Service criteria

For No. of Lanes, D = divided, and U = undivided

ADT = average daily trips

LOS = level of service

V/C = volume-to-capacity ratio

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4.12 TRIBAL CULTURAL RESOURCES

This section of the Draft Environmental Impact Report (EIR) evaluates the potential for the proposed Tirador Residential Project (proposed project) to impact tribal cultural resources. Other potential impacts to cultural resources, including historic and archaeological resources, are evaluated in Section 4.4, Cultural Resources, of this Draft EIR. The analysis in this section summarizes pertinent information and findings from both Native American consultation and Section 4.8, Cultural/Scientific Resources, of the City of San Juan Capistrano's (City) *Ventanas Business Center Environmental Impact Report* (2007). The Ventanas Business Center Project was proposed for a 19.43-acre site that included the current project site in its entirety.

4.12.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. Two of the comment letters included comments related to Tribal Cultural Resources.

The letter from the Native American Heritage Commission (NAHC) received on November 14, 2019, provided information related to Native American consultation as required by Assembly Bill (AB) 52 and Senate Bill (SB) 18. The letter from the Juaneño Band of Mission Indians received on December 5, 2019, requested that a treatment plan be prepared that includes measures regarding monitoring and procedures for how any inadvertent discoveries of tribal resources would be addressed.

4.12.2 Methodology

A cultural resources assessment was conducted on the project site in 2007, in conjunction with the preparation of the City's *Ventanas Business Center Environmental Impact Report.* The study included a record search at the South Central Coastal Information Center (SCCIC), a pedestrian survey, and archaeological testing. The purpose of the 2007 records search at the SCCIC was to determine the extent of previous cultural resources investigations within a 0.25-mile radius of the project area, and whether any previously recorded archaeological sites or other historic resources exist within or near the project area.

In order to identify tribal cultural resources on the project site and analyze potentially significant impacts associated with construction and implementation of the proposed project, the City conducted Native American consultation in accordance with AB 52 requirements. AB 52 requires Native American consultation for any California Environmental Quality Act (CEQA) project that has a Notice of Preparation or a Notice of Negative Declaration or Mitigated Negative Declaration filed on or after July 1, 2015.

A Sacred Lands File (SLF) was requested from the NAHC for the proposed project, as was a list of potential Native American contacts for consultation. The search was requested to determine whether there are sensitive or sacred Native American resources on or near the site that could be affected by the proposed project. The NAHC responded on December, 28, 2018, to say that the SLF search was positive for the project area, indicating the presence of known and recorded sites that

may have the potential to contain tribal cultural resources. The NAHC provided a Tribal Consultation List that included the following 30 Native American representatives:

- Jeff Grubbe, Chairperson, Agua Caliente Band of Cahuilla Indians
- Patricia Garcia-Plotkin, Director, Agua Caliente Band of Cahuilla Indians
- Ralph Goff, Chairperson, Campo Band of Mission Indians
- Robert Pinto, Chairperson, Ewiiaapaayp Tribal Office
- Michael Garcia, Vice Chairperson, Ewiiaapaayp Tribal Office
- Erica Pinto, Chairperson, Jamul Indian Village
- Sonia Johnston, Chairperson, Juaneño Band of Mission Indians
- Matias Belardes, Chairperson, Juaneño Band of Mission Indians Acjachemen Nation – Belardes
- Joyce Perry, Tribal Manager, Juaneño Band of Mission Indians Acjachemen Nation – Belardes
- Teresa Romero, Chairperson, Juaneño Band of Mission Indians Acjachemen Nation – Belardes
- Thomas Rodriguez, Chairperson, La Jolla Band of Luiseno Indians
- Gwendolyn Parada, Chairperson, La Posta Band of Diegueno Mission Indians
- Javaughn Miller, Tribal Administrator, La Posta Band of Diegueno Mission Indians
- Angela Elliott Santos, Chairperson, Manzanita band of Kumeyaay Nation
- Mario Morales, Cultural Resources Representative, Mesa Grande Band of Diegueno Mission Indians
- Virgil Oyos, Chairperson, Mesa Grande Band of Diegueno Mission Indians
- Shasta Gaughen, Tribal Historic Preservation Officer, Pala Band of Mission Indians
- Temet Aguilar, Chairperson, Pauma Band of Luiseno Indians
- Paul Macarro, Cultural Resources Coordinator, Pechanga Band of Mission Indians
- Mark Macarro, Chairperson, Pechanga Band of Mission Indians
- Jim McPherson, Tribal Historic Preservation Officer, Rincon Band of Luiseno Indians
- Bo Mazzetti, Chairperson, Rincon Band of Luiseno Indians
- John Flores, Environmental Coordinator, San Pasqual Band of Diegueno Mission Indians
- Allen Lawson, Chairperson, San Pasqual Band of Diegueno Mission Indians
- Scott Cozart, Chairperson, Soboba Band of Luiseno Indians
- Joseph Ontiveros, Cultural Resource Director, Soboba Band of Luiseno Indians
- Cody Martinez, Chairperson, Sycuan Band of the Kumeyaay Nation
- Lisa Haws, Cultural Resources Manager, Sycuan Band of the Kumeyaay Nation
- Robert Welch, Chairperson, Viejas Band of the Kumeyaay Indians
- Julie Hagen, Viejas Band of the Kumeyaay Indians

The IS/NOP prepared for the project indicated that consultation under Senate Bill (SB) 18 would be required due to a General Plan Amendment proposed as part of the project. Since distribution of the IS/NOP, a General Plan Amendment is no longer required as part of the project, and therefore, consultation under SB 18 is also no longer required. As such, the City did not include the tribal representatives in the above list in the consultation process.

The City maintains a list of the following tribal representatives that have requested consultation under AB 52. The City sent letters for the purposes of AB 52 consultation to the following individuals on the City's AB 52 list on January 21, 2019:

- Joseph Ontiveros, Cultural Resource Director, Soboba Band of Luiseno Indians
- Joyce Perry, Tribal Manager, Juaneño Band of Mission Indians Acjachemen Nation – Belardes
- Michael Martinez Mirelez, Cultural Resource Coordinator, Torres Martinez Desert Cahuilla Indians

No additional responses or requests for consultation have been received.

4.12.2.1 Results

Results of the record search at the SCCIC completed for the City's *Ventanas Business Center Environmental Impact Report* in 2007 indicated that 9 cultural resources occur within 0.25 mile of the project site. Further, the 2007 site survey and assessment resulted in the recordation of one prehistoric site within the project site.

4.12.3 Existing Environmental Setting

Tribal cultural resources are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe." Additionally, a lead agency can, at its discretion and supported by substantial evidence, choose to treat a resource as a tribal resource. AB 52 requires lead agencies to conduct formal consultations with California Native American tribes during the CEQA process to identify tribal cultural resources that may be subject to significant impacts by a project.

The project site is located in the City east of Interstate 5 (I-5), south of Calle Arroyo, west of the Ortega Equestrian Center, and north of San Juan Creek. The floodplain of San Juan Creek extends into the southern portion of the project site. The existing project site is primarily characterized by dirt and scattered ruderal vegetation, is irregular in shape, and is relatively flat with a slight slope to the east/southeast. The Cultural Resources Element of the San Juan Capistrano General Plan (1999) delineates areas that possess sensitivity for cultural resources, specifically in Figure CR-2 of the Cultural Resources Element. The project site is located within the limits of the areas identified in Figure CR-2 where prehistoric and historic archaeological resources are known to exist.

Ethnographically, the project site and surrounding area fall within the territory of the Native American Acjachemen Nation, later named the Juaneño by their association with the Mission San Juan Capistrano. The Juaneño Native American tribe consisted of semi-sedentary hunters and gatherers. Much like many of the island tribes, one of the most important sources of food for the Juaneño Native American tribe were acorns gathered from oak groves in canyons, drainages, and foothills. Acorns were ground into flour using mortars and pestles. Seeds from sage, grasses, and other native plant species were collected and ground into meal with manos and metates. The primary sources of protein were meat from deer, rabbits, and other animals hunted with bow and arrow or trapped using snares, nets, and deadfalls. Coastal tribes also collected shellfish and used carved shell hooks for fishing.

The Juaneño Native American tribe lived in villages consisting of up to 250 people located near permanent sources of water and food. Villages were located at the center of an established territory, from which resources were gathered. Small groups left the village for short periods to hunt, fish, and gather plants. When traveling away from the village, small groups established

temporary camps and created locations where food and other materials were processed. Evidence of these areas include manos and metates for seed grinding, bedrock mortars for acorn pulverizing, and lithic scatters indicating manufacturing or maintenance of stone tools used for hunting or butchering.

As stated above, a cultural resources assessment and subsequent testing program were conducted within the project site in 2007 as part of the City's *Ventanas Business Center Environmental Impact Report*. One prehistoric site, CA-ORA-1672, is located within the project site. A subsurface testing project was completed in 2007, and although artifacts were recovered, the context was highly disturbed and the resources were not recommended as significant. The site lacked integrity and did not appear to qualify as a significant cultural resource because the site did not produce adequate data to answer important research questions in prehistory.

4.12.4 Regulatory Setting

This section includes applicable federal, State, regional, and City regulations.

4.12.4.1 Federal Regulations

Archaeological Resources Protection Act. The Archaeological Resources Protection Act was enacted in 1979 with the purpose of securing the protection of archaeological resources and sites on public lands and Native American lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals.

Native American Graves Protection and Repatriation Act. The Native American Graves Protection and Repatriation Act (NAGPRA) was passed in 1990 with the purpose of outlining a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants, and culturally affiliated Indian tribes. The Act also establishes procedures for the inadvertent discovery or planned excavation of Native American cultural items on federal or tribal lands. While these provisions do not apply to discovery or excavations on private or State lands, the collections portions of the Act may apply to cultural items if they are under control of an institution that receives federal funding. The Act also makes it a criminal offense to traffic in Native American human remains without right of possession or in cultural items obtained in violation of the Act.

4.12.4.2 State Regulations

Native American Heritage Commission (NAHC). In 1976, the California State Government passed AB 4239, creating the Native American Heritage Commission (NAHC). The NAHC is responsible for identifying and categorizing Native American cultural resources as well as preventing damages to designated sacred sites and associated artifacts and remains. Legislation passed in 1982 authorized the NAHC to identify a Most Likely Descendant (MLD) when Native American remains are found outside of any place other than a designated cemetery. An MLD has the authority to make recommendations in regards to the treatment and disposition of the discovered remains.

The Native American Historic Resource Protection Act. The Native American Historic Resource Protection Act, or AB 52, defines guidelines for reducing conflicts between Native Americans and development projects and activities. Projects are subject to AB 52 if a notice of preparation for an EIR is filed or a notice of intent to adopt a Negative or Mitigated Negative Declaration is filed on or after July 1, 2016. "Tribal cultural resources" are protected under CEQA and are defined as a site, feature, place, cultural landscape (must include the size and scope of landscape), sacred place, and object with a cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register of Historical Resources (California Register), or included in a local register of historical resources. At the lead agency's discretion, a resource can be treated as a tribal cultural resource if a Native American Tribe provides substantial evidence. Additionally, AB 52 allows tribes to engage in consultation with lead agencies and sets guidelines for such consultation.

California Public Resources Code 5097.9–5097.991. California Public Resources Code (PRC) 5097.9–5097.991 provides protection to Native American historical and cultural resources (including sanctified cemeteries, places of worship, religious sites, or sacred shrines) and sacred sites and gives the NAHC enforcement authority.

Specifically, California PRC 5097.98 outlines procedures in the event human remains are discovered. The Orange County (County) Coroner shall make a determination within two working days from the time the person responsible for the excavation, or designee, notifies the County Coroner of the discovery or recognition of the human remains. If the County Coroner identifies the remains to be of Native American origin, or has reason to believe that the remains are those of Native American origin, the County Coroner must contact the California NAHC within 24 hours. The NAHC representative will then alert a Native American MLD to conduct an inspection of the site and to determine the following course of treatment and action. Additionally, *State CEQA Guidelines* Section 15064.5 sets forth a procedure if human remains are found on land outside of federal jurisdiction.

Health and Safety Code Section 7050.5. Section 7050.5 of the California Health and Safety Code protects Native American burials, remains, and associated grave artifacts in the event that they are discovered in any location other than a designated cemetery. The Health and Safety Code mandates the immediate stop of excavation in the site as well as any adjacent or overlying area where the remains or associated item is found, and provides for the sensitive disposition of those remains. Should remains be discovered, the County Coroner must determine that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or designee, in the manner provided in PRC Section 5097.98.

4.12.4.3 Regional Regulations

There are no regional regulations that are applicable to tribal cultural resources relevant to the proposed project.

4.12.4.4 Local Regulations

City of San Juan Capistrano Historical, Archaeological, and Paleontological Resource Management Guidelines. In 1997, the City revised City Council Policy 601 and renamed this policy, "Historical, Archaeological, and Paleontological Resource Management Guidelines." These guidelines aim to ensure that cultural resource evaluations for projects within the City are conducted by qualified individuals. The policy also establishes procedures for reviewing these reports and mitigation measures to address potential impacts to previously unknown cultural resources during construction activities. In the event cultural resources are discovered, these guidelines require that the locations of all significant historic resources within the City be recorded. These guidelines also outline specific circumstances during which a Native American monitor would be required during construction.

4.12.5 Thresholds of Significance

The thresholds for tribal cultural resources impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to tribal cultural resources if it would:

Threshold 4.12.1: **Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).**

Threshold 4.12.2: **Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

4.12.6 Project Impacts

Threshold 4.12.1: **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local**

register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less Than Significant Impact. The project site is not listed or eligible for listing in the California Register, or in a local register of historical resources. However, the NAHC SLF search did return positive results as one prehistoric site, CA-ORA-1672, located within the project site. Despite this positive finding, subsequent subsurface testing was completed and the resources were not recommended as significant due to their lack of integrity and the absence of data to answer important research questions in prehistory. Therefore, because there is no resource listed or eligible for listing on the California Register or local register, impacts under this threshold are considered less than significant. No mitigation is required.

Threshold 4.12.2: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant with Mitigation Incorporated. As noted above, an SLF through the NAHC and AB 52 Native American consultation were conducted for the proposed project. The purpose of these efforts was to identify known tribal cultural resources on or near the project site. The request for a search of the SLF with the NAHC (December 2018) resulted in positive findings. However, no responses were received from Native American representatives with regard to AB 52 consultation and outreach. However, as stated previously, two comment letters were received during the public review period for the IS/NOP, but after the AB 52 consultation period had concluded. Further, one prehistoric site, CA-ORA-1672, is located within the project site. However, a subsequent testing program at the prehistoric site established that it does not appear to qualify as a significant cultural resource because it lacks integrity and does not contain the data to answer important research questions in prehistory. Due to the presence of cultural resources within the project site and the location of the project site in an area near the San Juan Creek, the project area is considered potentially sensitive for tribal cultural resources. In addition, the City requires monitoring for development projects in culturally sensitive areas. As such, monitoring by an archaeological monitor under the supervision of an Orange County Certified Archaeologist and by a Native American representative is required (see Mitigation Measure CUL-1 in Section 4.4., Cultural Resources, of this Draft EIR). Mitigation Measure CUL-1 would reduce any potential impacts to previously undiscovered tribal cultural resources to a less than significant level. In addition, in the unlikely event that human remains are encountered during project grading, the County Coroner would be notified immediately, and no further disturbance would occur until the County Coroner makes a determination of origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be Native American, the County Coroner would notify the NAHC, which would then

determine and notify the MLD. With permission from the City, the MLD would complete inspection within 48 hours of notification by the NAHC (see Mitigation Measure CUL-2 in Section 4.4., Cultural Resources, of this Draft EIR). Mitigation Measure CUL-2 would reduce potential impacts related to the discovery of unknown Native American human remains on the project site to a less than significant level.

4.12.7 Level of Significance Prior to Mitigation

The proposed project could result in potentially significant impacts with respect to tribal cultural resources without the implementation of applicable mitigation measures.

4.12.8 Regulatory Compliance Measures and Mitigation Measures

4.12.8.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the proposed project.

