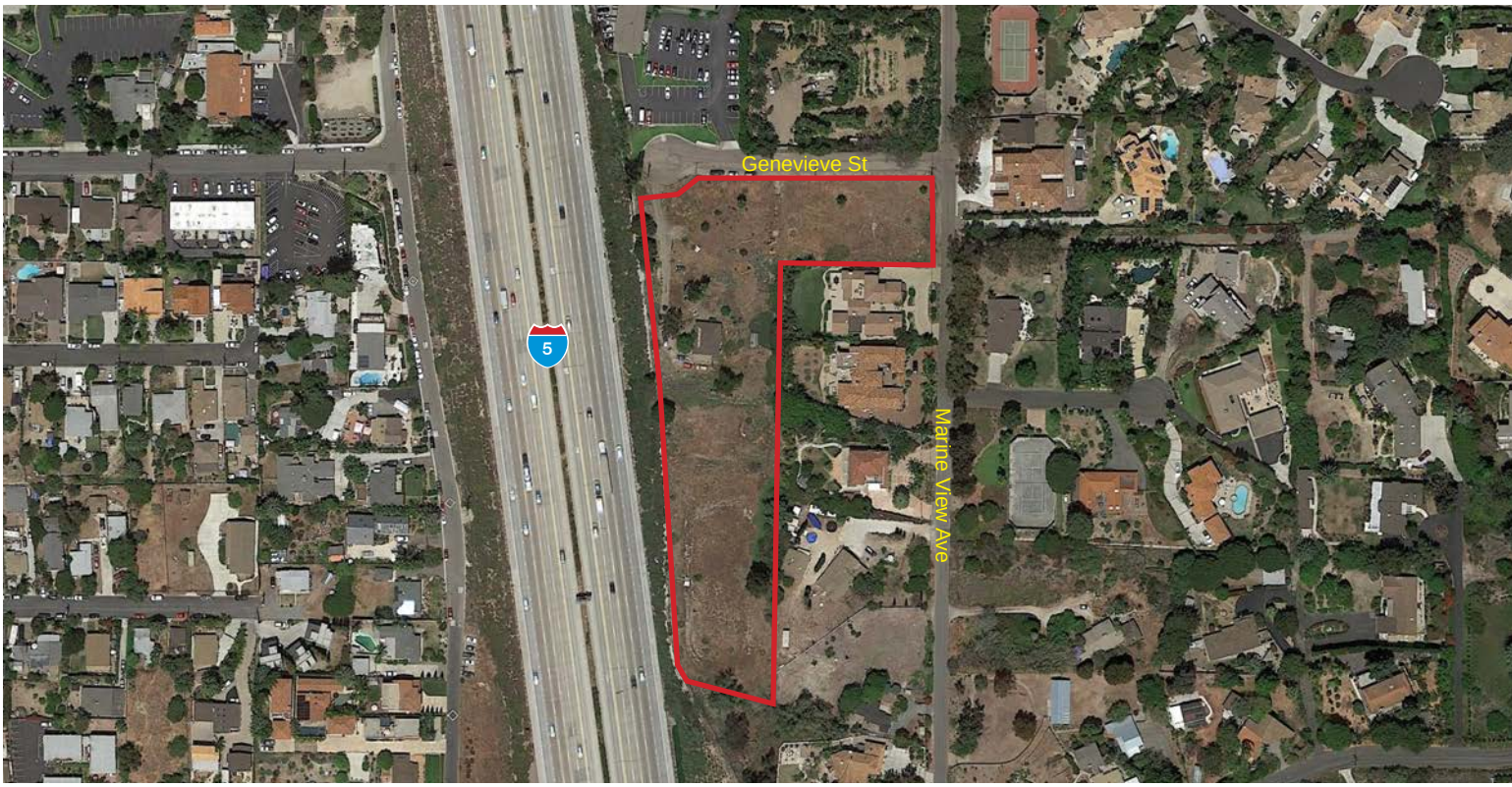
Draft Environmental Impact Report

State Clearinghouse No. 2017061068



SOLANA BEACH SENIOR CARE SPECIFIC PLAN PROJECT

City of Solana Beach

April 2019

PLACEWORKS

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SOLANA BEACH SENIOR CARE SPECIFIC PLAN PROJECT

City of Solana Beach

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Abbreviations and Acronyms

ABBREVIATIONS AND ACRONYMS

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
ADU	accessory dwelling unit
amsl	above mean sea level
AQMP	air quality management plan
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfs	cubic feet per second
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel

DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
HCM	Highway Capacity Manual
HVAC	heating, ventilating, and air conditioning system
L_{dn}	day-night noise level
L_{eq}	equivalent continuous noise level
LBP	lead-based paint
LOS	level of service
LST	localized significance thresholds
mgd	million gallons per day
MMT	million metric tons
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O_3	ozone
OES	California Office of Emergency Services
PM	particulate matter
ppm	parts per million
REC	recognized environmental condition
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SO_X	sulfur oxides
SQMP	stormwater quality management plan

Abbreviations and Acronyms

SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
tpd	tons per day
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
VdB	velocity decibels
VMT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan

1. Executive Summary

1.1 INTRODUCTION

This draft environmental impact report (DEIR) addresses the environmental effects associated with the implementation of the proposed Solana Beach Senior Care Specific Plan. The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers. This document focuses on impacts determined to be potentially significant in the Initial Study completed for this project (see Appendix 2-1).

This DEIR has been prepared pursuant to the requirements of CEQA and the City of Solana Beach's CEQA procedures. The City of Solana Beach, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on City technical personnel from other departments and review of all technical reports.

Data for this DEIR derive from various sources, including but not limited to onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments (air quality and greenhouse gases, biological resources, cultural resources, geological resources, hazards and hazardous materials, health risk assessment, hydrology and water quality, noise, circulation and traffic).

1.2 ENVIRONMENTAL PROCEDURES

This DEIR has been prepared pursuant to CEQA to assess the potential environmental effects associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals. CEQA establishes six main objectives for an EIR:

1. Disclose to decision makers and the public the potential, significant environmental effects of proposed activities.

2. Identify ways to avoid or reduce environmental impacts.

3. Prevent environmental impacts by requiring implementation of feasible alternatives and/or mitigation measures.

4. Disclose to the public reasons for agency approval of projects with significant unmitigable environmental effects.

5. Foster interagency coordination in the review of projects.

6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of the various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

1.2.1 EIR Format

Chapter 1. Executive Summary: Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the project.

Chapter 2. Introduction: Describes the purpose of this EIR, background of the project, the Notice of Preparation (NOP) and Initial Study, the use of incorporation by reference, and Final EIR certification.

Chapter 3. Environmental Setting: A description of the physical environmental conditions onsite and in the vicinity of the project as they existed at the time the NOP was published, from local and regional perspectives. These provide the baseline physical conditions from which the lead agency determines the significance of the project's potential environmental impacts.

Chapter 4. Project Description: A detailed description of the proposed project, including its goals and objectives, its area and location, approvals anticipated to be required for the project, necessary environmental clearances, and the intended uses of this EIR.

Chapter 5. Environmental Analysis: Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology used to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the proposed project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed project and other past, present, or reasonably foreseeable future development in the area.

Chapter 6. Alternatives to the Proposed Project: Describes the alternatives and compares their impacts to the impacts of the proposed project.

Chapter 7. CEQA Mandated Assessments: Briefly describes the potential impacts of the project that were determined not to be significant by the Initial Study and were therefore not discussed in detail in this EIR. This

chapter also describes any significant unavoidable adverse impacts, significant irreversible environmental changes, and potential growth-inducing impacts associated with the proposed project.

Chapter 8. Organizations and Persons Consulted: Lists the people and organizations that were contacted during the preparation of this EIR, and lists the people who prepared this EIR for the proposed project.