4.12.8.2 Mitigation Measures

The proposed project would comply with the following mitigation measures, identified in Section 4.4., Cultural Resources, of this Draft EIR.

Mitigation Measure CUL-1 **Cultural Resources Monitoring and Accidental Discovery.** Prior to the issuance of grading permits, the Project Applicant shall retain, with approval of the City of San Juan Capistrano (City) Development Services Director, or designee, a qualified archaeological monitor. A monitoring plan should be prepared by the archaeologist and implemented upon approval by the City. Prior to issuance of grading permits, the Project Applicant, with City approval, shall also retain a Native American monitor after consultation with interested tribal and Native American representatives. Both monitors shall be present on the project site during ground-disturbing activities to monitor rough and finish grading, excavation, and other ground-disturbing activities in the native soils. Because cultural resources were previously identified on the project site, both monitors are required to be present on a full-time basis during initial site preparation and initial ground-disturbing activities. Further, each monitor shall spot check any ground-disturbing activities (e.g., finish grading) to ensure that no cultural resources are impacted during construction activities.

If cultural materials are discovered during site preparation, grading, or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these

deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing on the California Register of Historical Resources. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to: excavation of the deposit in accordance with a data recovery plan (see California Code of Regulations [CCR] Title 14(3) Section 15126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.

Mitigation Measure CUL-2

Human Remains. Consistent with the requirements of CCR Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the project site, the construction contractor shall halt work within 25 feet of the discovery; all work within 25 feet of the discovery shall be redirected and the Orange County (County) Coroner notified immediately. No further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the City, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City shall consult with the MLD identified by the NAHC to develop an agreement for the treatment and disposition of the remains.

Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report shall be submitted to the City Development Services Director, or designee, and the South Central Coastal Information Center. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.

4.12.9 Level of Significance after Mitigation

The proposed project would result in less than significant impacts with respect to tribal cultural resources following implementation of Mitigation Measures CUL-1 and CUL-2, as identified in Section 4.4., Cultural Resources, of this Draft EIR.

4.12.10 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for tribal cultural resources. The cumulative study area for tribal cultural resources is the geographical area of the City of San Juan Capistrano, which is the geographical area covered by the City's General Plan, including all goals and policies therein. Future development in the City could include excavation and grading that could potentially impact tribal cultural resources. The cumulative effect of the proposed project would be the continued loss of these resources. The proposed project, in conjunction with other development in the City, has the potential to cumulatively impact tribal cultural resources; however, it should be noted that each development proposal requiring a discretionary approval received by the City would undergo environmental review pursuant to CEQA. If there is a potential for significant impacts to tribal cultural resources, an investigation would be required to determine the nature and extent of the resources and to identify appropriate mitigation measures. If subsurface cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, applicable City ordinances and General Plan policies would be implemented as appropriate to reduce the effects of additional development to tribal cultural resources within the City. The proposed project would result in less than cumulatively significant impacts with respect to tribal cultural resources following implementation of Mitigation Measures CUL-1 and CUL-2, as identified in Section 4.4., Cultural Resources, of this Draft EIR.

5.0 ALTERNATIVES

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (*State CEQA Guidelines*, Section 15126.6). This chapter identifies potential alternatives to the Tirador Residential Development Project (proposed project), located in the City of San Juan Capistrano (City), evaluates the potential impacts of each alternative, and compares the potential impacts of each alternative against the project's impacts, as required by CEQA.

Key provisions of the *State CEQA Guidelines* on alternatives (Section 15126.6[b] through [f]) are summarized below to explain the foundation and legal requirements for the alternatives analysis in the EIR:

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly (15126.6[b]).

- The specific alternative of "no project" shall also be evaluated along with its impact (15126.6[e][1]). The "no project" analysis shall discuss the existing conditions at the time the Notice of Preparation is published and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (15126.6[e][2]).

- The range of alternatives required in an EIR is governed by the "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent) (15126.6[f]).

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (15126.6[f][2][A]).

- If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project, which must be in close proximity to natural resources at a given location (15126.6[f][2][B]).

- An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (15126.6[f][3]).

Pursuant to the guidelines stated above, alternatives to the proposed project are considered and evaluated in this EIR. These alternatives were developed in the course of project planning and environmental review. The discussion in this section provides:

1. A description and analysis of impacts for each of the alternatives considered;

2. Comparative analysis of each alternative that focuses on the potentially significant unavoidable environmental impacts of the proposed project, e.g., agricultural and greenhouse gas (GHG) emissions (the purpose of this analysis is to determine whether alternatives are capable of eliminating or reducing the significant environmental impacts of the project to a less than significant level); and

3. Conclusions regarding the alternative's: (1) ability to avoid or substantially lessen the significant unavoidable impacts of the project; (2) ability to attain the project objectives (as stated below); and (3) merits compared to the merits of the proposed project.

5.2 PROPOSED PROJECT

5.2.1 Project Characteristics

As described in Chapter 3.0, Project Description, the proposed project would involve the construction of a 132-unit residential development consisting of 43 two-story detached single-family units and 89 three-story attached townhome units on an approximately 16.1-acre site. Amenities provided throughout the residential development would include a gathering area with barbeques, seating, a shade structure, an open play turf area, a tot lot, play equipment, a dog waste station, trash receptacles, and a multi-purpose pedestrian, bicycle, and equestrian trail with additional amenities.

5.2.2 Project Objectives

Each alternative is analyzed to determine whether it achieves the basic objectives of the proposed project. The underlying purpose of the proposed project would be to provide a high quality residential development with recreational amenities. As discussed in Section 3.3.10, Project Objectives, of Chapter 3.0, Project Description, of this EIR, the following project objectives have been established to aid decision-makers in their review of the proposed project and its associated environmental impacts:

1. Develop a residential development to increase the City's market-rate and affordable housing stock.

2. Develop a project that balances the development potential of the project site with environmental considerations.

3. Revitalize the vacant site with a well-designed and landscaped residential project that is compatible with the surrounding community.

4. Increase the City's tax base by generating revenue for the City through property taxes.

5. Provide non-traditional home ownership opportunities through the provision of townhomes and affordable units.

6. Provide recreational opportunities for the surrounding community with incorporation of a multi-purpose pedestrian, bicycle, and equestrian trail and associated amenities.

7. Dedicate approximately 5.6 acres of the project site adjacent to the San Juan Creek as a conservation area.

8. Locate housing adjacent to available infrastructure to serve the project.

9. Implement the City's General Plan.

5.2.3 Significant Unavoidable Impacts of the Proposed Project

As described in Chapter 4.0, Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation Measures, after implementation of mitigation, the proposed project would not result in significant unavoidable adverse impacts related to any topic analyzed in this EIR including aesthetics; air quality; biological resources; cultural resources; energy; geology and soils; greenhouse gas emissions; hydrology and water quality; land use and planning; noise; transportation; or tribal cultural resources. In addition, as described in Chapter 2.0, Introduction, the project would have no impacts related to agriculture and forestry resources, hazards and hazardous materials; mineral resources, population and housing, public services, recreation, utilities and service systems, or wildfire.

Because the proposed project as analyzed in this EIR would not result in significant adverse unavoidable impacts, the following discussion focuses on alternatives that would reduce or avoid the potentially significant impacts, which have been mitigated to a less than significant level, as identified in Chapter 4.0.

5.3 ALTERNATIVES INITIALLY CONSIDERED BUT REJECTED FROM FURTHER CONSIDERATION

Section 15126.6(c) of the *State CEQA Guidelines* suggests that EIRs identify any alternatives that were considered by the Lead Agency but were rejected during the scoping process and briefly explain the reasons underlying the Lead Agency's determination. In evaluating an appropriate range of alternatives to the proposed project, a number of alternatives were considered and rejected for differing reasons by the City.

The following is a discussion of the development alternatives considered during the environmental review process and the reasons they were not selected for detailed analysis in this Draft EIR.

5.3.1 Alternative Project Sites

CEQA requires that the discussion of alternatives focuses on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant impacts of the project. The key question and first step in the analysis is whether any of the significant impacts of the project would be avoided or substantially lessened by relocating the project. Only locations that would avoid or substantially lessen any of the significant impacts of the project need be considered for inclusion in the EIR (*State CEQA Guidelines*, Section 15126.6[f][2][A]). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the Project Applicant can reasonably acquire, control, or otherwise have access to the alternative site (*State CEQA Guidelines*, Section 15126.6[f][1]). If it is determined that no feasible alternative locations exist, the EIR must disclose the reasons for this conclusion (*State CEQA Guidelines*, Section 15126.6[f][2][B]).

The City has reviewed the inventory of vacant properties that have the potential to support a residential development. Due to the developed nature of the City, there are no available properties that are of sufficient size to accommodate the proposed project, which requires approximately 16 acres of developable land. The City is currently processing development applications on the few vacant or underdeveloped properties in the City that are large enough to potentially accommodate the proposed project (i.e., the proposed Farm Specific Plan property on Del Obispo Street north of Camino Del Avion and the proposed Ganahl Lumber Project on Stonehill Drive near the intersection with Camino Capistrano). Additionally, other sites in the City designated by the General Plan Land Use Element for Very High Density Residential land use are less than 4 acres in size and are either currently developed or the City has recently approved development applications (i.e., the existing City Hall complex on a 2.5-acre site at 32400 Paseo Adelanto and a 75-unit senior apartment complex on a 3.85-acre site at the northwest corner of Junipero Serra Road and Camino Capistrano). As stated previously, an alternative site smaller than the project site would result in the elimination of affordable units because they would no longer be economically feasible to construct. As such, this alternative would conflict with Project Objectives 1 and 5, which involve developing a residential development to increase the City's affordable housing stock and providing non-traditional home ownership opportunities through the provision of affordable units, respectively.

The only site within the City that is both adequately sized to accommodate the project and which also has a General Plan land use designation of Very High Density Residential is the Oso Ranch Planned Community, located along Camino Capistrano at the northwestern-most portion of the City. The Oso Ranch Planned Community is an approximately 55-acre site designated in the General Plan Land Use Element as Public Institutional, Very High Density Residential, and Medium Density Residential. The Oso Ranch site access is restricted by Trabuco Creek, and some of the acreage is within the flood zone, making large portions of the site undevelopable. The Oso Ranch Planned Community regulations establish that 30 percent of the site is to be reserved for Very High Density Residential land use. However, since only 31.2 acres of the site is developable, approximately 9.4 acres are allocated for Very High Density Residential land use. This site, identified as Assessor's Parcel Number (APN) 121-070-57, is entitled to be developed at a density of 30 dwelling units per

acre, or 279 units. The 219 affordable units designated in the City's General Plan Housing Element which are no longer able to be accommodated with the proposed development on the project site can be accommodated on this alternative site. Chapter 3.0, Project Description, includes more details regarding the alternative site designation in the City's General Plan Housing Element. However, this is not a feasible alternative site for the reasons stated below.

The Project Applicant does not own or control any other property within the City that would be suitable for development of the proposed project. Moreover, the Project Applicant cannot reasonably acquire or control an alternative site in the City in a timely fashion that would allow for the implementation of a project with similar uses and square footage.

In addition, development of the proposed project at an alternative site in the City (assuming one was available) could potentially result in some environmental impacts that would be similar to or greater than those of the proposed project's environmental impacts, depending on the proximity of the alternate site to sensitive uses or a circulation system where the existing level of service and roadway capacity could accommodate the proposed uses.

The development of the proposed project on an alternative site in the City would also fail to meet several of the project objectives. Moving the proposed project would not result in a balanced development potential of the project site with environmental considerations (Project Objective 2), nor would it revitalize the vacant project site (Project Objective 3). Moving the proposed project to another part of San Juan Capistrano would not provide the same level of recreational opportunities for the surrounding community through the incorporation of a multi-purpose pedestrian, bicycle, and equestrian trail and associated amenities (Project Objective 6) because the improvements to an equestrian trail on an alternate site would not be located as close to the Ortega Equestrian Center, which is adjacent to the project site. Furthermore, the development of the proposed project on an alternative site would not include the permanent dedication of approximately 5.6 acres of the project site adjacent to the San Juan Creek as a conservation area (Project Objective 7), and potentially, this area could be developed under a future project. For these reasons, no alternative site is considered feasible because no suitable alternative site is available that would achieve the underlying purpose and objectives of the project, and an alternative site would likely not reduce environmental impacts as compared to the development of the proposed project on the project site. Therefore, no alternative locations to undertake the proposed project are analyzed in the Draft EIR. This alternative was rejected from further consideration.

5.4 ALTERNATIVES UNDER CONSIDERATION

Section 21100 of the Public Resources Code (PRC) and Section 15126 of the *State CEQA Guidelines* require an EIR to identify and discuss a No Project Alternative and a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the project and would avoid or substantially lessen any of the significant environmental impacts. Based on the criteria listed above, the following two alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the proposed project but that may avoid or substantially lessen any of the significant impacts of the proposed project. Therefore, the alternatives considered in this EIR include the following:

- **Alternative 1: No Project/No Development.** This alternative would involve no changes to the existing land uses and conditions on the project site. No development would occur on the project site and the existing condition of the site as vacant and undeveloped would not change.

- **Alternative 2: Reduced Project Alternative.** This alternative would include a reduced intensity residential development consisting of 100 dwelling units. The Reduced Project Alternative would include 32 two-story detached single-family units and 68 three-story attached townhome units, which is the same ratio of detached single-family and attached townhomes as the proposed project. This alternative would include 11 affordable units, which is just over 10 percent of the total units, and a similar percentage as provided by the proposed project.

For the purpose of this analysis, it is assumed that the alternatives would comply with applicable federal, State, and local regulations, policies, and ordinances. Table 5.A, below, provides a summary description of each alternative and the basis for its selection for inclusion in the EIR. The No Project Alternative (Alternative 1) and the Reduced Project Alternative (Alternative 2) are evaluated below.

In accordance with *State CEQA Guidelines* Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less than, similar to, or greater than the corresponding impacts of the proposed project. Furthermore, each alternative is evaluated to determine the extent to which the project objectives, identified in Chapter 3.0, of this Draft EIR, would be attained by the alternative. The evaluation of each of the alternatives follows the process described below:

1. The environmental impacts of the alternative are determined for each environmental issue area analyzed in Chapter 4.0, of this Draft EIR, assuming that each alternative would implement similar regulatory compliance measures, project design features, and mitigation measures as the proposed project.

2. Post-mitigation significant and non-significant environmental impacts of the alternative and the proposed project are compared for each environmental issue area as follows:

    a. **Less:** Where the impact of the alternative would be clearly less adverse or more beneficial than the impact of the proposed project, the comparative impact is said to be “less.”

    b. **Greater:** Where the impact of the alternative would clearly be more adverse or less beneficial than the proposed project, the comparative impact is said to be “greater.”

    c. **Similar:** Where the impact of the alternative and the proposed project would be roughly equivalent, the comparative impact is said to be “similar.”

3. The comparative analysis of the impacts is followed by a general discussion of the extent to which the project objectives are attained by the alternative.

Table 5.A: Summary of Project Alternatives

Alternative	Description	Basis for Selection and Summary Analysis
Proposed Project	• Approximately 16.1-acre project site • Land use designation of Planned Community, General Open Space, and Community Park • Zoning Designation of Planned Community District • Undeveloped and vacant in the existing condition • Construction of a 132-unit residential development consisting of 43 two-story detached single-family units and 89 three-story attached townhome units • Of the 89 townhomes, 14 would be designated affordable units restricted to households of moderate income • Amenities provided throughout the residential development include a gathering area with barbeques, seating, and a shade structure, an open play turf area, a tot lot, play equipment, a dog waste station, and trash receptacles • Construction of 20-foot wide multi-purpose pedestrian, bicycle, and equestrian trail and associated amenities • Dedication of approximately 5.6 acres of the project site adjacent to the San Juan Creek as a conservation area	• Preferred site within the City under the control of the Project Applicant • Meets all Project Objectives • Refer to Chapters 3.0 and 4.0 of this Draft EIR • No significant and unavoidable impacts after incorporation of mitigation measures
Alternative 1: No Project/No Development	• Approximately 16.1-acre project site • Land use designation of Planned Community, General Open Space, and Community Park • Zoning Designation of Planned Community District • Undeveloped and vacant in the existing condition • Continued underutilization of the vacant project site • No grading or construction on the project site	• Required by CEQA • Inconsistent with all Project Objectives
Alternative 2: Reduced Project Alternative	• Approximately 16.1-acre project site • Land use designation of Planned Community, General Open Space, and Community Park • Zoning Designation of Planned Community District • Undeveloped and vacant in the existing condition • Construction of a 100-unit residential development consisting of 32 two-story detached single-family units and 68 three-story attached townhome units • Of the 68 townhomes, 11 would be designated affordable units restricted to households of moderate income • Amenities provided throughout the residential development include a gathering area with barbeques, seating, and a shade structure, an open play turf area, a tot lot, play equipment, a dog waste station, and trash receptacles • Construction of 20-foot-wide multi-purpose pedestrian, bicycle, and equestrian trail and associated amenities • Dedication of approximately 4.2 acres of the project site adjacent to the San Juan Creek as a conservation area	• Reduced physical environmental impacts • Inconsistent with some of the Project Objectives

CEQA = California Environmental Quality Act
EIR = Environmental Impact Report

5.4.1 Alternative 1: No Project/No Development Alternative

Description. Consistent with Section 15126.6 of the *State CEQA Guidelines*, the No Project/No Development Alternative assumes the existing land uses and condition of the project site at the time the NOP was published (November 7, 2019) would continue to exist without any changes. The setting of the project site at the time the NOP was published is described throughout Chapter 4.0 of this EIR with respect to individual environmental issues, and forms the baseline of the impact assessment of the proposed project. The No Project/No Development Alternative represents the environmental conditions that would exist if no new development of any kind were to occur on the project site. The No Project/No Development Alternative anticipates that the project site would remain primarily as a vacant and undeveloped lot, with no improvements to the existing condition of the San Juan Creek Trail. Although there would be no improvements implemented on the project site as proposed by the project, the General Plan land use designation of Planned Community, General Open Space, and Community Park, and the Zoning Designation of Planned Community District, would still be applicable to the project site. Under those designations, future residential development at density of up to 30 du/acre, or 483 units, could occur. The No Project/No Development Alternative would allow existing conditions on the project site to remain unchanged.

Environmental Analysis. The project site is currently undeveloped and vacant. In its existing condition, the San Juan Creek Trail is publicly accessible from the project site; the trail begins at the intersection of Calle Arroyo and Paseo Tirador, traverses the project site in a southwest direction, and terminates at the Pacific Ocean in the City of Dana Point. This alternative assumes that the existing use of the San Juan Creek Trail would continue to operate into the future. It is assumed that no improvements or new construction would occur at the project site.

Under the No Project Alternative, the visual setting of the project site would not be altered. No new air pollutant emissions or greenhouse gas (GHG) emissions would be generated by short-term construction since no new construction is proposed, and new residents and the residential development would not be present to result in operational emissions. There would be no impacts related to biological resources or geology and soils because the project site would remain undisturbed and undeveloped. Unknown potential archaeological, paleontological, and tribal cultural resources would remain undisturbed. No changes in energy usage would result because the site would remain undeveloped. There would be no change to the project site with regard to the percentage of the site that would remain pervious or the volume of runoff during a storm event and runoff treatment from best management practices (BMPs) that are included in the proposed project. The project site would remain designated for very-low income affordable housing units in the City's General Plan Housing Element, and the site's use would be consistent with the General Plan and zoning documents. No short-term construction noise impacts or long-term operational noise impacts would occur to the surrounding area. Further, no additional vehicle trips would be generated by construction or operations at the site.

Overview of Potential Impact/Comparison to Proposed Project. The No Project Alternative would not result in any physical changes to the project site and there would not be a potential for new environmental impacts to occur. Overall, the No Project Alternative would result in fewer environmental impacts than the proposed project because no construction or development would take place.

Project Objectives. The No Project Alternative would not achieve any of the Project Objectives. Without the proposed project, the project site would not be developed with a 132-unit residential development (including 14 affordable units), amenities, and a multi-purpose pedestrian, bicycle, and equestrian trail. In addition, although the project site would remain undeveloped, a 5.6 acre portion of the project site would not be dedicated as a conservation area. The No Project/No Development Alternative would not do any of the following: develop a residential development to increase the City's market-rate and affordable housing stock (Project Objective 1); develop a project that balances the development potential of the project site with environmental considerations (Project Objective 2); revitalize the vacant site with a well-designed and landscaped residential project that is compatible with the surrounding community (Project Objective 3); increase the City's tax base by generating revenue for the City through property taxes (Project Objective 4); provide non-traditional home ownership opportunities through the provision of townhomes and affordable units (Project Objective 5); provide recreational opportunities for the surrounding community with incorporation of a multi-purpose pedestrian, bicycle, and equestrian trail and associated amenities (Project Objective 6); dedicate approximately 5.6 acres of the project site adjacent to the San Juan Creek as a conservation area (Project Objective 7); locate housing adjacent to available infrastructure to serve the project (Project Objective 8); nor would it implement the City's General Plan (Project Objective 9).

5.4.2 Alternative 2: Reduced Project Alternative

Description. Alternative 2 would include a reduced intensity residential development consisting of 100 dwelling units. The Reduced Project Alternative would include 32 two-story detached single-family units and 68 three-story attached townhome units, which is the same ratio of detached single-family and attached townhomes as the proposed project. This alternative would include 11 affordable units, which is 11 percent of the total units, and a similar percentage of affordable units as provided by the proposed project. The project site would be divided by unit type, with single-family units and townhomes constructed on the eastern and western portions of the site, respectively, similar to the proposed project. The residential density of Alternative 2 would total 6.2 du/ac, which is substantially lower than the maximum density of 30.0 du/ac allowed on the site, and lower than the density (8.2 du/acre) proposed under the Proposed Project.

Alternative 2 would also include a 20-foot (ft)-wide multi-purpose pedestrian, bicycle, and equestrian trail along the project site's southern boundary. Fewer amenities would be proposed with Alternative 2, although a gathering area with barbeques, seating, a tot lot, an equestrian hitching post, bicycle racks, drinking fountains, and trash receptacles would be provided within the development. This alternative would dedicate approximately 4.2 acres of the project site adjacent to the San Juan Creek as a conservation area, which is a smaller acreage dedicated than under the proposed project.

For purposes of the alternative analysis, it is assumed that the architectural design, landscaping, and lighting characteristics for Alternative 2 would be similar to the Proposed Project.

This alternative would be consistent with the site's General Plan land use designation of Planned Community. There are also small portions of the project site designated as General Open Space and Community Park. The land uses proposed under Alternative 2 would be consistent with the existing land use designations. The project site is zoned as a Planned Community District associated with the

adopted Ortega Planned Community Comprehensive Development Plan (CDP 78-01). Alternative 2 would also be consistent with the existing zoning. Therefore, no General Plan Amendment (GPA) or zoning changes would be required to implement Alternative 2.

Environmental Analysis. As stated previously, the project site is currently undeveloped and vacant. The following sections describe potential environmental impacts that would occur upon implementation of Alternative 2, Reduced Project Alternative.

Aesthetics. Under Alternative 2, the visual setting of the project site would be altered to a similar, although lesser, degree as compared to the proposed project. Similar to the proposed project, Alternative 2 would have less than significant impacts related to scenic resources, light, glare, and the existing visual character of the project site and its surroundings. Under Alternative 2, 11 of the townhomes, or approximately 11 percent of the total units, would be designated affordable and would allow the Project Applicant to apply for a concession and waivers of development standards. Upon approval of the concession and waivers requested as part of the project, both the proposed project and Alternative 2 would be consistent with all applicable General Plan and zoning regulations governing aesthetics and scenic quality on the property. Additionally, both the proposed project and Alternative 2 would have no impact associated with State Scenic Highways because no official State Scenic Highways are located in the vicinity of the project. Overall, impacts to aesthetics under Alternative 2 are reduced, but similar to impacts associated with the proposed project. No mitigation is required.

Because impacts related to aesthetics for Alternative 2 would be similar to those associated with the proposed project, cumulative impacts would also be less than cumulatively significant, and no mitigation would be required.

Air Quality. Due to the reduced size of the project, it can be assumed that construction-related criteria air pollutant emissions generated under Alternative 2 would be similar, but slightly less, than emissions expected under the proposed project. Further, Regulatory Compliance Measures AQ-1 through AQ-3 would be applicable to Alternative 2 and would ensure compliance with SCAQMD standard conditions, including Rule 402 (Nuisance) to control nuisance emissions, Rule 403 (Fugitive Dust) to control fugitive dust, and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Overall, construction impacts related to air quality would be less than significant and would be similar, but slightly less than impacts generated by the proposed project.

Under Alternative 2, fewer new residents and a reduced residential development would result in reduced operational emissions as compared to the proposed project. Alternative 2 would result in fewer operational criteria air pollutants than the proposed project. As such, because Alternative 2 results in fewer operational emissions as compared to the proposed project, Alternative 2 would not exceed the significance thresholds of criteria pollutants for which the project region is nonattainment under the CAAQS or NAAQS. Further, both the proposed project and Alternative 2 are not anticipated to produce emissions that could lead to objectionable odors affecting a substantial number of people because implementation of both projects involves the development of a residential community, which do not typically produce odorous emissions. Overall, operational impacts related to air quality would be less than significant and would be less than impacts generated by the proposed project.

Alternative 2, similar to the proposed project, is consistent with the current General Plan land use designations on the project site and would not exceed the growth assumptions in the AQMP, is consistent with land use planning strategies set forth by SCAQMD, and includes implementation of all feasible air quality rules to reduce emissions. Therefore, Alternative 2, similar to the proposed project, would not conflict with or obstruct implementation of the 2016 AQMP because the construction and operational emissions would not exceed SCAQMD's regional significance thresholds.

Alternative 2 would have less than significant impacts with respect to air quality, and impacts would be further reduced with the incorporation of Regulatory Compliance Measures AQ-1 through AQ-3. Overall, impacts to air quality under Alternative 2 are reduced as compared to impacts associated with the proposed project. No mitigation is required. Because impacts related to air quality for Alternative 2 would be less than those associated with the proposed project, cumulative impacts would also be less than cumulatively significant, and no mitigation would be required.

Biological Resources. Similar to the proposed project, the project site under Alternative 2 would be cleared, excavated, graded, and paved, and the area of disturbance would be similar to that of the proposed project. Therefore, Mitigation Measures BIO-1 through BIO-7 would still be applicable under Alternative 2 to ensure that potential impacts to biological resources are reduced to a less than significant level. Further, Regulatory Compliance Measure BIO-1 would also be applicable to Alternative 2 to ensure trail maintenance during project operation. As such, biological impacts associated with Alternative 2 are considered to be less than significant with mitigation and similar to those of the proposed project. However, overall impacts related to biological resources would be greater under Alternative 2 because a reduced amount of land would be preserved as conservation area (approximately 4.2 acres as compared to 5.6 acres under the proposed project). Although this area is not currently developed, a reduction in conservation area could allow for future development to occur on the 1.4 acres that would not be conserved under Alternative 2. Overall, Alternative 2 would have less than significant impacts with respect to biological resources with the incorporation of Mitigation Measure BIO-1 through BIO-7 and Regulatory Compliance Measure BIO-1.

Although impacts related to biological resources for Alternative 2 would be greater than those associated with the proposed project due to smaller area dedicated for conservation, cumulative impacts would be less than cumulatively significant, and no mitigation would be required.

Cultural Resources. Under Alternative 2, impacts to potential archaeological and paleontological resources would be similar to the proposed project because the project site boundaries and disturbance area would be essentially the same as under the proposed project. Mitigation Measures CUL-1 and CUL-2 would still be applicable under Alternative 2 in order to protect any unknown archaeological resources and previously undiscovered buried human remains. With the incorporation of Mitigation Measures CUL-1 and CUL-2, Alternative 2 would have less than significant impacts to archaeological resources and previously undiscovered buried human remains. Overall, impacts to cultural resources under Alternative 2 would be similar to the proposed project's impacts because the area of disturbance would remain the same.

Because impacts related to cultural resources for Alternative 2 would be similar to those associated with the proposed project, implementation of Mitigation Measures CUL-1 and CUL-2 would also

ensure that Alternative 2, together with cumulative projects, would not result in a significant cumulative impact to unique archaeological resources and previously undiscovered buried human remains.

Energy. Under Alternative 2, less energy would be used during project construction because of the reduced size of the residential development and other components as compared to the proposed project. Similarly, less energy would be used during project operation because the project would accommodate fewer residents under Alternative 2. Specifically, electricity, natural gas, and construction- and operation-related fuel consumption would be reduced under Alternative 2. Regulatory Compliance Measure ENG-1 would still be applicable under Alternative 2 in order to ensure that the project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources during project construction and operation. With incorporation of Regulatory Compliance Measure ENG-1, Alternative 2 would have less than significant impacts with respect to energy. Overall, impacts to energy under Alternative 2 would be less than significant and would be less than impacts generated by the proposed project. No mitigation is required.

Because impacts related to energy for Alternative 2 would be less than those associated with the proposed project, cumulative impacts would also be less than cumulatively significant, and no mitigation would be required.

Geology and Soils. Under Alternative 2, similar impacts would occur to geology and soils as compared to the proposed project because the project site boundaries and the area of disturbance would remain essentially the same as under the proposed project. Although Alternative 2 would construct fewer residential units than the proposed project, the project would be located on the same soils with the same geological conditions, and therefore, would result in potentially significant impacts with respect to strong seismic ground shaking, ground failure (including liquefaction), slope stability, corrosive soils, ground settlement, expansive soils, and the destruction of paleontological resources, similar to the proposed project. As such, Mitigation Measures GEO-1 through GEO-5 and Regulatory Compliance Measures GEO-1 through GEO-3 would be applicable to Alternative 2, similar to the proposed project. With the implementation of the mitigation measures and regulatory compliance measures, potential impacts for Alternative 2 with respect to geology and soils would be less than significant and similar to those of the proposed project. Overall, impacts to geology and soils under Alternative 2 are similar to impacts associated with the proposed project.

Because impacts related to geology and soils for Alternative 2 would similar to those associated with the proposed project, implementation of Mitigation Measures GEO-1 through GEO-5 and Regulatory Compliance Measures GEO-1 through GEO-3 would also ensure that Alternative 2, together with cumulative projects, would not result in a significant cumulative impact.

Greenhouse Gas Emissions. Due to the reduced size, it can be assumed that construction-related GHG emissions generated under Alternative 2 would be similar, but slightly less, than emissions expected under the proposed project. Similar to the proposed project, GHG emissions generated during construction of Alternative 2 would be temporary, would cease upon project completion, and would not result in a permanent increase in emissions. As such, construction-related impacts related to GHG emission would be less than significant. It is reasonable to conclude that operational impacts related to GHG emissions would be less that the proposed project due to the reduction in new residents and fewer residential units constructed Alternative 2. Consequently, GHG emissions

generated under Alternative 2 would also fall under the SCAQMD interim screening-level bright-line threshold of 3,500 MT of CO_2e per year for residential developments and would be less than significant.

Similar to the proposed project, Alternative 2 would not conflict with the goals of the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Further, Alternative 2 would not be considered regionally significant per *State CEQA Guidelines* Section 15206. Thus, the project would not conflict with the 2016–2040 RTP/SCS targets because those targets were established and are applicable on a regional level. Overall, impacts to GHG emissions under Alternative 2 are less than impacts associated with the proposed project and are less than significant No mitigation is required.

Because impacts related to GHG emissions for Alternative 2 would be less than those associated with the proposed project, cumulative impacts would also be less than cumulatively significant.