Appendices: The appendices for this document (in PDF format on a CD attached to the back cover) comprise these supporting documents:

- Appendix 2-1: Initial Study and NOP
- Appendix 2-2: Responses to the NOP
- Appendix 4-1: Solana Beach Senior Care Specific Plan
- Appendix 5.1-1: Landscape Plan
- Appendix 5.2-1: Air Quality Assessment
- Appendix 5.2-2: Solana Beach Senior Housing Health Risk Screening Letter
- Appendix 5.3-1: Biological Resources Survey
- Appendix 5.4-1: Department of Parks and Recreation Form
- Appendix 5.4-2: Cultural Resources Study
- Appendix 5.4-3: Paleontological Record Search for Solana Beach Seniors Project
- Appendix 5.5-1: Preliminary Geotechnical Investigation
- Appendix 5.6-1: Global Climate Change Analysis
- Appendix 5.7-1: Phase I Environmental Site Assessment
- Appendix 5.8-1: Preliminary Hydrology Study
- Appendix 5.8-2: Water Quality Technical Report
- Appendix 5.9-1: LCP Consistency Analysis
- Appendix 5.10-1: Noise Impact Assessment
- Appendix 5.11-1: Alternate Methods and Materials, Fire Apparatus Access Roads
- Appendix 5.11-2: Agency Responses
- Appendix 5.12-1: Traffic Assessment Letter
- Appendix 5.12-2: Emergency Calls Statistics
- Appendix 5.12-3: Community Enhancements
- Appendix 5.15-1: Energy Calculations

1.2.2 Type and Purpose of This DEIR

This DEIR has been prepared as a "Project EIR," defined by Section 15161 of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a specific development project and should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation.

1.3 PROJECT LOCATION

The project site is 959 Genevieve Street in the City of Solana Beach, San Diego County (Assessor's Parcel Number [APN] 298-390-51-00). The property is approximately 2.91 acres and roughly L-shaped, with its length bounded by I-5 on the west. Genevieve Street is the northern site boundary, and Marine View Avenue forms part of the eastern boundary.

1.4 PROJECT SUMMARY

1.4.1 Specific Plan

The proposed specific plan would permit development of a 99-bed residential care facility for the elderly with a maximum floor area ratio of 0.55, subject to an affirmative public vote. The proposed project, as envisioned by the applicant however, includes 96 beds in 85 assisted living units. The EIR evaluates the potential environmental impacts associated with the 99 beds allowed by the specific plan as it represents the maximum development scenario for the site.

The residential senior care facility for the elderly would require a license from the state of California. The proposed specific plan would establish new zoning and regulations, such as permitted uses, including open space and other uses allowed under the ER-2 zone; density, height, and parking limits; and development setbacks on the project site. The specific plan also describes required infrastructure, guidelines, and standards for implementing site improvements.

1.4.2 Development Plan

The proposed project would require permits for demolition of all existing onsite structures and construction and operation of a state-licensed, 96-bed residential senior care facility. A single building would be constructed along the western perimeter of the site. Other improvements include surface and below-ground parking facilities, and landscaped and hardscaped areas. The building could be accessed from both the western and eastern sides. Access from the west would be into the first floor of the building, and access from the east, near the north end of the building, would be into the second floor. A landscaped area at the corner of Marine View Avenue and Genevieve Street would be available for community use. All improvements would comply with the latest California Building Code and Americans with Disabilities Act requirements.

As required by the proposed specific plan's limitations on buildable area and setbacks for the site, the proposed building would be oriented north-south, paralleling I-5. The building would be terraced and segmented to maintain a 25-foot height limit, as measured from the lower of either the existing or finished grade. The building would have two stories (excluding the basement garage level). The northern and southern halves of the building would be separated by a two-story lobby "breezeway."

1.5 SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

Project alternatives are assessed in further detail in Chapter 6 of the DEIR, *Alternatives to the Proposed Project*.

1.5.1 Alternative A, No-Project/No Development Alternative

In the No Project/No Development alternative, the proposed project is not developed and the project site remains in its current condition. The site is vacant except for a residence, greenhouse, and shed, all of which are in the northwest part of the site. The site is vegetated with grasses, small shrubs, and ornamental palm trees. This alternative would not meet the project's objectives—development of the site consistent with the City's General Plan and increased assisted-living housing available for elderly adults in Solana Beach.

1.5.2 Alternative B, Four Single-Family Residences

In the Four Single-Family Residences alternative, the proposed project would not be developed. Instead, the project would involve the construction of two single-family residences on the site with two accessory dwelling units (ADU), consistent with the existing zoning and site development standards. This alternative would require the subdivision of the property; the four homes could be developed individually or as one construction process as part of a residential subdivision. This alternative would not require a change in density. The average household size in Solana Beach in 2017 is estimated as 2.28 persons.[1] Thus, population onsite at buildout is estimated as 9 to 10 persons.

1.5.3 Alternative C, Reduced Intensity Residential Care Facility

Under Alternative C, a reduced intensity residential senior care facility that meets the ER-2 zone and FAR requirements was reviewed for viability at the project site. A graphic representation of a potential layout of a reduced residential senior care facility on the site is included as Figure 6-1, *Alternative C, Reduced-Intensity Residential Senior Care Facility*, to this DEIR. This alternative would require construction of similar improvements as the proposed project, including grading and construction of the footings, connections for utilities, and roadway improvements. It is assumed that to reduce the number of beds for this alternative, the second floor would be removed from the proposed project design plans.

1.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain a discussion of issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the lead agency as to:

[1] California Department of Finance (CDF). 2017, May. E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2011- 2017. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/documents/E-5_2017_Internet%20Version.xlsx.

1. Whether this DEIR adequately describes the environmental impacts of the project.
2. Whether the proposed land use (residential senior care for the elderly) is compatible with the character of the existing area.
3. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
4. Whether there are other mitigation measures that should be applied to the project besides the mitigation measures identified in the DEIR.
5. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project while still achieving most of the basic project objectives.

1.7 AREAS OF CONTROVERSY

In accordance with Section 15123(b)(2) of the CEQA Guidelines, the EIR summary must identify areas of controversy known to the lead agency, including issues raised by agencies and the public.

1. Traffic and circulation from the additional project-related vehicle trips
2. Noise from ambulances and emergency response personnel
3. Pedestrian Safety due to the lack of existing sidewalks in the community

The City of Solana Beach determined that an EIR would be required for this project and issued an NOP and Initial Study on June 23, 2017 (see Appendix 2-1). Comments received during the Initial Study's public review period, from June 23, 2017, to July 24, 2017, are in Appendix 2-2. Agency letters and public comments received in response to the NOP included requests to address existing conditions, air quality, aesthetics, cultural resources, hydrology and water quality, land use and planning, noise, traffic and transportation, tribal cultural resources, alternatives, and other general considerations for development of the site.

1.8 SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table 1-1 summarizes the conclusions of the environmental analysis contained in this EIR. Some issues have been previously addressed in the Initial Study and do not require further consideration in the DEIR (Please refer to Appendix 2-1).

Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AESTHETICS			
Impact 5.1-1: Would project development substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less Than Significant.	None.	Less Than Significant.
Impact 5.1-2: Would project development substantially degrade the existing visual character or quality of the site and its surroundings?	Less Than Significant.	None.	Less Than Significant.
Impact 5.1-3: Would the proposed project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less Than Significant.	None.	Less Than Significant.
5.2 AIR QUALITY			
Impact 5.2-1: Would project-related construction activities violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Less Than Significant.	None.	Less Than Significant.
Impact 5.2-2: Would the long-term operation of the project violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is	Less Than Significant.	None.	Less Than Significant.

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			
Impact 5.2-3: Would the project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant.	AQ-1 During the 260-day construction period for the proposed improvements, construction equipment with Tier IV with diesel particulate filters attached inline to the exhaust system shall be used.	Less Than Significant.
Impact 5.2-4: Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant.	None.	Less Than Significant.
5.3 BIOLOGICAL RESOURCES			
Impact 5.3-1: Would the project have a substantial effect, either directly or through habitat modifications, on any species, riparian habitat, or other sensitive natural community 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 Game or U.S. Fish and Wildlife Service?	Less Than Significant.	None.	Less Than Significant.
Impact 5.3-2: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No Impact.	None.	Less Than Significant.
Impact 5.3-3: 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	Less Than Significant.	None.	Less Than Significant.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
wildlife corridors or impede the use of native wildlife nursery sites?				
Impact 5.3-4: Would the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant.	BIO-1	Prior to certificate of occupancy, the applicant shall complete, to the satisfaction of the City of Solana Beach, a tree protection plan. As required by Policy 3.53 of the Solana Beach LCP Land Use Plan, the applicant shall replace all native trees (one coast live oak) at a 1:1 ratio on the project site, and shall ensure maturity and viability of the root zone. Further, based on the removal of other trees on site as a result of development, and as outlined in the project's Tree Protection Plan, the applicant shall provide an arborist's certification that the replacement tree is in good health and thriving. Monitoring will occur three times during year 1, twice during year 2, and annually during years 3 through 5. Following each monitoring inspection, a monitoring report will be provided by the arborist as notification to the City of Solana Beach that the tree is healthy and establishing. The final monitoring report will provide certification that the tree is healthy and established. Should the tree die during the monitoring period, it will be replaced and will be monitored for the remainder of the 5-year period. If the oak declines it will be provided appropriate measures to improve health or structural condition, or the oak will be replaced.	Less Than Significant.
Impact 5.3-5: Would the proposed 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?	Potentially Significant.	BIO-2	Prior to issuance of a grading permit, the project applicant shall either: • Provide for 0.3 acre (1,307 SF) of nonnative grassland within the project boundaries with low-fuel volume (low foliage when dormant). Native grasses and fire-resistant shrubs, including but not limited to wild lilac (*Ceanothus sp.*), toyon (*Heteromeles arbutifolia*), and lemonade berry (*Rhus integrifolia*), shall be planted onsite in conjunction with completion of project grading/slope preparation, and would satisfy the requirement for 0.3-acre of restoration of native habitat. Other nonnative vegetation types may be considered and would be determined by the projects' landscape architect in consultation with the City; or • Provide written proof to the satisfaction of the City of the purchase of mitigation credits from a California Department of Fish and Wildlife certified mitigation bank for 0.3 acre of nonnative grassland.	Less Than Significant.

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
5.5 CULTURAL RESOURCES				
Impact 5.4-1: Would the project cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5.?	Less Than Significant.	None.		Less Than Significant.
Impact 5.4-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Potentially Significant.	CUL-1	Prior to the start of any ground-disturbing activity, the project applicant shall retain an archaeological monitor, approved by the City of Solana Beach (City), to monitor ground-disturbing activities associated with the proposed project, including but not limited to grading, excavation, brush clearance, and grubbing. The archaeological monitor shall conduct preconstruction cultural resources worker sensitivity training to bring awareness to personnel of actions to be taken in the event of a cultural resources discovery. The duration and timing of monitoring shall be determined by the qualified archaeologist in consultation with the City. Initially, all ground-disturbing activities associated with the proposed project shall be monitored. However, the qualified archaeologist, based on observations of soil stratigraphy or other factors, and subject to the approval of the City, may reduce the level of monitoring as warranted. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor shall have the authority to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated. If the find is determined to be potentially significant, the archaeologist, in consultation with the City and group(s) (if the find is a prehistoric or Native American resource), shall develop a treatment plan. Construction activities shall be redirected to other work areas until the treatment plan has been implemented or the qualified archaeologist determines that work can resume in the vicinity of the find.	Less Than Significant.
Impact 5.4-3: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant.	CUL-2	Prior to the issuance of grading permits, the project applicant shall retain a qualified paleontologist for the project. The paleontologist shall prepare a paleontological monitoring program. All grading and other significant ground-disturbing activities of more than 2,000 cubic yards and more than 10 feet below the ground surface shall be monitored by a paleontological monitor. If any evidence of paleontological resources is discovered, the following measures shall be taken:	Less Than Significant.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• All below-grade work shall stop within a 50-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified paleontologist. • A qualified paleontologist in coordination with the City shall assess the find(s) and determine if they are scientifically important. If the find(s) are of value then: • Scientifically important fossils shall be prepared by the paleontologist and/or his/her designee(s) to the point of identification, identified to the lowest taxonomic level possible, and curated in a museum repository with permanent, retrievable storage. • Significant paleontological resources shall be preserved as determined necessary by the paleontological monitor. • Excavated finds shall be offered to the San Diego Natural History Museum or its designee for curation on a first-refusal basis. After which, finds shall be offered to an accredited and permanent scientific institution for the benefit of current and future generations. • Within 60 days after completion of earth-moving activities, the paleontologist shall draft a report summarizing the finds and shall include the inspection period, an analysis of any resources found, and the present repository of the items. • The paleontologist's report shall be approved by the City. Any resulting reports shall also be filed with the permanent scientific institution where the resources are curated.	
5.5 GEOLOGY AND SOILS			
Impact 5.5-1: Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	Less Than Significant.	None.	Less Than Significant.
Impact 5.5-2: Would the proposed project result in substantial soil erosion or the loss of topsoil?	Less Than Significant.	None.	Less Than Significant.

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.5-3: 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- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Less Than Significant.	None.	Less Than Significant.
5.6 GREENHOUSE GAS EMISSIONS			
Impact 5.6-1: Would development of the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant.	None.	Less Than Significant.
Impact 5.6-2: Would the proposed project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less Than Significant.	None.	Less Than Significant.
5.7 HAZARDS AND HAZARDOUS MATERIALS			
Impact 5.7.1: Would the proposed project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less Than Significant.	None.	Less Than Significant.
5.8 HYDROLOGY AND WATER QUALITY			
Impact 5.8-1: Would the proposed 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? Or would the project create or contribute runoff water which would	Less Than Significant.	None.	Less Than Significant.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			
Impact 5.8-2: Would the project violate any water quality standards or waste discharge requirements, alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site, or otherwise substantially degrade water quality?	Less Than Significant.	None.	Less Than Significant.
5.9 LAND USE AND PLANNING			
Impact 5.9-1: Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	Less Than Significant.	None.	Less Than Significant.
Impact 5.9-2: Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?	Potentially Significant.	BIO-1 Prior to issuance of a grading permit, the project applicant shall either: • Provide for 0.3 acre (1,307 SF) of nonnative grassland within the project boundaries with low-fuel volume (low foliage when dormant). Native grasses and fire-resistant shrubs, including but not limited to wild lilac (*Ceanothus sp.*), toyon (*Heteromeles arbutifolia*), and lemonade berry (*Rhus integrifolia*), shall be planted onsite in conjunction with completion of project grading/slope preparation, and would satisfy the requirement for 0.3-acre of restoration of native habitat. Other nonnative vegetation types may be considered and would be determined by the projects' landscape architect in consultation with the City; or	Less Than Significant.