Hydrology and Water Quality. The modification and installation of existing and new utilities and infrastructure associated with the proposed project would still occur under Alternative 2. Similar to the proposed project, the project site under Alternative 2 would be cleared, excavated, graded, and paved, and the area of disturbance would be approximately the same. Similar to the proposed project, Alternative 2 would change the use on the project site, increase impervious surface area, increase stormwater runoff, and change the pollutants of concern in stormwater runoff. Alternative 2 would be required to comply with all National Pollutant Discharge Elimination System (NPDES) and City regulations governing hydrology and water quality. In compliance with these requirements, drainage facilitates to accommodate stormwater runoff and BMPs to reduce pollutants in stormwater runoff would be implemented. Therefore, similar to the proposed project, impacts related to surface and groundwater quality, groundwater supplies, erosion and siltation, flooding, storm drain capacity, polluted runoff, release of pollutants, and conflict with water quality and groundwater plans under Alterative 2 would be less than significant.

Similar to the proposed project, Alternative 2 would be constructed within a 100-year floodplain Zone AE. Alternative 2, similar to the proposed project, would be designed in compliance with the design requirements of Section 8-11.115 of the City's Municipal Code, which specifies design requirements for developments within the 100-year floodplain. The project under Alternative 2 would be required to obtain an Elevation certificate, as outlined in Regulatory Compliance Measure WQ-1. In addition, as specified in Regulatory Compliance Measure WQ-2, the project under Alternative 2 would be required to process a Conditional Letter of Map Revision (CLOMR) or Conditional Letter of Map Revision Based on Fill (CLOMR-F) during final design and a Letter of Map Revision (LOMR) or Letter of Map Revision Based on Fill (LOMR-F) upon project completion through the City, the Orange County Flood Control District (OCFCD), and the Federal Emergency Management Agency (FEMA). With compliance with Regulatory Compliance Measures WQ-1 and WQ-2, Alternative 2 would result in less than significant impacts related to hydrology and water quality. Overall, impacts to hydrology and water quality under Alternative 2 would be similar to those of the proposed project. No mitigation is required.

Because impacts related to hydrology and water quality for Alternative 2 would be similar to those associated with the proposed project, cumulative impacts would also be less than cumulatively significant, and no mitigation would be required.

Land Use and Planning. Similar to the proposed project, Alternative 2 would have less than significant impacts related to land use and planning. Under Alternative 2, as well as the proposed project, there would be no impacts related to the division of an existing community. Though Alternative 2 would represent a reduced project with fewer residential units, the proposed uses would be the same under the proposed project and Alternative 2. As such, Alternative 2 would still be consistent with both the existing General Plan land use designations of Planned Community, General Open Space, and Community Park and zoning designation of Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP) 78-01. As under the proposed project, the implementation of Alternative 2 would not require a General Plan Amendment or Zoning Amendment. Alternative 2 would be consistent with the policies contained in the City's General Plan, SCAG's 2008 Regional Comprehensive Plan, and SCAG's 2016–2040 RTP/SCS.

Under Alternative 2, 11 of the townhomes, or approximately 11 percent of the total units, would be designated affordable and would allow the Project Applicant to apply for a concession and waivers to development standards. Similar to the proposed project, Alternative 2 would be entitled to one incentive or concession under the State density bonus law and the City's affordable housing ordinance. Additionally, Alternative 2 would be entitled to waivers of development standards as necessary to prevent physical preclusion of the project alternative. It is reasonable to assume that these affordable housing waivers would be approved, unless the City were to find that the waiver to the development standard would have a specific adverse impact as defined in Section 9-3.505(d)(3)(L) of the City's Municipal Code, and would result in an adverse impact upon health, safety, the physical environment, or a designated historical resource. Following approval of the requested concession and waivers, Alternative 2 would be consistent with the City's Zoning Ordinance. As such, impacts related to land use under Alternative 2 are considered to be less than significant and predominantly similar to those associated with the proposed project. However, under Alternative 2, greater impacts would occur because fewer residential units would be constructed to meet the City's housing needs, including both market-rate and affordable units. No mitigation is required.

Although impacts related to land use and planning for Alternative 2 would be greater than those associated with the proposed project due to the provision of fewer residential units, cumulative impacts would be less than cumulatively significant, and no mitigation would be required.

Noise. Similar to the proposed project, Alternative 2 would encompass the same amount of acreage within the same proximity to noise receptors. Grading and site preparation activities are the loudest aspects of construction, and the grading and site preparation involved with Alternative 2 require a similar amount of, but slightly less, ground disturbance as the proposed project. However, Alternative 2 would result in the construction of less residential units and building area as compared to the proposed project. As such, construction-related noise generated under Alternative 2 would be produced for a slightly shorter period of time than the proposed project. Similar to the proposed project, Alternative 2 would also implement Mitigation Measure NOI-1, which requires adherence to noise restrictions during project construction. Alternative 2 would result in a similar amount of, but slightly less, ground vibration during construction as the proposed project. Similar to the proposed project, vibration levels under Alternative 2 at the closest commercial buildings would not exceed the United States Federal Transit Association (FTA) community annoyance threshold of 84 vibration

velocity decibels (VdB) for land uses similar to office uses. In addition, this vibration level would not exceed the FTA damage threshold of 94 VdB (0.2 in/sec peak particle velocity [PPV]) for buildings constructed of non-engineered timber and masonry. Therefore, noise and ground-borne vibration generated from construction activities associated with Alternative 2 would be similar to impacts under the proposed project. Overall, construction-related noise and vibration impacts under Alternative 2 would be less than significant.

The City's exterior and interior noise standards are 65 dBA CNEL and 45 dBA Community Noise Equivalent Level (CNEL), respectively, for single-family and multifamily residences. Alternative 2 would result in the operation of fewer residential units and building area as compared to the proposed project. Because Alternative 2 is proposed on the same project site as the proposed project, exterior noise levels would be the same in both circumstances. Under Alternative 2, it is assumed that the tot lot and gathering areas would be located in similar positions on the project site as compared to the proposed project. The noise sensitive areas under Alternative 2 which are required to meet the City's exterior standard of 65 dBA CNEL include the private rear yards of the single-family homes and the common use areas such as the tot lot and gathering areas. Similar to the proposed project, exterior noise levels would be below 65 dBA CNEL at the single-family home rear-yards, and no further noise reduction measures would be necessary.

It is assumed that the tot lot and the gathering areas would be sited in a similar location under Alternative 2 as for the proposed project. Under the proposed project, noise levels at the proposed tot lot and gathering areas are projected to exceed the 65 A-weighted decibel Community Noise Equivalent Level (dBA CNEL) exterior noise standard; therefore, similar to the proposed project an increased height of the perimeter wall would be necessary under Alternative 2. Therefore, Alternative 2 would require Mitigation Measure NOI-2, which would incorporate a minimum 14-foot-high wall near the proposed tot lot, thereby reducing noise levels to 64.7 dBA CNEL and all noise sensitive receptors below the City's exterior noise level standard for playground and park uses. Similar to the proposed project, under Alternative 2 some of the buildings on the western portion of the project site would need to upgrade the exterior façades in order to achieve adequate interior noise reduction. This can be accomplished by installing upgraded windows, improving wall construction, or a combo of both. As in the proposed project, Alternative 2 would be required to implement Mitigation Measure NOI-2, which requires preparation of a Final Acoustic Report to confirm that the interior living spaces of residential dwelling units will meet the City's interior noise standard of 45 dBA CNEL with windows and doors closed. With implementation of Mitigation Measure NOI-2, on-site interior noise levels would be consistent with the City's Noise Element standards for residential interior areas under Alternative 2. It should be noted that due to the reduction in the number of units under Alternative 2, it is possible that the outdoor amenities and the residential buildings could be relocated further from noise sources and Mitigation Measure NOI-2 may not be required.

Overall, impacts to operational noise under Alternative 2 would be similar to those of the proposed project, and mitigation would be required to reduce impacts to a less than significant level.

Implementation of Mitigation Measures NOI-1 and NOI-2 would ensure that construction of Alternative 2, together with cumulative projects, would not result in a significant cumulative impact as a result of construction- and operation-related noise. Although impacts related to noise for

Alternative 2 would be similar to those associated with the proposed project, cumulative impacts would be less than cumulatively significant.

Transportation. Alternative 2 would result in the construction of less residential units and building area as compared to the proposed project, and therefore, a shorter construction schedule would be necessary. As such, construction-related traffic generated under Alternative 2 would occur for a shorter period of time than the proposed project, and construction trips would be reduced. Therefore, similar to the proposed project, Alternative 2 would result in less than significant impacts related to construction traffic.

Operation of Alternative 2, similar to the proposed project, would generate more trips than during construction. The Level of Service (LOS) analyses prepared for the proposed project determined that the project would not result in any significant operational traffic impacts. The proposed project has the potential to generate approximately 890 average daily trips (ADT), including 64 trips (16 inbound and 48 outbound) in the a.m. peak hour and 82 trips (51 inbound and 31 outbound) in the p.m. peak hour. All study area intersections, including the hot-spot intersections, are anticipated to operate at satisfactory LOS based on the Intersection Capacity Utilization (ICU) and Highway Capacity Manual (HCM) methodologies. Impacts under the proposed project were determined to be less than significant. Therefore, it can be concluded that traffic impacts under Alternative 2 would be less than significant because this alternative represents a reduced project that would result in fewer trips. Overall, operational traffic impacts under Alternative 2 would be less that impacts associated with the proposed project. No mitigation is required.

Since Alternative 2 represents a reduced project that would result in fewer trips, it can be concluded that this alternative would also generate fewer vehicle miles traveled (VMT) per capita as compared to the regional VMT per capita. As such, based on the Governor's Office of Planning and Research (OPR) Technical Advisory (TA) guidance and similar to the proposed project, Alternative 2 would not have a significant transportation impact. However, since the City does not currently have thresholds or standards in place for assessing potential VMT impacts, VMT information is provided for disclosure purposes only, and the analysis of traffic impacts in this Draft EIR for CEQA purposes are based on the City's LOS thresholds. No mitigation would be required.

Similar to the proposed project, Alternative 2 would be required to comply with General Plan policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, as well as City Council Policy No. 310, which establishes metrics for determining traffic impacts, consistent transportation-related goals and policies in the City's General Plan, and the Orange County Congestion Management Program (CMP) (2019).

Because impacts related to traffic for Alternative 2 would be less than those associated with the proposed project, cumulative impacts would also be less than cumulatively significant.

Tribal Cultural Resources. Under Alternative 2, impacts to potential tribal cultural resources would be similar to the proposed project because the project site boundaries and disturbance area would remain the same as under the proposed project. Mitigation Measures CUL-1 and CUL-2 would still be applicable under Alternative 2 to protect any unknown tribal cultural resources and previously undiscovered buried human remains. With the incorporation of Mitigation Measures CUL-1 and CUL-2, Alternative 2 would have less than significant impacts to tribal cultural resources and

previously undiscovered buried human remains. Overall, impacts to tribal cultural resources under Alternative 2 would be similar to the proposed project's impacts because the project site boundaries and area of disturbance would remain the same.

Because impacts related to tribal cultural resources for Alternative 2 would be similar to those associated with the proposed project, implementation of Mitigation Measures CUL-1 and CUL-2 would also ensure that Alternative 2, together with cumulative projects, would not result in a significant cumulative impact to unique tribal cultural resources and previously undiscovered buried human remains.

Overview of Potential Impact/Comparison to Proposed Project. Construction impacts would be incrementally reduced under Alternative 2 as fewer residential units would be constructed (approximately 25 percent fewer units). Similarly, fewer operational impacts would occur as fewer residents, traffic trips, emissions, and noise would result from a smaller development. Overall, physical impacts under this alternative would be incrementally reduced due to fewer housing units being constructed and occupied.

Project Objectives. Alternative 2 would meet some, but not all of the project objectives. Alternative 2 would develop a residential development to increase the City's housing stock (Project Objective 1); develop a project that balances the development potential of the project site with environmental considerations (Project Objective 2); revitalize the vacant site with a well-designed and landscaped residential project that is compatible with the surrounding community (Project Objective 3); provide recreational opportunities for the surrounding community with incorporation of a multi-purpose trail (Project Objective 7); locate housing adjacent to available infrastructure to serve the project (Project Objective 8); and implement the City's General Plan (Project Objective 9).

However, this alternative would not achieve Project Objective 4, including increasing the City's tax base generating revenue for the City through property taxes, to the same extent as the proposed project because a smaller residential development would likely generate less property tax revenue. Additionally, a smaller residential development would result in the elimination of affordable units because they would no longer be economically feasible to construct. As such, this alternative would not meet Project Objectives 1 and 5 to the same extent as the proposed project, because a smaller residential development would not increase the City's affordable housing stock and providing non-traditional home ownership opportunities to the same extent as the proposed project. Furthermore, Alternative 2 would not dedicate as much acreage as the proposed project for a permanent conservation area adjacent to the San Juan Creek.

Overall, this alternative would meet some of the project objectives, but not to the same degree as the proposed project.

5.5 IDENTIFICATION OF ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an Environmentally Superior Alternative. *State CEQA Guidelines* Section 15126.6(e)(2) states that if the No Project Alternative is the Environmentally Superior Alternative, then the EIR shall also identify an Environmentally Superior Alternative among the other alternatives. Table 5.B provides, in summary format, a comparison of the level of impacts for each Alternative to the proposed project.

Table 5.B: Comparison of Alternatives

Impact Area	Proposed Project Impacts with Mitigation (if any)	Alternative 1: No Project/No Development	Alternative 2: Reduced Project Alternative
Aesthetics	Less than Significant	Less	Similar
Air Quality	Less than Significant	Less	Less
Biological Resources	Less than Significant	Greater	Greater
Cultural Resources	Less than Significant	Less	Similar
Energy	Less than Significant	Less	Less
Geology and Soils	Less than Significant	Less	Similar
Greenhouse Gas Emissions	Less than Significant	Less	Less
Hydrology and Water Quality	Less than Significant	Less	Similar
Land Use and Planning	Less than Significant	Greater	Greater
Noise	Less than Significant	Less	Similar
Transportation/Traffic	Less than Significant	Less	Less
Tribal Cultural Resources	Less than Significant	Less	Similar

The No Project Alternative has the least impact to the environment because it would not result in the development of the proposed project on the currently undeveloped site. While overall the No Project Alternative would lessen or avoid the impacts of the proposed project, the beneficial impacts of the proposed project—including increasing the City's housing stock, improving the City's economic base through increased property tax revenues, and dedicating land for conservation—would not occur, and none of the Project Objectives would be met.

With the exception of the No Project Alternative, the Environmentally Superior Alternative would be Alternative 2, the Reduced Project Alternative. This alternative would either lessen environmental impacts or result in impacts similar to those associated with the proposed project in most environmental areas. However, similar to the No Project Alternative, impacts to biological resources and land use would be greater because the beneficial impacts of the proposed project would not occur, including increasing the City's housing stock and dedicating land for conservation to the same degree as under the proposed project. Although Alternative 2 would achieve some of the project objectives—specifically the project objectives aimed at providing a residential development to increase the City's housing stock (Project Objective 1); balancing the development potential of the project site with environmental considerations (Project Objective 2); revitalizing the vacant site with a well-designed and landscaped residential project that is compatible with the surrounding community (Project Objective 3); provide recreational opportunities for the surrounding community with incorporation of a multi-purpose trail (Project Objective 7); locate housing adjacent to available infrastructure to serve the project (Project Objective 8); and implement the City's General Plan

(Project Objective 9) – this alternative would not maximize the potential to maximize the City's tax base generating revenue through property taxes (Project Objective 4) and would also conflict with Project Objectives 1 and 5, which involve developing a residential development to increase the City's affordable housing stock and providing non-traditional home ownership opportunities through the provision of affordable units, respectively. Furthermore, Alternative 2 would not dedicate the same maximum acreage as the proposed project for a permanent conservation area adjacent to the San Juan Creek (Project Objective 7). Therefore, this alternative would meet some of the project objectives, but not to the same degree as the proposed project.

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6.0 OTHER CEQA CONSIDERATIONS

6.1 SUMMARY OF SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(c) of the California Environmental Quality Act (CEQA) Guidelines (*State CEQA Guidelines*) requires that an Environmental Impact Report (EIR) describe any significant impacts that cannot be avoided. Specifically, Section 15126.2(c) states that an EIR shall:

> "Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."