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Provide written proof to the satisfaction of the City of the purchase of mitigation credits from a California Department of Fish and Wildlife certified mitigation bank for 0.3 acre of nonnative grassland.	
5.10 NOISE			
Impact 5.10-1: Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less Than Significant.	None.	Less Than Significant.
Impact 5.10-2: Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Less Than Significant.	None.	Less Than Significant.
Impact 5.10-3: Would the proposed project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Potentially Significant.	NOI-1 Heating, Ventilation, and Air Conditioning equipment shall be located on the ground level between the main building and Interstate 5 unless an additional acoustical analysis can demonstrate that the equipment will not exceed 45 dBA when measured at any point on the neighboring property line.	Less Than Significant.
Impact 5.10-4: Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Potentially Significant.	NOI-2 The project applicant shall require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections during construction activities by a qualified noise consultant, retained by the project applicant, and approved by the City Engineer. NOI-3 Prior to issuance of any demolition or grading permit, the applicant shall establish a noise complaint response program subject to the approval of the City and shall respond to any noise complaints received for this project by measuring noise levels at the affected receptor site. The noise complaint response program shall require that all residences and noise-sensitive land uses within 50 feet of construction site shall be notified of the construction. The notification will describe the activities anticipated, provide dates and hours, and provide contact information with a description of a complaint and response procedure. Additionally, as part of the noise complaint response program, the	Less Than Significant.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		applicant shall designate a "Construction Liaison" who will be responsible for notifying the City and Engineer and responding to any local complaints about construction noise. The liaison will determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures included in the Construction Noise Control Plan (see Mitigation Measure NOI-4, below), approved by the City Engineer, to correct the problem within 48 hours after receiving a complaint. NOI-4 The project applicant and construction contractor shall prepare a noise control plan which shall include best management practices that may include, but would not be limited to the following: • Stationary noise-generating equipment shall be located as far as reasonable from sensitive receptors when sensitive receptors adjoin or are within 50 feet of the construction site. • Limitation of grading and use of noise-generating equipment for less than 8 hours per day. • Unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes) shall be prohibited. If a noise complaint is registered that cannot be resolved by the Construction Liaison, then the applicant shall retain a Qualified Noise Consultant to conduct noise measurements at the location where the complaint was registered. If the noise level exceeds an Leq(8) of 75 A-weighted decibels (dBA; i.e., more than 75 dBA for more than 8 hours during any 24-hour period when measured at or within an adjacent residential property), the applicant shall implement noise reduction measures, such as portable sound attenuation walls, use of quieter equipment, shift of construction schedule to avoid the presence of sensitive receptors, etc., to reduce noise levels, to the satisfaction of the City Engineer. The determination of appropriate resolutions to noise complaints shall be sent to the complainant and City Engineer within 48 hours after receiving a complaint. NOI-5 A temporary sound wall, eight feet in height, shall be erected on the southern and eastern site boundaries to reduce noise exposure at adjacent residences.	

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.11 PUBLIC SERVICES			
FIRE PROTECTION AND EMERGENCY SERVICES			
Impact 5.11-1: Would the proposed project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services?	Less Than Significant.	None.	Less Than Significant.
POLICE PROTECTION			
Impact 5.11-2: Would the proposed project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services?	Less Than Significant.	None.	Less Than Significant.
5.12 TRANSPORTATION/TRAFFIC			
Impact 5.12-1: Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to	Less Than Significant.	None.	Less Than Significant.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			
Impact 5.12-2: Would the project 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.	None.	Less Than Significant.
Impact 5.12-3: Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less Than Significant.	None.	Less Than Significant.
Impact 5.12-4: Would the project result in inadequate emergency access?	No Impact.	None.	No Impact.
Impact 5.12-5: Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Less Than Significant.	None.	Less Than Significant.
Impact 5.12-6: Would the project result in inadequate parking capacity?	Potentially Significant.	TRAF-1 Prior to certificate of occupancy, the applicant shall prepare a parking management plan that establishes a list of dates of special events throughout the calendar year that the applicant considers to have potential for increased parking needs that may exceed available parking on- or offsite. The list of special events shall be reviewed and approved by City staff prior to certificate of occupancy. The applicant shall establish a contract with a contract-valet/parking service to provide valet service to visitors for the first two special events within the calendar year after the senior care facility is open. If after two special events it is determined that the valet service is not necessary because the site is able to accommodate parking needs during special events, the applicant may cease the valet/parking contract. The applicant shall re-establish a contract with a	Less Than Significant.

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		valet/parking service if they are notified by visitors or nearby residents that there are limitations related to availability of parking during special events.	
5.13 TRIBAL CULTURAL RESOURCES			
Impact 5.13-1: Would the proposed 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)?	No Impact.	None.	No Impact.
Impact 5.13-2: Would the proposed 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	Potentially Significant.	TCR -1 In addition to implementing Mitigation Measure CUL-1, which requires a registered professional archaeologist (RPA) to monitor ground-disturbing activities for the discovery of potential historical or archaeological resources, the RPA shall also monitor for potential tribal cultural resources. If tribal cultural resources are recovered, the RPA shall contact the liaisons for the local Native American tribes, including their Native American monitors, to assess the find and as appropriate return the artifact to the appropriate tribe(s).	Less Than Significant.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
consider the significance of the resource to a California Native American tribe. The			
5.14 UTILITIES AND SERVICE SYSTEMS			
Impact 5.14-1: Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Less Than Significant.	None.	Less Than Significant.
Impact 5.14-2: Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less Than Significant.	None.	Less Than Significant.
Impact 5.14-3: Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or would new and/or expanded entitlements would be needed?	Less Than Significant.	None.	Less Than Significant.
Impact 5.14-4: Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less Than Significant.	None.	Less Than Significant.
5.15 ENERGY			
Impact 5.15-1: Would the project develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements during construction?	Less Than Significant.	None.	Less Than Significant.

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.14-2: Would the project develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation?	Less Than Significant.	None.	Less Than Significant.

2. Introduction

2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the potential environmental consequences of projects over which they have discretionary authority before taking formal action on those projects. This draft environmental impact report (DEIR) has been prepared to satisfy CEQA and the State CEQA Guidelines. The environmental impact report (EIR) is the public document designed to provide decision makers and the public with an analysis of the potential environmental effects of the proposed project, to indicate possible ways to reduce, avoid or mitigate potential environmental damage and to identify potential alternatives to the proposed project. The EIR must also disclose any potentially significant environmental impacts that cannot be avoided; potential growth-inducing impacts; effects not found to be significant; and potentially significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (Guidelines § 21067). The City of Solana Beach has the principal responsibility for approval of the Solana Beach Senior Care Specific Plan (proposed project). For this reason, the City of Solana Beach (City) is the CEQA lead agency for this project.

The intent of the DEIR is to provide sufficient information on the potential environmental impacts of the proposed project for the City to make an informed decision regarding approval of the project. Specific discretionary actions to be reviewed by the City are described in Section 3.4, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, title 14, §§ 15000 et seq.)

The overall purpose of this DEIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the potential environmental effects of the construction and operation of the proposed Solana Beach Senior Care Specific Plan project. This DEIR addresses effects that may be significant and adverse; evaluates alternatives to the proposed project; and identifies mitigation measures to reduce or avoid identified significant adverse effects.

2.2 NOTICE OF PREPARATION AND INITIAL STUDY

The City of Solana Beach prepared an Initial Study and determined that an EIR would be required for this project. The City thus issued a Notice of Preparation of an EIR (NOP) and made a copy of the Initial Study available on June 23, 2017 (see Appendix 2-1). Comments received during the NOP's public review period, from June 23, 2017 to July 24, 2017, are in Appendix 2-2.

The NOP process helps determine the scope of the environmental issues to be addressed in the DEIR. Based on this process and the Initial Study for the project, certain environmental categories were identified as having the potential to result in significant impacts. Impacts considered potentially significant are addressed in this DEIR, but impacts identified as less than significant and issues with no potential for impact are not discussed further in this EIR. Refer to the Initial Study in EIR Appendix 2-1 for discussion of how these initial determinations were made by the City as the lead agency.

2.3 VOTER APPROVAL

The Solana Beach General Plan prohibits the development of a project that would exceed maximums of general plan residential land use categories or result in the intensification of a residential parcel unless the action—via a general plan amendment, including a specific plan—is approved by a majority of voters in the City. The proposed Specific Plan would be subject to voter approval of an initiative to support development of a 99-bed residential senior care facility for the elderly with a maximum floor area ratio of 0.55.

2.4 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on the City's Initial Study, comments received in response to the NOP, and comments received at the public scoping meeting conducted by the City on July 13, 2017. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, the DEIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance.

The information in Chapter 4, *Project Description*, establishes the basis for analyzing potential future, project-related environmental impacts.

2.4.1 Impacts Considered Significant

The DEIR analyzes the potential significant environmental impacts of the project on existing conditions in the project area. The information in Chapter 3, *Environmental Setting*, as well as the information about the existing conditions of specific resources discussed in Chapter 5, *Environmental Analysis*, describes the existing conditions in the project area which will serve as the baseline for evaluating the potential environmental impacts of the project. The information in Chapter 4, *Project Description*, describes the characteristics of the project which are analyzed for their potential impacts on the environmental. The nature and magnitude of the project's potential environmental impacts, and feasible mitigation measures which may avoid or reduce the project's significant impacts, are disclosed and discussed in Chapter 5, *Environmental Analysis*.

2.3.2 Impacts Considered Less Than Significant

During preparation of the Initial Study, the City determined that the proposed project would have no impact or a less than significant impact with respect to the following issues addressed in CEQA Guidelines Appendix G "Environmental Checklist Form". The checklist questions are shown by main resource topic and the CEQA Guidelines checklist letter for the specific questions addressed below.

- **3.1 Aesthetics (a).** The project will not have an adverse impact on a scenic resource.
- **3.2 Agriculture and Forestry Resources (a) through (e).** The project would not convert any special status farmland to nonagricultural use.
- **3.3 Air Quality (e).** The project would not create objectionable odors.
- **3.5 Cultural Resources (d).** The project would not affect any human remains.
- **3.6 Geology and Soils (a.i) through (a.iii), (d), (e).** The project is not located on a known seismic fault or located on expansive soils. The proposed project would not use septic tanks or other onsite wastewater treatment; therefore, the project would not impact these systems.
- **3.8 Hazards and Hazardous Materials (a), (c), (d) through (h).** The project would not transport significant hazardous waste or emit hazardous substances, is not located on a hazardous materials site, would not affect public or private airport operations, is not in a wildfire hazard area, and would not impede emergency services.
- **3.9 Hydrology and Water Quality (g) through (j).** The project would not deplete groundwater and is not in a 100-year flood zone or subject to inundation due to dam or levy failure, seiche, or tsunami.
- **3.10 Land Use and Planning (c).** The project would not physically divide an established community.
- **3.11 Mineral Resources (a), (b).** The project would not affect mineral resources.
- **3.12 Noise (e) and (f).** The project would not be affected by noise from a public or private airstrip.
- **3.13 Population and Housing (a) through (c).** The project would not result in significant population or employment growth, and would not displace housing.
- **3.14 Public Services (c) through (e).** The project would not increase the number of school children or create a need for parks or other public facilities.
- **3.15 Recreation (a) and (b).** The project would not create additional demand on existing parks.
- **3.16 Transportation/Traffic (c) and (d).** The project would not affect air traffic patterns or create a hazardous design feature.

- **3.18 Utilities and Service Systems (b), (f), (g).** The project would not create a demand for new or expanded water or wastewater treatment facilities, or generate solid waste in excess of landfill capacity.

2.4.2 Potentially Unavoidable Significant Adverse Impacts

This DEIR did not identify significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the proposed project.

2.5 PUBLIC REVIEW AND COMMENT ON THE DEIR

This DEIR is being circulated for public review for 45 days. Interested agencies and members of the public are invited to provide written comments on the DEIR to the City at the following address:

Corey Andrews
City of Solana Beach
635 South Highway 101
Solana Beach, CA 92075
candrews@cosb.org

The DEIR is available to the general public for review at these locations:

- City of Solana Beach Community Development Department, City Hall 635 S. HWY 101 Solana Beach, CA 92075.
- Solana Beach Library, 175 Stevens Avenue., Solana Beach, CA. 92075

2.6 FINAL EIR CERTIFICATION

Upon completion of the 45-day public review and comment period, the City will review all written comments received and prepare written responses for each comment. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from the comments. All persons who comment on the DEIR will be notified of the availability of the FEIR.

2.7 MITIGATION MONITORING AND REPORTING PROGRAM

CEQA Guidelines Section 15097 requires that public agencies adopt a mitigation monitoring or reporting program for any project for which mitigation measures are required. Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Mitigated Negative Declaration.

The Mitigation Monitoring and Reporting Program (MMRP) for the proposed project will be prepared prior to consideration of the project by the Solana Beach City Council, and required of the project if it is approved by the voters.

3. Environmental Setting

3.1 INTRODUCTION

This section of the DEIR provides a "description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, ... from both a local and a regional perspective" (Guidelines § 15125[a]), pursuant to provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The environmental setting provides the baseline physical conditions from which the lead agency will determine the potential significance of environmental impacts resulting from the proposed project.

3.2 REGIONAL ENVIRONMENTAL SETTING

The project site is located in the southeastern portion of Solana Beach, and the entire City is within the coastal zone. Solana Beach is a built-out, coastal city in western San Diego County. As shown in Figure 3-1, *Regional Location*, Solana Beach is surrounded by the cities of Encinitas to the north, Del Mar and San Diego to the south, the unincorporated San Diego County community of Rancho Santa Fe to the east, and the Pacific Ocean to the west. Regional access to the site is provided by Interstate 5 (I-5), which bounds the site to the west. Figure 3-2, *Local Vicinity,* shows the project site in the local context.

3.3 LOCAL ENVIRONMENTAL SETTING

3.3.1 Project Location

The project site is located at 959 Genevieve Street in the City of Solana Beach, San Diego County (Assessor's Parcel Number [APN] 298-390-51-00). The property is roughly L-shaped, with its western boundary adjacent to I-5. Genevieve Street is the northern site boundary, residences form the southern boundary, and Marine View Avenue forms part of the eastern boundary. Figure 3-3, *Aerial Photograph*, shows an aerial view of the project site and surrounding area.

3.3.2 Project Site

The project site encompasses 2.91 acres (126,875 square feet). The site contains abandoned structures, including a residence, greenhouse, and shed. The remainder of the site, approximately 124,000 square feet or 98 percent, of the site is vacant with grasses, small shrubs, and ornamental palm trees. The project site also contains debris and a few conceptual story poles. Figure 3-4, *Site Photographs*, illustrates the existing condition of the project site.

The property gently slopes down from the southeast to the northwest. Site elevations range from approximately 140 feet above mean sea level (amsl) in the southern and northeastern areas to approximately 110 feet amsl in

the northwest corner. The site is slightly below the developed grades of Marine View Avenue and Genevieve Street and the commercial and residential developments north and east of the site are at higher elevations, averaging 125 amsl. The I-5 freeway is also developed at about 125 amsl; therefore, the site is higher than I-5 at the southwest end and gradually declines below the grade of I-5 at the northwest end of the site. The I-5 is proposed to be widened to the east toward the project site in the future; the proposed project will not impact the planned I-5 improvements but has been designed in coordination with Caltrans.

Due to the elevated topography of the surrounding areas, stormwater drains toward the site and discharges into the drainage swale along its western boundary, adjacent to the existing I-5 embankment. A second drainage swale, perpendicular to I-5, crosses the site approximately 300 feet south of Genevieve Street. A north-south oriented private sewer easement crosses the site from the rear property lines of the residences west of Marine View Avenue to an existing sewer line in Genevieve Street. Vehicular access into the existing site is via a driveway at the end of the Genevieve Street cul-de-sac.

3.3.3 Surrounding Land Use

I-5 is adjacent to the site to the west. Commercial uses (i.e., the Timbers [a three-story office building] and a plant nursery) are north of the site. Six single-family properties with one- or two-story houses are located east and south of the project site. Figure 3-5, *Surrounding Land Uses*, shows photos of the surrounding uses.