The Executive Summary of this Draft EIR (Chapter 1.0) contains a detailed summary that identifies the proposed project's environmental impacts as compared to existing conditions, proposed mitigation measures, and the level of significance of any impacts after mitigation. Implementation of the proposed project would not result in any impacts that are considered significant, adverse, and unavoidable. All environmental issues analyzed in this Draft EIR were determined to result in less than significant impacts, or can be reduced to less than significant levels with the incorporation of mitigation measures.

6.2 ENERGY IMPACTS

According to Section 15126.2(b) of the *State CEQA Guidelines*, "[i]f analysis of the project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources, the EIR shall mitigate that energy use."

As described in Section 4.5, Energy, of this Draft EIR, the proposed project would not result in significant impacts related to energy use. Therefore, no mitigation is required.

6.3 GROWTH-INDUCING IMPACTS

Sections 15126(d) and 15126.2(e) of the *State CEQA Guidelines* require that an EIR analyze growth-inducing impacts and discuss the ways in which a proposed project could foster economic or population growth or construction of additional housing, either directly or indirectly, in the surrounding environment. *State CEQA Guidelines* Section 15126.2(d) also requires a discussion of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. To address these issues, potential growth-inducing effects were examined through analysis of the following questions:

- Would the project remove obstacles to, or otherwise foster, population growth (e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development)?

- Would the project foster economic growth?

- Would approval of the project involve some characteristic that may encourage and facilitate other activities that could significantly affect the environment?

Growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment (*State CEQA Guidelines*, Section 15126.2(e)). This issue is presented to provide additional information on ways in which the proposed project could contribute to significant changes in the environment beyond the direct consequences of developing the proposed land uses as described in earlier sections of this Draft EIR.

6.3.1 Removal of Obstacles to, or Otherwise Foster, Population Growth

The area surrounding the project site is already urbanized and developed with a mix of office, commercial, religious, residential, and open space uses, so limited population growth is feasible within the vicinity of the project site. In any event, the proposed project would not remove impediments to population growth in the area surrounding the project site. While the proposed project may require water, sewer, electricity, and natural gas lines on site and in the immediate vicinity of the project site, such improvements would be intended primarily to meet project-related demand through connections to existing utility facilities in the area, and would not necessitate substantial utility infrastructure improvements. In addition, the 20-foot wide multi-purposed pedestrian, bicycle, and equestrian trail proposed along the southern boundary of the project site is intended to facilitate active transportation, and would not foster off-site population growth.

Although businesses that provide construction related services may hire a small amount of additional employees to perform construction work for the proposed project, the construction of the proposed project would not generate a substantial number of construction-related jobs because it is expected that local and regional construction workers would be available to meet the proposed project's construction needs. Additionally, short-term construction activities would be temporary in nature and would cease upon completion of project construction. Further, the proposed project would not induce material population growth because most of these employees are not expected to change their place of residence as a direct consequence of working on the proposed project. The work requirements of most construction projects are highly specialized so construction workers remain at a job site only for the limited time in which their specific skills are needed to complete a particular phase of the construction process. Therefore, the proposed project would not induce material population growth from a short-term employment perspective.

Upon completion of the proposed project, the development of 132 residential units is anticipated to generate approximately 410 additional residents on the project site. While this direct growth would increase the demand for neighborhood-servicing commercial uses in the area surrounding the project site, the proposed project would be located in a built-out developed area of the City of San Juan Capistrano (City) that is already served by neighborhood- serving retail and service uses. Although some local businesses that provide goods and services to nearby residents could hire a small number of additional employees to accommodate the minor increase in clientele associated with the proposed project, the additional hiring is not expected to induce material population

growth because most of these new employees hired by local businesses are not expected to change their place of residence.

With regard to project operation, the proposed project is residential and does not include the development of employment-generating uses. As such, the proposed project would not create an indirect demand for additional housing or households in the area. Therefore, given that the employment opportunities generated by the construction of the proposed project would be filled by people who would commute to the project site and operation of the proposed project would not result in employment generation, the potential population growth associated with project employees would be minimal.

6.3.2 Foster Economic Growth

In its existing condition, the project site is undeveloped and vacant and is primarily characterized by dirt and scattered ruderal vegetation. Therefore, the project site currently does not generate revenue for the City. The proposed project would provide a new source of property tax revenues to the City, thereby increasing the local property tax base. Because the proposed project does not include sales tax generating uses, the proposed project would not result in a change in the City's sales tax revenues.

The construction of the proposed project would generate construction-related jobs in San Juan Capistrano during the construction period. However, the proposed project does not contain employment-generating uses, and therefore, would not provide long-term employment opportunities. The 410 additional residents generated by implementation of the proposed project could, however, foster economic growth associated with the sales tax receipts of local businesses who would serve the new residents.

6.3.3 Other Characteristics

The proposed project includes the construction of a 132-unit residential development consisting of 43 two-story detached single-family units and 89 three-story attached townhome units. The project site is zoned as a Planned Community District associated with the adopted Ortega Planned Community Comprehensive Development Plan (CDP 78-01). There are also small portions of the project site designated as General Open Space and Community Park. The proposed land uses are consistent with these designations and no General Plan Amendment or zoning changes would be required to implement the proposed project. Therefore, the approval of the proposed project does not involve any characteristics that would encourage or facilitate other development projects.

It should be noted that the project site is identified in the City's General Plan 2014–2021 Housing Element (Adopted January 21, 2014, Revised September 19, 2017) as accommodating 230 very-low-income units. The proposed project includes 118 market- rate units and 14 moderate-income affordable units on the site. As such, the project would result in 216 fewer affordable housing units for the site than identified in the City's Housing Element. Senate Bill (SB) 166, which went into effect on January 1, 2018, requires a local jurisdiction to ensure that its Housing Element inventory can accommodate at all times its remaining unmet Regional Housing Needs Assessment (RHNA). Therefore, to ensure compliance with SB 166, the City has identified an alternative site which

includes 9.3 acres designated as Very High Density Residential Land Use. This site, identified as Assessor's Parcel Number (APN) 121-070-57, is entitled to be developed at a density of 30 dwelling units per acre, or 279 units. The 219 units, which are no longer able to be accommodated with the proposed development on the project site, can be accommodated on this alternative site. The City will notify the State Department of Housing and Community Development regarding the alternative site identified to accommodate the replacement housing should the proposed project be approved.

Because the future development of the 230 very-low-income units was already required regardless of whether or not the proposed project is approved, the proposed project would not directly increase the City's population beyond the number of residents who would live in the 132 on-site residential units. Therefore, the approval of the proposed project does not involve any characteristics that would encourage or facilitate other growth that was not anticipated in the City's General Plan.

6.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(d) of the *State CEQA Guidelines* requires that an EIR consider and discuss significant irreversible changes that would be caused by implementation of a proposed project. The *State CEQA Guidelines* specify that the use of nonrenewable resources during the initial and continued phases of a project should be discussed because a large commitment of such resources makes removal or non-use thereafter unlikely. Primary and secondary impacts (e.g., a highway improvement that provides access to a previously inaccessible area) should also be discussed because such changes generally commit future generations to similar uses. Irreversible damage can also result from environmental accidents associated with a project and should be discussed.

The types and level of development associated with the proposed project would consume limited, slowly renewable, and nonrenewable resources. This consumption would occur during construction of the proposed project and would continue throughout the operational lifetime of the proposed project. The development of the proposed project would require a commitment of resources that would include (1) building materials, (2) fuel and operational materials/resources, and (3) the transportation of goods and people to and from the project site.

Construction of the proposed project would require consumption of resources that are not replenishable or that may renew so slowly as to be considered nonrenewable. These resources would include certain types of lumber and other forest products (e.g., hardwood lumber), aggregate materials used in concrete and asphalt (e.g., sand, gravel, and stone), metals (e.g., steel, copper, and lead), petrochemical construction materials (e.g., plastics), and water. Fossil fuels (e.g., gasoline and oil) would also be consumed in the use of construction vehicles and equipment. Water, which is a limited, slowly renewable resource, would also be consumed during construction of the proposed project. However, given the temporary nature of construction activities, water consumption during construction would result in a less than significant impact on water supplies. Furthermore, the use of construction vehicles and equipment would require the consumption of nonrenewable fossil fuels such as natural gas and oil. As with other resources consumed during construction, the consumption of nonrenewable fossil fuels for energy use would occur on a temporary basis during construction of the proposed project.

Operation of the proposed project would continue to expend similar nonrenewable resources that are currently consumed within San Juan Capistrano. These include energy resources such as electricity, petroleum-based fuels, fossil fuels, and water. Energy resources would be used for heating and cooling buildings, transportation within the project site, and building lighting. Fossil fuels are primary energy sources for project operation. This existing, finite energy source would thus be incrementally reduced. Under Title 24, Part 6 of the California Code of Regulations (CCR), conservation practices limiting the amount of energy consumed by the proposed project would be required during operation. Additionally, the proposed project would include the implementation of conservation and sustainability features as listed in Section 3.3.9, Conservation and Sustainability Features, in Chapter 3.0, Project Description. Nevertheless, the use of such resources would continue to represent a long-term commitment of essentially nonrenewable resources.

The proposed project would result in the limited use of potentially hazardous materials during project operation typical of residential uses (e.g., cleaning solvents, fertilizers, and pesticides). Such materials would be used, handled, stored, and disposed of in accordance with manufacturers' instructions and handled in compliance with applicable government regulations and standards that would serve to protect against a significant and irreversible environmental change resulting from the accidental release of hazardous materials.

In summary, construction and operation of the proposed project would commit the use of slowly renewable and nonrenewable resources and would limit the availability of these resources on the project site for future generations or for other uses during the life of the proposed project. However, the continued use of such resources during operation would be typical of other residential uses and consistent with regional and local urban design and development goals for the area, including the City's General Plan. As a result, the use of nonrenewable resources in this manner would not result in significant irreversible changes to the environment under the proposed project.

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7.0 MITIGATION AND MONITORING AND REPORTING PROGRAM

7.1 MITIGATION MONITORING REQUIREMENTS

Public Resources Code (PRC) Section 21081.6 (enacted by the passage of Assembly Bill 3180) mandates that the following requirements shall apply to all reporting or mitigation monitoring programs:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes that have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

- The lead agency shall specify the location and custodian of the documents or other materials that constitute the record of proceedings upon which its decision is based.

- A public agency shall provide measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents that address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.

- Prior to the close of the public review period for a Draft Environmental Impact Report (EIR), a responsible agency, or a public agency having jurisdiction over natural resources affected by the project, shall either (1) submit to the lead agency complete and detailed performance objectives for mitigation measures that would address the significant effects on the environment identified by the responsible agency or agency having jurisdiction over natural resources affected by the project, or (2) refer the lead agency to appropriate, readily available guidelines or reference documents. Any mitigation measures submitted to a lead agency by a responsible agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures that mitigate impacts to resources that are subject to the statutory authority of, and definitions applicable to, that agency. Compliance or noncompliance with that requirement by a responsible agency or agency having jurisdiction over natural resources affected by a project shall not limit the authority of the responsible agency or agency having jurisdiction over natural resources affected by a project, or the authority of the lead agency, to approve, condition, or deny projects as provided by this division or any other provision of law.

7.2 MITIGATION MONITORING PROCEDURES

The mitigation monitoring and reporting program has been prepared in compliance with PRC Section 21081.6. It describes the requirements and procedures to be followed by the City of San Juan Capistrano (City) to ensure that all mitigation measures adopted as part of the Tirador Residential Development Project (proposed project) will be carried out as described in this Draft EIR.

Table 7.A lists each of the mitigation measures specified in this Draft EIR and identifies the party or parties responsible for implementation and monitoring of each measure.

Table 7.A: Mitigation and Monitoring Reporting Program

Mitigation Measures		Responsible Party	Timing for Mitigation Measures
4.1 Aesthetics			
There are no potentially significant impacts related to aesthetics; therefore, no mitigation is required.			
4.2 Air Quality			
There are no potentially significant impacts related to air quality; therefore, no mitigation is required.			
4.3 Biological Resources			
Mitigation Measure BIO-1:	**Springtime Botanical Survey**. Prior to any project-related ground disturbance, the Project Applicant shall retain a qualified biologist/botanist to conduct a botanical survey during the typical springtime blooming season (April through May 2020) to confirm the absence of annual special-status plant species that bloom during this period. The results of the survey shall be documented and submitted to the Director of the City of San Juan Capistrano (City) Development Services Department, or designee. Should special-status plant species be found within the project disturbance limits, a compensatory mitigation plan must be prepared and approved by the City Development Services Department, or designee, prior to project-related ground disturbance. If listed special-status plant species are found, the compensatory mitigation plan must also be approved by the United States Fish and Wildlife Service or California Department of Fish and Wildlife, as applicable.	City of San Juan Capistrano Development Services Director, or designee	Prior to the start of ground disturbing activities
Mitigation Measure BIO-2:	**Worker Environmental Awareness Training.** Prior to initial groundbreaking, the Director of the City of San Juan Capistrano Development Services Department, or designee, shall confirm that a Worker Environmental Awareness Training shall be conducted by a qualified biologist to educate all construction personnel on the relevant federal, state, and local laws related to regional special-status species known to occur in adjacent habitat types, particularly habitat associated with San Juan Creek. The training session shall include training on identification of species that may be found on or adjacent to the project site, the status of those species, and any legal protection afforded to those species. Measures that are being implemented to protect those species shall also be explained. Personnel shall be advised to report any special-status species promptly to the construction manager. The training session shall also include information regarding invasive shot hole borers (ISHB), how to recognize signs of infestation, and where to report observations. A fact sheet conveying this information shall be prepared for display or for distribution to anyone who may enter the project site.	City of San Juan Capistrano Development Services Director, or designee	Prior to the start of ground disturbing activities
Mitigation Measure BIO-3:	**Construction Site Housekeeping.** Impacts to habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities shall be minimized by adhering to the following measures for the duration of construction activities: • The project disturbance limits shall be clearly marked with construction fencing (or other highly visible material), and construction/materials staging and vehicle/ equipment maintenance and fueling areas shall be located at least 200 feet away from riparian habitat associated with San Juan Creek and El Horno Creek, where feasible. • To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, and other designated areas. • Project-related vehicles shall observe a daytime speed limit of 20 miles per hour (mph) throughout the site in all project sites, except on county roads and State and federal highways. Night-time construction shall be minimized to the extent possible. However if it does occur, then the speed limit shall be reduced to 10 mph. Off-road traffic outside of designated project sites shall be prohibited. • To prevent inadvertent entrapment of animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape. • For the duration of construction activities, all food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least daily from the construction site. • Pets, such as dogs or cats, shall not be permitted on the project site during construction to prevent harassment, injury, or death of wildlife in the project vicinity. • Use of rodenticides and herbicides in project sites shall be restricted to prevent primary or secondary poisoning of predators and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, the California Department of Food and Agriculture, and other State and federal legislation	Construction Manager	During construction activities
Mitigation Measure BIO-4:	**Erosion Control and Amphibian Exclusionary Fencing.** Grading and construction resulting in ground disturbance shall occur within the typical dry season (April 15 through October 15), as feasible, to avoid erosion and sedimentation impacts to nearby creeks and water quality. The Director of the City of San Juan Capistrano Development Services Department, or designee, shall verify that project plans require the Project Contractor to install adequate erosion and sedimentation barriers (e.g., silt fencing, as described below) prior to ground disturbance to prevent any sediment-laden runoff or debris from entering adjacent waterways or the Pacific Ocean during the wet season or periods of rain. This silt fencing shall also serve as a temporary barrier to further minimize the potential for special-status amphibians and other wildlife from entering work areas during construction. The barriers shall consist of 3-foot-tall silt fencing buried to a depth of at least 6 inches below the soil surface along the outer limits of all work areas (or as otherwise required by the storm water pollution and prevention plan). These barriers shall be inspected daily by construction personnel and maintained and repaired as necessary for the duration of construction to ensure that they are functional and are not a hazard to wildlife on the outer side of the fence. A qualified biologist shall monitor all fence installation. All barriers shall be removed following completion of construction.	City of San Juan Capistrano Development Services Director, or designee	Prior to ground disturbing activities