3.4 SITE HISTORY

The project site has contained residential structures, various crops, and plant-nursery activity since at least 1957 until approximately 2009, when the remaining trees were removed from the property. In addition, according to aerial photographs, pedestrian paths appear visible on the vacant site from 1972 through 2005. A residential structure on the eastern side of the site near Marine View Avenue was demolished between 1994 and 2003. The site has since been unoccupied for nearly a decade.

3.5 REGULATORY PLANS AND GUIDELINES

Where appropriate, the analysis in the EIR discusses the applicability of the following regulatory plans and guidelines in the *Regulatory Setting* section of each environmental topic.

3.5.1 City of Solana Beach General Plan

The City of Solana Beach General Plan guides future development of the City. It was adopted in 1988, and the land use, housing, and circulation elements were amended in 2014. Other elements include noise, safety, open space/conservation, and economic development. The general plan is the framework for all decisions about public and private projects, future expenditures, and services provided by the City.

3.5.2 City of Solana Beach Local Coastal Program Land Use Plan

The City adopted the Solana Beach Local Coastal Program (LCP) Land Use Plan (LUP) in 2013 and amended the LUP in 2014. The City's LCP consists of the adopted LUP and will include a future Local Implementation

Plan (LIP) (i.e., the implementing zoning ordinances and maps) which together meet the Coastal Act requirements and implement its provisions and policies within the City. CCC certification of an LCP, followed by the City's adoption, is required to fully implement an LCP. As the CCC has not certified the City of Solana Beach LIP, all final coastal development permits (CDP's) are issued by the CCC.

3.5.3 City of Solana Beach Municipal Code

The municipal code establishes regulations and laws passed by ordinances. Code regulations address administration and personnel; revenue and finance; business licenses and regulations; animals; health and safety; public peace, morals, and welfare; vehicles and traffic; streets, sidewalks, and public places; public services; buildings and construction; subdivisions; and zoning.

3.5.4 General Plan, Zoning, and Local Coastal Program

The project site has a General Plan land use designation of Estate Residential and corresponding zoning of Estate Residential 2 (ER-2). The ER-2 zone allows up to two dwelling units per net acre and conditionally allows for other uses, such as residential care facilities, churches, and schools. The maximum allowable floor area on the project site is 23,531 square feet under existing zoning. The project site is also within the City's Dark Sky Overlay Zone, which regulates and restricts the use of outdoor lighting (Solana Beach 2014b). The project site is also subject to the policies of the LCP as the entire City is located within the Coastal Zone.

3.6 OTHER RELATED DEVELOPMENT PROJECTS

Cumulative effects or impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (California Code of Regulations, Title 14 § 15130[b]). Cumulative impacts are the change caused by the incremental impact of the project evaluated in the EIR combined with the incremental impacts from past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed when the project's incremental effect is "cumulatively considerable." It further states that this discussion shall reflect the level and severity of the impact and likelihood of occurrence, but not in as much detail as the project itself.

The information used in an analysis of cumulative impacts can come from two sources:

A. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, projects outside of the control of the agency.

B. A summary of projections in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, that described or evaluated regional or area-wide conditions contributing to the cumulative impact.

3. Environmental Setting

The cumulative impact analyses in this EIR use a combination of sources A and B. Depending on the environmental category, the cumulative impact analysis may use either data source. Some impacts are site specific, such as biological resources, and others may have impacts outside the City boundaries, such as regional air quality effects.

A list of approved and reasonably foreseeable projects near the project site are listed in Table 3-1, *Related Cumulative Projects*. Please refer to sections in Chapter 5, *Environmental Analysis*, for a discussion of the potential environmental impacts associated with cumulative development.

Table 3-1 Related Cumulative Projects

Project	Location	Project Description	Status
Solana Highlands	661 to 781 South Nardo Avenue (0.5 mi west)	Demolish 194 multifamily units; redevelop with 260 multifamily units, including senior housing, in two and three-story buildings.	Project approved and EIR Certified by City Council on December 17, 2018.
The Pearl	555 South Sierra Avenue (1 mi west)	Three-story mixed use with 10 housing units, commercial office space, and 53 parking spaces.	Approved by City Council in April 2014.
San Andres Drive Median Improvements	San Andres Drive (0.4 mi east)	Construction of curb medians, pedestrian ramps, asphalt concrete overlays, traffic striping and markings, and traffic signage.	Project completed.
Ocean Ranch Estates	512 - 538 S. Nardo Avenue (0.5 mi west)	Subdivision and construction of 8 single-family homes; purchase of off-site affordable accessible dwelling unit.	Project planning. CEQA document issued for public review in February 2019.
330 S. Cedros Mixed Use	330 S. Cedros Avenue (0.8 mi west)	Construction of 26,127 SF, two-story, mixed use with 4 dwelling units, 4 retail suites, and a restaurant.	Project approved in December 2016. Construction is underway.
North Bluff Resort	929 & 101 Border Avenue, Del Mar (1.1 mi southwest)	Proposed resort, hotel, and villas on 16.6 acres.	Project planning. Citizen participation program initiated in May 2017. CEQA document expected for public review in 2019.
Stevens Ave. CATS Project	Stevens Ave. (0.3 mi west)	Complete streets improvements.	Completed in early 2018.
Lomas Santa Fe Corridor Study	Lomas Santa Fe (0.6 mi north)	Corridor study.	Phase 1 of planning process is complete. Phase 2 – Feasibility Analysis contract to be awarded and preliminary conceptual design to begin in 2019.
NCTD Train Station Project	101–441 N. Cedros Avenue (1.1 mi northwest)	Proposed mix of 48,000 SF of restaurant, retail, and office; 32,000 SF boutique hotel with 45 rooms; 28,000–30,000 SF multifamily residential, 30 units; 1,250 underground parking spaces; plaza and green space.	Project planning. Conceptual plan has been presented to the City Council. No application on file.

Table 3-1 Related Cumulative Projects

Project	Location	Project Description	Status
Feather Acres 7-lot residential subdivision	980 Avocado Place (0.3 mi southeast)	Seven lot subdivision to be graded. Lots developed individually.	Final map approved. Grading completed and construction underway.
Solana 101	Pacific Coast Highway at Dahlia Drive	Site redevelopment to include mixed use development consisting of commercial and residential land uses.	Project approved and EIR Certified by City Council on July 10, 2018.
Skyline Elementary School Reconstruction	606 Lomas Santa Fe (0.6 mi north)	Reconstruction of school campus.	Project completed.
Earl Warren Middle School Reconstruction	155 Stevens Ave. (0.5 mi northwest)	Reconstruction of school campus.	Project completed.
Harbaugh Trails Public Open Space and Trails Project	Highway 101 at the north end of the City and adjacent to the San Elijo Lagoon (1.5 mi northwest)	Open space and public trails improvements; public viewing platform.	Site downzoned from Commercial to Open Space is complete. City permitting is complete. CCC issued CDP in November 2018. Construction anticipated to begin in early 2019.
Santa Fe Christian School Master Plan Update	838 Academy Dr. (0.25 mi northwest)	K–12 campus-wide improvement plan; 172,336 SF buildings, 266 parking spaces, 9,000 cubic yards of cut, 6,000 cy of fill.	Phase 1A under construction.
I-5 North Coast Corridor	I-5 Freeway from Vandergrift Boulevard in Oceanside to La Jolla Village Drive in San Diego (Adjacent west)	27-mile-long I-5 improvement; includes construction of express lanes, interchanges, and sound walls.	Phase I: I-5 express lane construction along median from Lomas Santa Fe to Oceanside is underway.
El Camino Real Bridge / Road Widening	El Camino Real from Via de la Valle to San Dieguito Road (1.4 mi southeast)	Replace 2-lane bridge with 4-lane bridge; widen 2-lane roadway to 4-lane roadway.	Design stage. Construction September 2019.
Via de la Valle Underground Utilities District for Utilities Undergrounding Program	Via de la Valle (0.5 mi south)	Streetlight and undergrounding utility improvements.	Design stage. Construction September 2018.
Roadway and Sidewalk Improvements	Camino Del Mar, Jimmy Durante Blvd., Via de la Valle. (0.6 mi south)	Construction of improved sidewalk, bicycle, vehicular, and drainage infrastructure on Camino Del Mar, Jimmy Durante Blvd., and Via de la Valle.	Camino del Mar-Carmel Valley Road in progress.
City Hall/Town Hall Project	1050 Camino Del Mar, Del Mar, CA 92014 (2.3 mi southwest)	Construction of new City Hall/Town Hall.	Project complete.
Del Mar Village Specific Plan	Camino Del Mar (2 mi southwest)	Public improvements to streetscape; strategies to protect community resources/village atmosphere.	Program EIR certified; planning and construction.