Table 7.A: Mitigation and Monitoring Reporting Program

Mitigation Measures		Responsible Party	Timing for Mitigation Measures
Mitigation Measure BIO-5:	**Nesting Bird Surveys.** If vegetation removal, construction, or grading activities are planned to occur within the active nesting bird season (January 1 through September 15), the Director of the City of San Juan Capistrano Development Services Department, or designee, shall confirm that the Project Applicant has retained a qualified biologist who shall conduct a preconstruction nesting bird survey no more than 3 days prior to the start of such activities. If construction activities using heavy equipment (i.e., graders, bulldozers, and excavators, etc.) continue through the nesting season, weekly nesting bird surveys shall be conducted. Each nesting bird survey shall include the work area and areas adjacent to the site (within 500 feet, as feasible) that could potentially be affected by project-related activities such as noise, vibration, increased human activity, and dust, etc. For any active nest(s) identified, the qualified biologist shall establish an appropriate buffer zone around the active nest(s). The appropriate buffer shall be determined by the qualified biologist based on species, location, and the nature of the proposed activities. Project activities shall be avoided within the buffer zone until the nest is deemed no longer active, as determined by the qualified biologist.	City of San Juan Capistrano Development Services Director, or designee	No more than 3 days prior to the start of site disturbing activities
Mitigation Measure BIO-6:	**Delineation of Environmentally Sensitive Areas.** During the construction period, the Director of the City of San Juan Capistrano Development Services Department, or designee, shall confirm that construction plans require that temporary fencing be installed along San Juan Creek that restricts access into the creek and adjacent habitats. Prior to issuance of occupancy permits, the Director of the City's Development Services Department, or designee, shall confirm that permanent signage has been installed that includes references to the environmentally sensitive nature of the creek and adjacent habitats. The Homeowner's Association (HOA) shall fund annual signage monitoring and repairs, as needed.	City of San Juan Capistrano Development Services Director, or designee	During construction activities and prior to the issuance of occupancy permits
Mitigation Measure BIO-7:	**Invasive Shot Hole Borers.** To prevent the spread of Invasive Shot Hole Borers (ISHB), the Project Applicant shall not install any ISHB-infected trees for landscaping, and installed trees shall be monitored once every 3 years for up to 9 years by an International Society of Arboriculture (ISA) certified arborist. The Worker Environmental Awareness Training, described in Mitigation Measure BIO-2, shall include a component to educate crews about ISHB and how to recognize signs of this species. A designated biologist familiar with the signs of ISHBs shall survey trees on the project site that are designated for removal or trimming. Surveys shall be conducted at least 30 days prior to removal or trimming activities. If any tree is determined to be infested/infected by ISHB, a control plan shall be prepared and submitted to the California Department of Fish and Wildlife (CDFW) for review and approval. At a minimum, the control plan shall include methods of control, removal, and appropriate disposal techniques to prevent the spread of ISHB. The results of the tree survey, and if warranted, a copy of the CDFW-approved control plan shall be submitted to the City's Development Services Director, or designee, prior to issuance of grading permits.	City of San Juan Capistrano Development Services Director, or designee	During project operation, and at least 30 days prior to tree removal or trimming activities
4.4 Cultural Resources			
Mitigation Measure CUL-1:	**Cultural Resources Monitoring and Accidental Discovery.** Prior to the issuance of grading permits, the Project Applicant shall retain, with approval of the City of San Juan Capistrano (City) Development Services Director, or designee, a qualified archaeological monitor. A monitoring plan should be prepared by the archaeologist and implemented upon approval by the City. Prior to issuance of grading permits, the Project Applicant, with City approval, shall also retain a Native American monitor after consultation with interested tribal and Native American representatives. Both monitors shall be present on the project site during ground-disturbing activities to monitor rough and finish grading, excavation, and other ground-disturbing activities in the native soils. Because cultural resources were previously identified on the project site, both monitors are required to be present on a full-time basis during initial site preparation and initial ground-disturbing activities. Further, each monitor shall spot check any ground-disturbing activities (e.g., finish grading) to ensure that no cultural resources are impacted during construction activities. If cultural materials are discovered during site preparation, grading, or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing on the California Register of Historical Resources. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to: excavation of the deposit in accordance with a data recovery plan (see California Code of Regulations [CCR] Title 14(3) Section 15126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.	City of San Juan Capistrano Development Services Director, or designee	Prior to the issuance of grading permits
Mitigation Measure CUL-2:	**Human Remains.** Consistent with the requirements of CCR Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the project site, the construction contractor shall halt work within 25 feet of the discovery; all work within 25 feet of the discovery shall be redirected and the Orange County (County) Coroner notified immediately. No further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the City, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City shall consult with the MLD identified by the NAHC to develop an agreement for the treatment and disposition of the remains. Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the	City of San Juan Capistrano Development Services Director, or designee	During site disturbance, grading, or other construction activities

Table 7.A: Mitigation and Monitoring Reporting Program

	Mitigation Measures	Responsible Party	Timing for Mitigation Measures
	treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report shall be submitted to the City Development Services Director, or designee, and the South Central Coastal Information Center. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.		
4.5 Energy			
There are no potentially significant impacts related to energy; therefore, no mitigation is required.			
4.6 Geology and Soils			
Mitigation Measure GEO-1:	**Incorporation of and Compliance with the Recommendations in the Geotechnical Investigation.** All grading operations and construction shall be conducted in conformance with the recommendations included in the project-specific geotechnical investigation report prepared by GeoSoils Consultants Inc. (July 10, 2017). Design, grading, and construction shall be performed in accordance with the requirements of the City of San Juan Capistrano (City) Building Code and the California Building Code (CBC) applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the Director of the City of San Juan Capistrano Development Services Department, or designee, prior to issuance of grading permits. Recommendations in the Geotechnical Investigation are summarized below. ● **Site Grading/Earthwork.** Prior to grading activities on the site, organics and debris shall be removed and hauled off-site. Undocumented fill within the project limits shall be over-excavated to a minimum depth of 12 feet (ft). The bottom of the excavated area shall be underlain by a layer of filter fabric (which will prevent contamination of crushed aggregate from underlying fine soils) and overlain by a minimum of 2 ft of crushed rock and a geogrid layer(which will minimize the manifestation of vertical settlements to the surface). The excavated layer shall be backfilled with engineered fill, which shall be compacted to at least 90 percent. Compaction shall be verified by observation, probing, and testing by a Geotechnical Consultant. ● **Fill Material.** On-site soils with an Expansion Index (EI) less than 35 and free of organic materials, debris, and cobbles larger than 3 inches may be used for backfilling. Imported granular soils may be used in compacted fills within the project limits. All imported soil shall contain binder material. Imported materials shall also be non-expansive and free of organic materials, debris, and cobbles larger than 3 inches, with no more than 25 percent passing No. 200 Sieve. All fill materials within the upper 2 ft shall be free of particles greater than 2 inches in size. A bulk sample of import material, weighing at least 30 pounds, shall be submitted to the Geotechnical Consultant for approval at least 48 hours prior to fill operations. ● **Utility Trenching.** Bedding materials consisting of sand, gravel, or crushed aggregate shall be used to backfill around utility pipes. On-site soils having a Sand Equivalent (SE) of 30 or greater can also be used as bedding material. Prior to placing pipes, the pipe trench subgrade shall be observed by the Geotechnical Consultant. If exposed subgrade is loose or unstable, unsuitable subgrade shall be excavated and replaced with bedding material. Trenches in pavement areas shall be capped with at least 1 ft of compacted, on-site soil and shall be compacted to at least 95 percent relative compaction. ● **Temporary Excavations.** All temporary excavations shall be properly sloped or shored. Excavation of 3.5 ft or less in depth may be performed with vertical sidewalls. Deeper excavations up to a depth of 10 ft can be accomplished with Occupational Safety and Health Administration (OSHA) requirements for Type C soils and may be laid back 1H:1.5V gradient, or 1H:1V upon review by the Geotechnical Consultant. ● **Shoring.** Shoring systems feasible for the site are expected to include cantilever shoring, such as soldier piles. All shoring shall be designed in accordance with the latest edition of the Trenching and Shoring Manual (Caltrans 2011), and shall be approved by the Geotechnical Consultant. A licensed surveyor shall be retained to establish monuments on the shoring and surrounding area. These monuments shall be monitored for movement during construction. ● **Spread/Strip Footing Foundations.** Upon completion of the grading (cutting) required to establish the proposed building pad elevations, the proposed structures may be supported by a spread/strip footing foundation system. Spread/strip footings shall be at least 24 and 18 inches wide, respectively, and embedded at least 18 inches below the lowest adjacent grade in the engineered fill. The slab-on-grade should be at least 5 inches thick and reinforced with rebar. Footings shall be deepened as necessary in order to maintain adequate support for the foundations adjacent to utility trenches. ● **Matt Foundations.** Upon completion of the grading (cutting) required to establish the proposed building pad elevations, the proposed structures may be supported by a matt foundation system in areas where settlements cannot be tolerated by spread/strip footings. The mat should be at least 10 inches thick and embedded at least 18 inches below the lowest adjacent grade in the engineered fill. ● **Concrete Flatworks.** Frequent construction or control joints shall be provided in all concrete slabs where cracking is objectionable. Contraction or weakened plane joints shall extend deeper than one-quarter of the slab thickness. Control joints shall be spaced a minimum of 10 ft intervals. Exterior concrete slab-on-grade may be subjected to drying due to the fluctuation of moisture content in subgrade soils. Deepened edge sections will aid in reducing the potential for the shrinkage and swelling of underlying soils. ● **Retaining Walls.** The proposed development is expected to require various types of earth-retaining structures: freestanding cantilever retaining wall, temporary shoring, and below grade walls for several of the proposed structures. In general, retaining structures planned at the site shall be backfilled with compacted soil and be	City of San Juan Capistrano Development Services Director, or designee	Prior to commencement of grading activities

Table 7.A: Mitigation and Monitoring Reporting Program

	Mitigation Measures	Responsible Party	Timing for Mitigation Measures
	constructed with a backdrain. ● **Corrosive Soils.** A representative bulk sample of soils in contact with concrete and pipes shall be collected and tested or pH, minimum resistivity, soluble chloride content, and soluble sulfate content. The test results shall be used to determine the chemical properties of on-site soils and appropriate recommendations. Recommendations for corrosion protection may include, but are not limited to, sacrificial metal, the use of protective coatings, and/or cathodic protection. ● **Geotechnical Review and Future Testing.** Additional site testing and final design evaluation shall be conducted by the project Geotechnical Consultant to refine and enhance these recommendations. Final design shall be based on testing and analyses of the near-surface soils following the completion of grading. Design, grading, and construction shall be conducted in accordance with the specifications of the Geotechnical Consultant as summarized in a final report based on the CBC applicable at the time of grading and building and the City of San Juan Capistrano Building Code.		
Mitigation Measure GEO-2:	**Grading Plan Review and On-Site Inspection**. Grading plan review shall also be conducted by the Geotechnical Consultant and the Director of the City of San Juan Capistrano Development Services Department, or designee, prior to the start of grading to verify that the recommendations developed during the geotechnical design evaluation have been appropriately incorporated into the project plans. On-site inspection during grading shall be conducted by the Geotechnical Consultant and the City Building Official, or designee, to ensure compliance with geotechnical specifications as incorporated into project plans.	City of San Juan Capistrano Development Services Director, or designee	Prior to commencement of grading activities
Mitigation Measure GEO-3:	**California Building Code Compliance and Seismic Standards.** Structures and retaining walls shall be designed in accordance with the seismic parameters presented in the Geotechnical Investigation and applicable sections of Section 1613 of the 2016 California Building Code (CBC). Prior to issuance of building permits for planned structures, the project soils engineer and the Director of the San Juan Capistrano Development Services Department, or designee, shall review building plans to verify that structural design conforms to the recommendations of the Geotechnical Investigation and the City of San Juan Capistrano Building Code.	Project soils engineer and the City of San Juan Capistrano Development Services Director, or designee	Prior to issuance of building permits
Mitigation Measure GEO-4:	**Paleontological Resources Assessment.** Prior to issuance of grading permits, and in accordance with City of San Juan Capistrano's Historical, Archaeological, and Paleontological Resource Management Guidelines (previously known as Council Policy 601), a paleontologist certified by the County of Orange shall prepare a Paleontological Resources Assessment that includes the following information: a clear map delineating the project boundaries, the results of a field survey of the project area, the results of background research and sources for that background information, criteria for evaluation of paleontological sensitivity of the property, and a determination of whether development of the project has the potential to impact paleontological resources. If the Paleontological Resources Assessment determines that project activities will not impact paleontological resources, no further paleontological resource impact mitigation is required. If the Paleontological Resources Assessment determines that there is a low possibility for project activities to impact paleontological resources, the Project Applicant shall retain a paleontologist on an on-call basis to address any unanticipated discoveries. If the Paleontological Resources Assessment determines that paleontological resources may be impacted by project development, a Paleontological Resources Impact Mitigation Program shall be prepared, and paleontological monitoring, fossil collection and treatment (if necessary), and preparation of a final monitoring report shall occur as described in Mitigation Measure GEO-5.	Qualified paleontologist	Prior to commencement of site disturbance, grading, or other construction activities
Mitigation Measure GEO-5:	**Paleontological Resources Impact Mitigation Program.** In the event the project specific Paleontological Resources Assessment determines that paleontological resources may be impacted by project development, a Paleontological Resources Impact Mitigation Program (PRIMP) shall be prepared prior to commencement of any grading activity on site, and approved by the Director of Planning, or designee. The PRIMP shall be prepared by a paleontologist who is listed on the County of Orange list of certified paleontologists, and shall include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP) (2010). The paleontologist or paleontological monitor shall attend one pre-construction meeting in order to explain the mitigation measures associated with the project, the potential for encountering paleontological resources, and the types of resources that may be found. Ground-disturbing activities in deposits with high paleontological sensitivity shall be monitored by a paleontological monitor following the PRIMP. Spot check monitoring is required for ground disturbance in deposits with low paleontological sensitivity, and no paleontological monitoring is required for ground disturbance in deposits with no paleontological sensitivity. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment in the area of the find in order to allow removal of abundant or large specimens. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and a paleontologist shall be contacted to assess the find for significance. Sediments shall occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a scientific institution. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program. When submitted to the City of San Juan Capistrano Director of Development Services, or designee, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources.	Qualified paleontologist and the City of San Juan Capistrano Development Services Director, or designee	Prior to commencement of grading activities

Table 7.A: Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measures
4.7 Greenhouse Gas Emissions		
There are no potentially significant impacts related to greenhouse gas emissions; therefore, no mitigation is required.		
4.8 Hydrology and Water Quality		
There are no potentially significant impacts related to hydrology and water quality; therefore, no mitigation is required.		
4.9 Land Use and Planning		
There are no potentially significant impacts related to land use and planning; therefore, no mitigation is required.		
4.10 Noise		
Mitigation Measure NOI-1: The project contractor shall implement the following measures during construction of the proposed project: ● Limit construction activities to between the hours of 7:00 a.m. and 6:00 p.m. Mondays through Fridays and between the hours of 8:30 a.m. and 4:30 p.m. on Saturdays. Construction noise is prohibited on Sundays and national holidays. ● Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. ● Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site. ● Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities. ● Designate a "disturbance coordinator" at the City of San Juan Capistrano (City) who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early or a bad muffler) and would determine and implement reasonable measures warranted to correct the problem.	Construction Manager	During construction
Mitigation Measure NOI-2: Prior to the approval of final building plans for the project, the City shall confirm that the project plans include a 14-foot-high soundwall along the western boundary of the project site adjacent to the tot lot. The Project Applicant shall prepare an acoustic study for approval by the Director of Development Services, or designee, that demonstrates that the exterior noise level at the common outdoor areas (tot lot and gathering areas) shall not exceed the 65 A-weighted decibel Community Noise Equivalent Level (dBA CNEL) and that interior noise levels in habitable rooms shall not exceed 45 dBA CNEL, as defined by the California Building Code. Acoustical design features shall be incorporated into the proposed project design, which may include a combination of exterior features to reduce noise, such as berms/walls and/or architectural features such as Sound Transmission Class (STC) rated windows and doors. All STC ratings shall be shown on the building plans and incorporated into the construction of the proposed project. Once final architectural plans with the exterior-wall details and window types are available, a Final Acoustic Report shall be prepared by a qualified consultant to confirm that the interior living spaces of residential dwelling units would meet the City interior noise standard of 45 dBA CNEL with windows and doors closed. If interior noise level thresholds are still exceeded after the Final Acoustic Report is completed, additional acoustical design features, including façade and window upgrades, shall be incorporated in the building plans in order to meet the interior noise standard.	City of San Juan Capistrano Development Services Director, or designee	Prior to the approval of final building plans
4.11 Transportation		
There are no potentially significant impacts related to transportation; therefore, no mitigation is required.		
4.12 Tribal Cultural Resources		
Refer to Mitigation Measures CUL-1 and CUL-2, which are provided above under Section 4.4, Cultural Resources.		

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8.0 LIST OF PREPARERS AND PERSONS CONSULTED

8.1 CITY OF SAN JUAN CAPISTRANO

The following individuals from the City of San Juan Capistrano (City) were involved in the preparation of this Draft Environmental Impact Report (EIR):

- Laura Stokes, Housing Supervisor/Associate Planner, Development Services Department
- Joel Rojas, Director, Development Services Department
- Eric Bauman, Assistant Utilities Director, Public Works Department
- Jeremy Hohnbaum, Senior Civil Engineer, Public Works Department
- Joe Mankawich, Associate Engineer, Public Works Department

8.2 EIR PREPARERS

The following individuals were involved in the preparation of this Draft EIR. The nature of their involvement is identified below.

8.2.1 LSA Associates, Inc.

The following individuals were involved in the preparation of this Draft EIR:

- Ashley Davis, Principal in Charge
- Shelby Cramton, Senior Environmental Planner/Project Manager
- Amy Fischer, Principal
- Nicole West, CPSWQ, QSD/QSP, Associate
- David Atwater, Senior Environmental Planner
- Cara Carlucci, Senior Planner
- Andrea Bean, Environmental Planner
- Elise Miller, Assistant Environmental Planner
- Marlene Watanabe, Assistant Environmental Planner
- Abby Annicchiarico, Assistant Environmental Planner
- Gary Dow, Associate/Graphics
- Lauren Johnson, Technical Editor
- Chantik Virgil, Senior Word Processor

8.3 TECHNICAL REPORT PREPARERS

The following individuals were involved in the preparation of the technical reports in support of this Draft EIR. The nature of their involvement is identified below.

8.3.1 Archaeological Resources Management Corporation

The following individuals were involved in the preparation of the *Report of Phase I Paleontological Assessment for Ventanas Business Center Project, San Juan Capistrano, South Orange County, California* (August 2007):

- Hugh M. Wagner, Ph.D.

8.3.2 Geosoils Consultants, Inc.

The following individuals were involved in the preparation of the *Geotechnical Engineering Investigation Proposed Residential Housing San Juan Mixed Use Intersection of Calle Arroyo and Paseo Tirador, City of San Juan Capistrano, California* (July 2017) and the *Response to City of San Juan Capistrano Review Letter, dated May 29, 2018, Proposed Residential Housing, San Juan Mixed Use, Intersection of Calle Arroyo and Paseo Tirador, San Juan Capistrano California* (October 2018):

- Karen L. Miller, G.E.
- James L. Van Meter, C.E.G

8.3.3 IBI Group

The following individual was involved in the preparation of the *Preliminary Hydrology Report for Paseo Tirador TTM 18148, San Juan Capistrano, CA* (November 2017, revised March 2018) and the *Preliminary Water Quality Management Plan for Paseo Tirador, San Juan Capistrano, CA* (November 2017, revised March 2018, July 2018, and January 2019):

- Puneet Comar, P.E.

8.3.4 LSA Associates, Inc.

The following individuals were involved in the preparation of the *Air Quality and Greenhouse Gas Emissions Analysis: Proposed Tirador Residential Development Project, City of San Juan Capistrano, California* (January 2020):

- Amy Fischer, Principal
- Michael Slavick, Senior Air Quality Specialist
- Jeff Haynes, Air Quality Analyst

The following individuals were involved in the preparation of the *Final Biological Resources Assessment for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (January 2020):

- Blake Selna, Principal
- Bo Gould, Senior Biologist
- Jessica Lieuw, Assistant Biologist

The following individuals were involved in the preparation of the *Noise and Vibration Impact Analysis Memorandum for the Proposed Tirador Residential Development Project in San Juan Capistrano* (January 2020):

- Amy Fischer, Principal
- JT Stephens, Associate/Senior Noise Specialist
- Jason Lui, Associate/Senior Noise Specialist

The following individuals were involved in the preparation of the *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (December 2019):

- Ambarish Mukherjee, AICP, PE, Associate/Transportation
- Dean Arizabal, Associate/Transportation
- Shiva Delparastaran, Transportation Engineer

8.4 PROJECT APPLICANT

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  - Joseph Ontiveros, Director
- Torres Martinez Desert Cahuilla Indians
  - Michael Martinez Mirelez, Cultural Resource Coordinator

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9.0 REFERENCES

The following references were used in the preparation of the Tirador Residential Development Project Environmental Impact Report for the City of San Juan Capistrano.

CHAPTER 2.0: INTRODUCTION

California Department of Forestry & Fire Protection (CAL FIRE). 2011. Orange County Fire Hazard Severity Zones. October. Website: http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/orange/c30_SanJuan Capistrano_vhfhsz.pdf (accessed December 4, 2018).

Capistrano Unified School District. 2018. Residential and Commercial/Industrial Fee Study. 2017–2018.

City of San Juan Capistrano. 1999. Public Services & Utilities Element.

_____. 2002. General Plan Parks and Recreation Element.

_____. 2017. *Mitigated Negative Declaration and Initial Study for the Church of Jesus Christ Latter Day Saints Meetinghouse Project*. September 2017.

_____. 2019. *Local Guidelines for Implementing the California Environmental Quality Act*.

_____. General Plan Elements (as amended). Website: http://sanjuancapistrano.org/Departments/Development-Services/Planning-Zoning/General-Plan.

_____. Municipal Code and other titles referenced herein. Website: http://www.qcode.us/codes/sanjuancapistrano/).

County of Orange. 1986. *Orange County Hydrology Manual*.

_____. 2000. *Orange County Flood Control Design Manual*.

_____. 2019. *Orange County Congestion Management Program* (CMP). November.

Southern California Association of Governments (SCAG). Regional Transportation Plan 2012-2035. GrowthForecast Appendix. Table 18.

State of California Department of Conservation (DOC). 1994. California Division of Mines and Geology. Generalized Mineral Land Classification or Orange County. Open-File Report 94-15, Plate 1.

State of California Department of Finance. 2018. City/Population and Housing Estimates. January.

United States Census Bureau (Census Bureau). Quick Facts Finder. 2017. Website: https://www.census.gov/quickfacts/fact/table/sanjuancapistranocitycalifornia,ca/PST045217 (accessed December 5, 2018).

CHAPTER 3.0: PROJECT DESCRIPTION

City of San Juan Capistrano. 1999. General Plan Land Use Element, Revised September 2014.

_____. 1999. General Plan Land Use Element, Revised September 2014.

_____. 2014–2021 General Plan Housing Element, Adopted January 21, 2014, Revised September 19, 2017.

_____. Municipal Code. Section 9-3.535, Parking.

Federal Emergency Management Agency (FEMA). 2009. Flood Maps 06059C0506J and 06059C0507J (effective December 3, 2009). Website: https://msc.fema.gov/portal/home (accessed November 2, 2018).

IBI Group. 2018. *Parking Summary Exhibit*. March.

Withee Malcolm Architects, LLP. 2018. *Project Information.* November 13, 2018.

CHAPTER 4.0: EXISTING ENVIRONMENTAL SETTING, ENVIRONMENTAL ANALYSIS, IMPACTS, AND MITIGATION MEASURES

City of San Juan Capistrano. 2019. *Local Guidelines for Implementing the California Environmental Quality Act.*

SECTION 4.1: AESTHETICS

City of San Juan Capistrano. 1999. General Plan Community Design Element, Revised 2002.

_____. 1999. General Plan Conservation and Open Space Element, Revised 2002.

_____. 1999. General Plan Land Use Element, Revised September 2014.

_____. 2019*. Local Guidelines for Implementing the California Environmental Quality Act.*

_____. Ortega Planned Community (CDP) 78-01, Planning Sectors B-3 and C.

_____. Municipal Code, Sections 9-3.301 and 9-3.535.

United States Census Bureau. Mission Viejo-Lake Forest-San Clemente, CA Urbanized Area No. 57709. Website: https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua57709_mission_viejo--lake_forest--san_clemente_ca/DC10UA57709.pdf (accessed December 24, 2019).

_____. 2010 Census Urban Area FAQs. Website: https://www2.census.gov/geo/pdfs/reference/ua/2010ua_faqs.pdf?# (accessed December 24, 2019).

SECTION 4.2: AIR QUALITY

California Air Pollution Control Officers Association. Model Policies for Greenhouse Gases in General Plans, Website: http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-ModelPolicies-6-12-09-915am.pdf (accessed November 2019).

California Air Resources Board (CARB). 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework Pursuant to AB 32, the California Global Warming Solutions Act of 2006.* Website: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf (accessed November 2019).

_____. 2016. Ambient Air Quality Standards. October. Website: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf (accessed November 2019).

_____. 2019. California Greenhouse Gas Emission Inventory – 2019 Edition. Website: http://www.arb.ca.gov/cc/inventory/data/data.htm (accessed December 2019).

_____. Air Quality Standards and Area Designations. Website: http://www.arb.ca.gov/desig/desig.htm (accessed November 2019) (Webpage last reviewed by CARB on May 5, 2016.)

_____. Assembly Bill 32 Overview, Website: http://www.arb.ca.gov/cc/ab32/ab32.htm (accessed November 2019).

California Building Industry Association v. Bay Area Air Quality Management District [No. S213478, Decided December 17, 2015]). Website: https://caselaw.findlaw.com/ca-supreme-court/1721100.html (accessed February 2020).

California Climate Change. Climate Action Team Reports. Website: http://www.climatechange.ca.gov/climateactionteam/reports/ (accessed November 2019).

California Energy Commission (CEC). 2006. Our Changing Climate – Assessing the Risks to California. July. Website: http://www.energy.ca.gov/2006publications/CEC-500-2006-077/CEC-500-2006-077.PDF (accessed November 2019).

California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. Website: http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF (accessed November 2019).

_____. 2019. California GHG Emission Inventory. Website: https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-16.pdf (accessed December 2019).

California Climate Change Center. Climate Scenarios for California. Website: http://www.energy.ca.gov/2005publications/CEC-500-2005-203/CEC-500-2005-203-SF.PDF (accessed November 2019).

City of San Juan Capistrano. 1999. General Plan. December 1999. Website: http://sanjuancapistrano.org/Departments/Development-Services/Planning-Zoning/General-Plan (accessed December 2019).

_____. 2019. *Local Guidelines for Implementing the California Environmental Quality Act.*

Intergovernmental Panel on Climate Change (IPCC). 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth 26 Assessment Report of the Intergovernmental Panel on Climate Change*. [S. Solomon, D. Qin, M. Manning, Z. Chen, 27 M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press. Cambridge, United 28 Kingdom 996 pp. Website: https://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm (accessed in November 2019).

_____. 2013. The Global Warming Potential Concept. Section 8.7.1.2. IPCC 2013 Fifth Assessment Report (AR5). Website: http://www.ipcc.ch/report/ar5/wg1/ (accessed November 2019).

LSA Associates, Inc. (LSA). 2019. *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (TIA).

_____. 2020. *Air Quality and Greenhouse Gas Emissions Assessment*.

South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook.* Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993) (accessed November 2019).

_____. 2005a. Air Quality Management Plan. Website: http://beta.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp (accessed November 2019).

_____. 2005b (amended). Rule 403: Fugitive Dust. Website: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4 (accessed November 2019).

_____. 2008a. *Final Localized Significance Threshold Methodology*. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf (accessed November 2019).

_____. 2008b. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans.* Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2 (accessed November 2019).

_____. 2010. Minutes for the GHG CEQA Significance Threshold. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf (accessed November 2019).

_____. 2015. S*CAQMD Air Quality Significance Thresholds.* Website: www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed November 2019).

_____. 2016. Air Quality Management Plan. Website: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf (accessed November 2019).

_____. 2017. Final 2016 AQMP. Website: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15 (accessed November 2019).

_____. 2018. *Air Quality Guidance Document - Glossary*. Website: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/glossary.pdf (accessed November 2019).

_____. *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2 (accessed November 2019).

Southern California Association of Governments (SCAG). 2008a. Draft 2008 RTP PEIR, Website: http://rtpscs.scag.ca.gov/Documents/peir/2008/draft/Ch3-02_AirQuality.pdf (accessed November 2019).

_____. 2008b. Water-Energy Sector Summary, AB 32 Scoping Plan, and GHG Emission Reduction Strategies. April. Website: http://www.climatechange.ca.gov/climate_action_team/reports/CAT_subgroup_reports/Water_Sector_Summary_and_Analyses.pdf (accessed November 2019).

_____. 2016. *The 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*, *A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life.* Website: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf (accessed November 2019).

United Nations Environment Programme. 2007. *Buildings and Climate Change: Status, Challenges and Opportunities.* Paris, France. Website: http://www.unep.fr/shared/publications/pdf/DTIx0916xPA-BuildingsClimate.pdf (accessed November 2019).

United Nations Framework Convention on Climate Change (UNFCCC). 2019. Combined Total of Annex I and Non-Annex I Country CO_2e Emissions, Greenhouse Gas Inventory Data. Website: https://unfccc.int/process/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc (accessed December 2019).

United States Environmental Protection Agency (EPA). 2010. Methane and Nitrous Oxide Emissions from Natural Sources. Website: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100717T.PDF?Dockey =P100717T.PDF (accessed November 2019).

_____. 2016. Climate Change Indicators in the United States: Global Greenhouse Gas Emissions, Website: https://www.epa.gov/climate-indicators/climate-change-indicators-global-green house-gas-emissions (accessed November 2019).

_____. 2017. Understanding Global Warming Potentials, Website: https://www.epa.gov/ghgemis sions/understanding-global-warming-potentials (accessed November 2019).

_____. 2018. Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016. Washington, D.C. Website: https://www.epa.gov/sites/production/files/2018-01/documents/2018_com plete_report.pdf (accessed November 2019).

_____. AirData: 2015–2017 Air Quality Data. Website: https://www.epa.gov/outdoor-air-quality-data/monitor-values-report (accessed November 2019).

Western Regional Climate Center. Recent Climate in the West. Website: http://www.wrcc.dri.edu (accessed November 2019).

SECTION 4.3: BIOLOGICAL RESOURCES

City of San Juan Capistrano. 2002. General Plan Conservation and Open Space Element (1999, revised 2002).

_____. 2019. *Local Guidelines for Implementing the California Environmental Quality Act.*

County of Orange. 2006. Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP). July. Website: http://www.ocplanning.net/ssnccp /nccp_hcp.aspx.

Glenn Lukos Associates. 2007. *Results of Biological Surveys for the Ventanas Business Center, San Juan Capistrano, Orange County, California*. Technical memorandum prepared for the Ventanas Business Center Project. November.

LSA Associates, Inc. (LSA). 2020. *Final Biological Resources Assessment Tirador Residential Development Project* (Biological Resources Assessment). January.

United States Fish and Wildlife Service (USFWS). 2019a. Environmental Conservation Online System (ECOS). Information for Planning and Conservation (IPaC) Trust Resources Report. January 2019. Website: http://ecos.fws. gov/ecp/.

_____. 2019b. USFWS Critical Habitat Mapper. February 2018. Website: http://ecos.fws.gov/crit hab/.

_____. 2019c. USFWS National Wetlands Inventory (NWI), Online Mapper Tool. Website: https:// www.fws.gov/wetlands/data/mapper.html (accessed December 6, 2019).

SECTION 4.4: CULTURAL RESOURCES

City of San Juan Capistrano. 1999. General Plan Cultural Resources Element. December 14, 1999.