3. Environmental Setting

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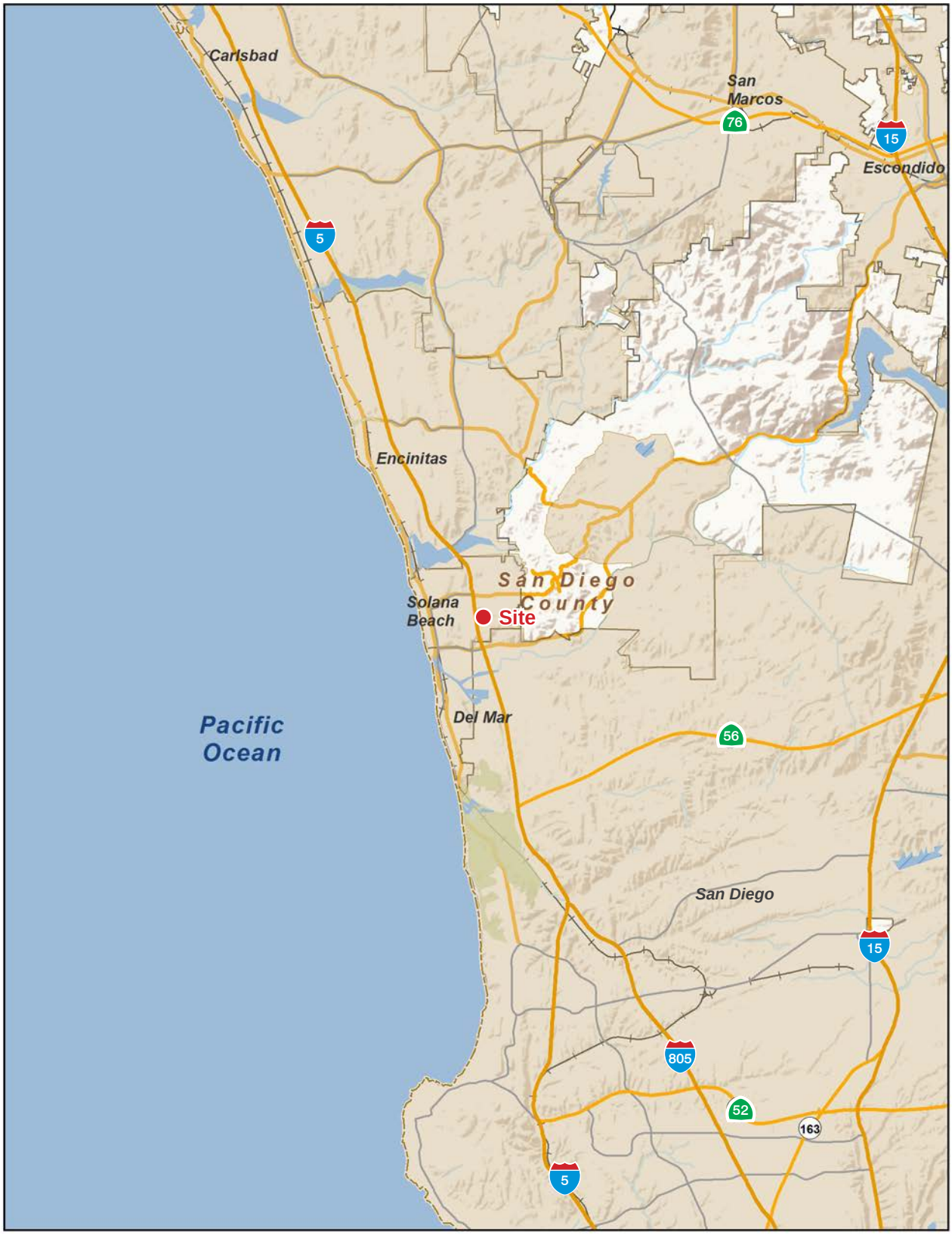
Figure 3-1 - Regional Location
3. Environmental Setting



0 3
Scale (Miles)

Source: ESRI, 2015

3. Environmental Setting

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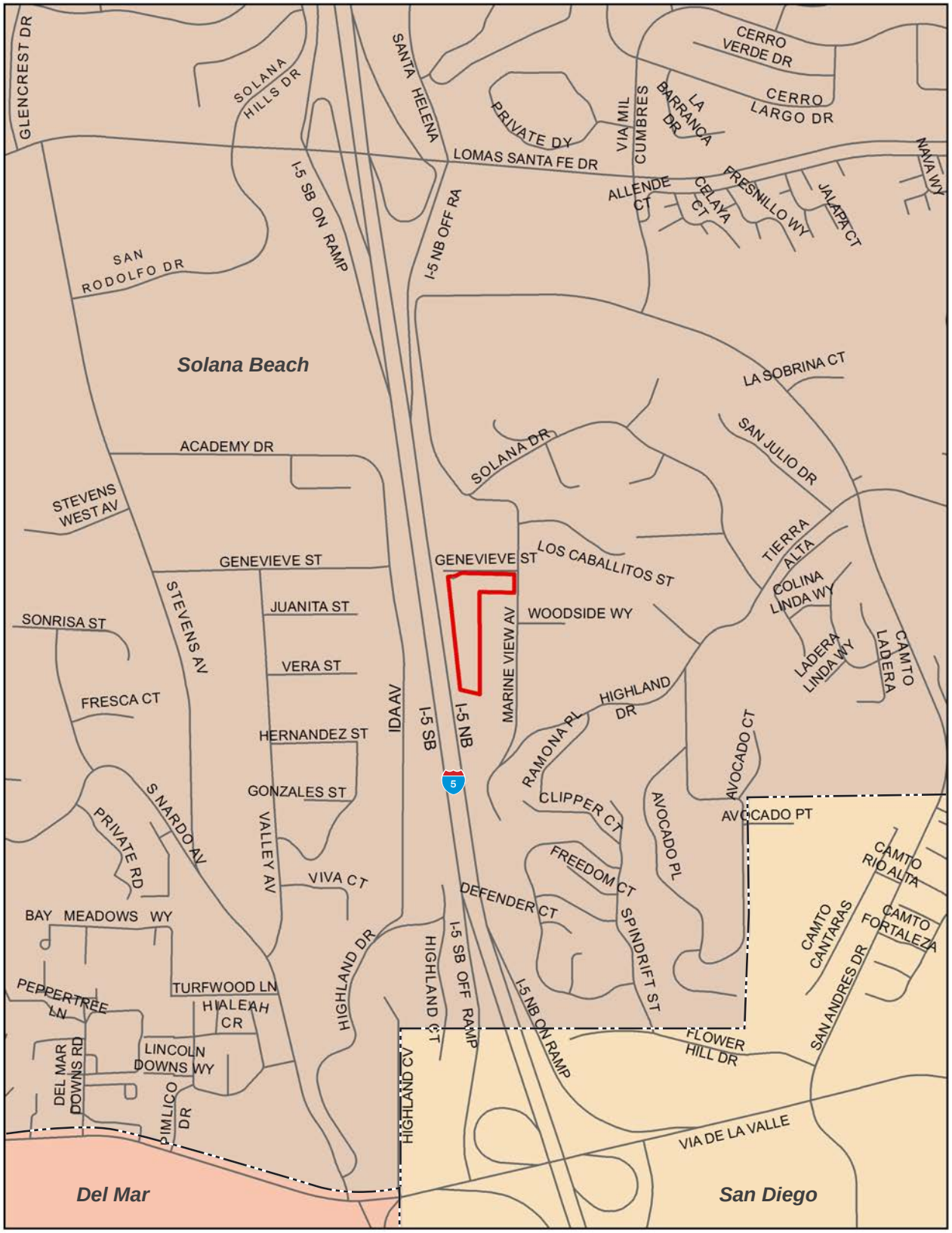
Figure 3-2 - Local Vicinity