_____. 2007. *Ventanas Business Center Environmental Impact Report.* December.

_____. 2018. *Inventory of Historic and Cultural Landmarks*, Updated October 2018.

_____. 2019*. Local Guidelines for Implementing the California Environmental Quality Act.*

SECTION 4.5: ENERGY

California Energy Commission (CEC). 2018a. *2017 Integrated Energy Policy Report.* California Energy Commission. Publication Number: CEC-100-2017-001-CMF. February.

_____. 2018b. *2018 Integrated Energy Policy Report Update*. California Energy Commission. Publication Number: CEC-100-2018-001-VI. February.

_____. 2018c. California Energy Demand, 2018-2030 Revised Forecast. Publication Number: CEC-200-2018-002-CMF. February. Website: https://efiling.energy.ca.gov/getdocument.aspx?t n =223244 (accessed December 26, 2019).

_____. 2019a. Electricity Consumption by County. Website: https://ecdms.energy.ca.gov/elecby county.aspx (accessed December 26, 2019).

_____. 2019b. Electricity Consumption by Entity. Website: https:// ecdms.energy.ca.gov/elecby util.aspx (accessed December 26, 2019)

_____. 2019c. Gas Consumption by County. Website: https://ecdms.energy.ca.gov/gasbycounty. aspx (accessed December 26, 2019).

_____. 2019d. Gas Consumption by Entity. Website: http://www.ecdms.energy.ca.gov/gasbyutil. aspx (accessed December 26, 2019).

_____. 2019e. Notice of Request for Public Comments on the Draft Scoping Order for the 2019 Integrated Energy Policy Report. Docket No. 19-IEPR-01.

_____. 2019f. Supply and Demand of Natural Gas in California. Website: https://ww2.energy. ca.gov/almanac/naturalgas_data/overview.html (accessed December 26, 2019).

California Public Utilities Commission (CPUC). 2008. *California Long-Term Energy Efficiency Strategic Plan.* September. Website: https://www.cpuc.ca.gov/General.aspx?id=4125 (accessed December 26, 2019).

_____. 2019. Renewables Portfolio Standard (RPS) Program. Website: https://www.cpuc.ca.gov/rps/ (accessed December 26, 2019).

City of San Juan Capistrano. 2019. *Local Guidelines for Implementing the California Environmental Quality Act.*

LSA Associates, Inc. (LSA). 2019. *Traffic Impact Analysis, Tirador Residential Development Project*. December.

National Highway Traffic Safety Administration (NHTSA). 2019a. Corporate Average Fuel Economy. Website: https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy (accessed December 26, 2019).

_____. 2019b. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. Website: https://www.nhtsa.gov/corporate-average-fuel-economy/safe (accessed December 26, 2019).

San Diego Gas and Electric Company (SDG&E). 1998-2016. Our Service Area. Website: https://webarchive.sdge.com/our-company/about-us/our-service-territory (accessed January 3, 2020).

Southern California Gas Company (SoCalGas). 2019. About SoCalGas. Website: https://www3.socalgas.com/about-us/company-profile (accessed December 26, 2019).

United States Energy Information Administration (EIA). 2019a California State Profile and Energy Estimates. Table F3: Motor gasoline consumption, price, and expenditure estimates, 2017. Website: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed December 26, 2019).

_____. 2019b. Electricity Explained-. Website: https://www.eia.gov/energyexplained/electricity/ (accessed December 26, 2019).

_____. 2019c. Natural Gas Explained- Use of Natural Gas. https://www.eia.gov/energyexplained/index.php?page=natural_gas_use (accessed December 26, 2019).

SECTION 4.6: GEOLOGY

Archaeological Resources Management Corporation (ARMC). 2007. *Report of Phase I Paleontological Assessment for Ventanas Business Center Project, San Juan Capistrano, South Orange County, California* (Paleontological Resources Assessment). August 22, 2007.

City of San Juan Capistrano. 2019. *Local Guidelines for Implementing the California Environmental Quality Act.*

California Department of Conservation, Division of Mines and Geology. 1997. Fault-Rupture Hazard Zones in California.

County of Orange, Cities of Orange County, and the Orange County Flood Control District. 2004. Orange County Stormwater Program. 2004. *Construction Runoff Guidance Manual for Contractors, Project Owners, and Developers. September.*

Earthquake Zones of Required Investigation. Website: https://maps.conservation.a.gov/cgs/EQZApp/app/ (accessed November 26, 2019).

GeoSoils Consultants Inc.. 2017. *Geotechnical Engineering Investigation, Proposed Residential Housing, San Juan Mixed Use, Intersection of Calle Arroyo and Paseo Tirador, City of San Juan Capistrano, California* (Geotechnical Investigation). July 10, 2017.

_____. 2018. *Proposed Residential Housing, San Juan Mixed Use, Intersection of Calle Arroyo and Paseo Tirador, San Juan Capistrano California.* October 29, 2018.

Southern California Association of Governments (SCAG). 2016. *The 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), *A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life*. Final Growth Forecast by Jurisdiction. April. Website: https://www.cag.ca.gov/Documents/2016_2040RTP SCS_FinalGrowthForecastbyJurisdiction.pdf (accessed December 19, 2019).

Southern California Earthquake Data Center. 2009. *Newport-Inglewood Fault Zone.*

United States Geologic Service. California Water Center. Areas of Land Subsidence in California. Website: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html (accessed November 26, 2019).

Weitz, Jerry. 2003. Planning Advisory Service Report No. 516: Jobs-Housing Balance. American Planning Association.

SECTION 4.7: GREENHOUSE GAS EMISSIONS

California Air Pollution Control Officers Association. Model Policies for Greenhouse Gases in General Plans, Website: http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-ModelPolicies-6-12-09-915am.pdf (accessed November 2019).

California Air Resources Board (CARB). 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework Pursuant to AB 32, the California Global Warming Solutions Act of 2006.* Website: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf (accessed November 2019).

_____. 2016. Ambient Air Quality Standards. October. Website: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf (accessed November 2019).

_____. 2019. California Greenhouse Gas Emission Inventory – 2019 Edition. Website: http://www.arb.ca.gov/cc/inventory/data/data.htm (accessed December 2019).

_____. Air Quality Standards and Area Designations. Website: http://www.arb.ca.gov/desig/desig.htm (accessed November 2019) (webpage last reviewed by ARB on May 5, 2016.)

_____. Assembly Bill 32 Overview, Website: http://www.arb.ca.gov/cc/ab32/ab32.htm (accessed November 2019).

California Climate Change. Climate Action Team Reports. Website: http://www.climatechange.ca.gov/climateactionteam/reports/ (accessed November 2019).

California Energy Commission (CEC). 2006. Our Changing Climate – Assessing the Risks to California. July. Website: http://www.energy.ca.gov/2006publications/CEC-500-2006-077/CEC-500-2006-077.PDF (accessed November 2019).

California Environmental Protection Agency (Cal/EPA). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. Website: http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF (accessed November 2019).

_____. 2019. California GHG Emission Inventory. Website: https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-16.pdf (accessed December 2019).

California Climate Change Center. Climate Scenarios for California. Website: http://www.energy.ca.gov/2005publications/CEC-500-2005-203/CEC-500-2005-203-SF.PDF (accessed November 2019).

City of San Juan Capistrano. 1999. General Plan. December 1999. Website: http://sanjuancapistrano.org/Departments/Development-Services/Planning-Zoning/General-Plan (accessed December 2019).

_____. 2019*. Local Guidelines for Implementing the California Environmental Quality Act.*

Intergovernmental Panel on Climate Change (IPCC). 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth 26 Assessment Report of the Intergovernmental Panel on Climate Change*. [S. Solomon, D. Qin, M. Manning, Z. Chen, 27 M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press. Cambridge, United 28 Kingdom 996 pp. Website: https://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm (accessed in November 2019).

_____. 2013. The Global Warming Potential Concept. Section 8.7.1.2. IPCC 2013 Fifth Assessment Report (AR5). Website: http://www.ipcc.ch/report/ar5/wg1/ (accessed November 2019).

LSA Associates, Inc. (LSA). 2019. *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (TIA).

_____. 2020. *Air Quality and Greenhouse Gas Emissions Assessment*.

South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook.* Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993), accessed November 2019.

_____. 2005a. Air Quality Management Plan. Website: http://beta.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp (accessed November 2019).

_____. 2005b (amended). Rule 403: Fugitive Dust. Website: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4 (accessed November 2019).

_____. 2008a. *Final Localized Significance Threshold Methodology*. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf (accessed November 2019).

_____. 2008b. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2 (accessed November 2019).

_____. 2010. Minutes for the GHG CEQA Significance Threshold. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf (accessed November 2019).

_____. 2015. S*CAQMD Air Quality Significance Thresholds.* Website: www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed November 2019).

_____. 2016. Air Quality Management Plan. Website: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf (accessed November 2019).

_____. 2017. Final 2016 AQMP. Website: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15 (accessed November 2019).

_____. 2018. *Air Quality Guidance Document - Glossary*. Website: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/glossary.pdf (accessed November 2019).

_____. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2 (accessed November 2019).

Southern California Association of Governments (SCAG). 2008a. Draft 2008 RTP PEIR, Website: http://rtpscs.scag.ca.gov/Documents/peir/2008/draft/Ch3-02_AirQuality.pdf (accessed November 2019).

_____. 2008b. Water-Energy Sector Summary, AB 32 Scoping Plan, and GHG Emission Reduction Strategies. April. Website: http://www.climatechange.ca.gov/climate_action_team/reports/CAT_subgroup_reports/Water_Sector_Summary_and_Analyses.pdf (accessed November 2019).

_____. 2016. *The 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life*. Website: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf (accessed November 2019).

United Nations Environment Programme. 2007. *Buildings and Climate Change: Status, Challenges and Opportunities.* Paris, France. Website: http://www.unep.fr/shared/publications/pdf/DTIx0916xPA-BuildingsClimate.pdf (accessed November 2019).

United Nations Framework Convention on Climate Change (UNFCCC). 2019. Combined Total of Annex I and Non-Annex I Country CO_2e Emissions, Greenhouse Gas Inventory Data. Website: https://unfccc.int/process/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc (accessed December 2019).

United States Environmental Protection Agency (EPA). 2010. Methane and Nitrous Oxide Emissions from Natural Sources. Website: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100717T.PDF?Dockey=P100717T.PDF (accessed November 2019).

_____. 2016. Climate Change Indicators in the United States: Global Greenhouse Gas Emissions, Website: https://www.epa.gov/climate-indicators/climate-change-indicators-global-greenhouse-gas-emissions (accessed November 2019).

_____. 2017. Understanding Global Warming Potentials, Website: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials (accessed November 2019).

_____. 2019. Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2016. Washington, D.C. Website: https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf (accessed November 2019).

_____. AirData: 2015–2017 Air Quality Data. Website: https://www.epa.gov/outdoor-air-quality-data/monitor-values-report (accessed November 2019).

Western Regional Climate Center. Recent Climate in the West. Website: http://www.wrcc.dri.edu (accessed November 2019).

SECTION 4.8: HYDROLOGY AND WATER QUALITY

City of San Juan Capistrano. 1999. General Plan Safety Element. December 14, 1999

_____. 2019*. Local Guidelines for Implementing the California Environmental Quality Act.*

County of Orange. 2017a. *Model Water Quality Management Plan for South Orange County*. September 28.

_____. 2017b. *South Orange County Hydromodification Management Plan* (HMP). September.

_____. 2018. *Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (WQMPs) in South Orange County*. December.

County of Orange, Stormwater Program. 2012. *Construction Runoff Guidance Manual for Contractors, Project Owners, and Developers*. December.

Department of Water Resources (DWR). 2004. California's Groundwater Bulletin 118. Hydrologic Region South Coast, San Juan Valley Groundwater Basin. February.

IBI Group. 2017a. *Preliminary Hydrology Report for Paseo Tirador TTM 18148, San Juan Capistrano, CA* (Preliminary Hydrology Report). Revised March 2018.

_____. 2017b*. Preliminary Water Quality Management Plan for Paseo Tirador, San Juan Capistrano, CA* (PWQMP). November 2017, Revised March 2018, July 2018, and January 2019.

San Diego Regional Water Quality Control Board (RWQCB). 1994. *Water Quality Control Plan for the San Diego Basin.* September 8, 1994 (with amendments effective on or before May 17, 2016).

_____. 2015a. *General Waste Discharge Requirements for Discharges from Groundwater Extraction Discharges to Surface Waters within the San Diego Region.* Order No. R9-2015-0013 (NPDES No. CAG919003). October.

_____. 2015b. National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4) Draining the Watersheds within the San Diego Region. Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 (NPDES No. CAS6010266). February.

State Water Resources Control Board (SWRCB). *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.* Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ (NPDES No. CAS000002). July 2010.

_____. 2019. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek). https://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/bacteria.html; accessed December 4, 2019.

United States Army Corps of Engineers (USACE), Los Angeles District. 2002. San Juan Creek Watershed Management Study, Orange County, California Feasibility Phase F-5 Report. August.

SECTION 4.9: LAND USE AND PLANNING

City of San Juan Capistrano. 1999. San Juan Capistrano General Plan Land Use Element. Revised September 2014.

_____. 2014. Housing Element. Adopted January 21, 2014, Revised September 19, 2017.

_____. 2019*. Local Guidelines for Implementing the California Environmental Quality Act.*

_____. Ortega Planned Community (CDP) 78-01, Planning Sectors B-3 and C.

_____. Municipal Code Sections 9-3.301 and 9-3.535.

Southern California Association of Governments (SCAG). Regional Transportation Plan 2012-2035.

_____. 2016. *The 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life*. Website: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf (accessed November 2019).

SECTION 4.10: NOISE

California Department of Transportation (Caltrans). 2017. *Traffic Volumes: Annual Average Daily Traffic (AADT)*. Website: https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017/route-5-6 (accessed December 2019).

California Supreme Court, 2015. *California Building Industry Association v. Bay Area Air Quality Management District 62 Cal.4th 369, Case No. S213478*. December.

City of San Juan Capistrano. 1999. General Plan Noise Element. December 14, 1999.

_____. 2019a*. Local Guidelines for Implementing the California Environmental Quality Act.*

_____. 2019b. Municipal Code Section 9-3.531, Noise Standards. October.

Federal Highway Administration (FHWA). 2006a. *Construction Noise Handbook*. Final Report. August.

_____. 2006b. *Roadway Construction Noise Model* (RCNM), Version 1.0.

_____. FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108).

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual.*

Governor's Office of Planning and Research (OPR). 2017. *General Plan Guidelines.*

LSA Associates, Inc. (LSA). 2019a. *Noise and Vibration Impact Analysis Memorandum for the Proposed Tirador Residential Development Project in San Juan Capistrano*. December.

_____. 2019b. *Traffic Impact Analysis, Tirador Residential Development Project* (TIA). December.

United States Environmental Protection Agency (EPA). 1978. *Protective Noise Levels, Condensed Version of EPA Levels Document*. November.

United States Federal Highway Administration (FHWA). 2006. *Construction Noise Handbook.* August.

SECTION 4.11: TRANSPORTATION

City of San Juan Capistrano. 1999. General Plan Circulation and Growth Management Elements.

_____. 2019*. Local Guidelines for Implementing the California Environmental Quality Act.*

Institute of Transportation Engineers (ITE). 2017. *Trip Generation Manual,* 10th Edition.

LSA Associates, Inc. (LSA). 2019. *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (TIA). December.

Orange County Transportation Authority (OCTA). 2018. *Guidance for Administration of the Orange County Master Plan of Arterial Highways* (MPAH).

_____. 2019. *Orange County Congestion Management Program* (CMP). November.

Transportation Research Board (TRB). 2016. *Highway Capacity Manual* (HCM), 6th Edition.

SECTION 4.12: TRIBAL CULTURAL RESOURCES

City of San Juan Capistrano. 1999. General Plan Cultural Resources Element (December 14, 1999) (accessed December 2, 2019).

_____. 2007. *Ventanas Business Center Environmental Impact Report*. December.

_____. 2019*. Local Guidelines for Implementing the California Environmental Quality Act.*

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