3. Environmental Setting



Project Site

City Boundary

0 500
Scale (Feet)

Source: ESRI, 2017

3. Environmental Setting

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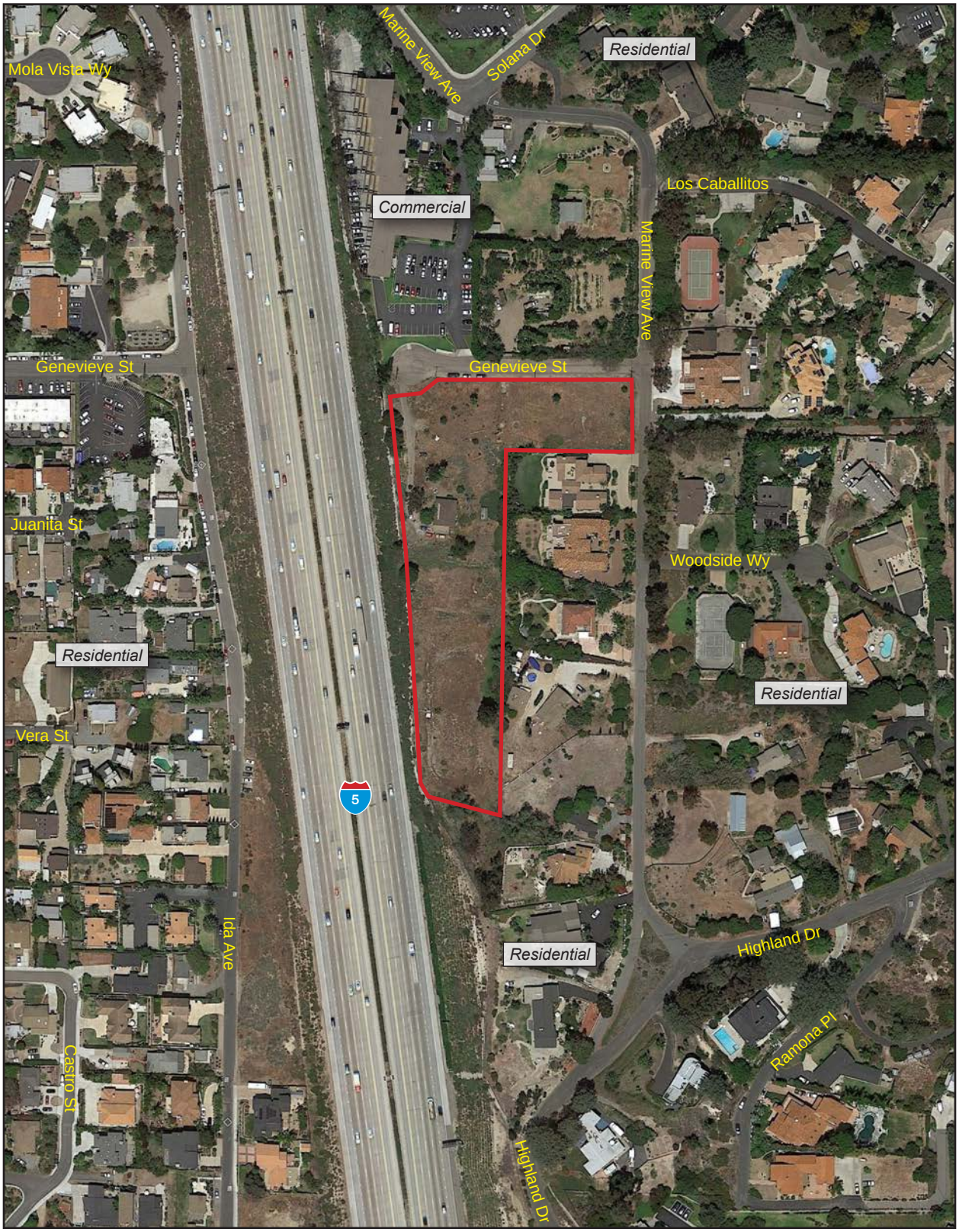
Figure 3-3 - Aerial Photograph

3. Environmental Setting



Project Boundary

0 250
Scale (Feet)

Source: Google Earth Pro, 2015

3. Environmental Setting

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Figure 3-4 - Site Photographs
3. Environmental Setting

View of the project site from the Genevieve Street cul-de-sac. Note the difference in grade between the project site and I-5 freeway on the right.

View of the northeast portion of the project site from the intersection of Genevieve Street and Marine View Avenue.

View facing north of the building proposed to be demolished. “The Timbers” office building is in the background.

3. Environmental Setting

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Figure 3-5 - Surrounding Land Uses
3. Environmental Setting

View from Genevieve Street near the northeast corner of project site looking east. Note the height of the residences relative to the down-gradient on the site.

View looking west from Marine View Avenue at the southeast corner of the “foot” of the ‘L” shaped project site. Note offsite residence on the left and the roofline of “The Timbers” at the far right.

3. Environmental Setting

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4. Project Description

4.1 PROJECT LOCATION

The project site is located at 959 Genevieve Street in the City of Solana Beach, San Diego County (Assessor's Parcel Number [APN] 298-390-51-00). As shown in Figure 3-1, *Regional Location*, Solana Beach is surrounded by the cities of Encinitas to the north and Del Mar and San Diego to the south, the unincorporated community of Rancho Santa Fe to the east, and the Pacific Ocean to the west. The property is roughly L-shaped, with its western border formed by Interstate 5 (I-5). Genevieve Street is the northern site boundary, residences form the southern boundary, and Marine View Avenue forms part of the eastern boundary. Figure 3-2, *Local Vicinity*, shows the project site from a local perspective, and Figure 3-3, *Aerial Photograph*, shows an aerial view of the project site and surrounding area.

4.2 STATEMENT OF PROJECT OBJECTIVES

Objectives for the Solana Beach Senior Care Specific Plan project are intended to aid local decision makers in their review of the project and associated environmental impacts. The project objectives are:

1. Utilize one of the last remaining undeveloped sites within the City of Solana Beach that is over two acres to approximately double the City's inventory of assisted living and memory care beds to help meet the community's current and increasing demand for such uses. This demand is demonstrated by the projected growth in City of Solana Beach of residents age 70 and over, from 2,200 persons in 2020 to 3,500 persons by 2035.

2. Provide for the development of the site as a state-licensed residential senior care facility for the elderly that is consistent with the City's General Plan and the requirements of the Specific Plan.

3. Provide a residential senior care facility with a size that incorporates the increased standards of the Specific Plan (above the City's zoning code minimum residential senior care facility requirements) for elements that affect day-to-day living. These include rooms with larger sleeping areas, storage areas, and bathroom facilities; substantially increased common indoor areas for living and socialization; and common outdoor open space areas.

4. Provide a residential senior care facility for the elderly to include amenities and services that contribute to a higher quality of life for residents, such as dining facilities, wellness/fitness areas, common living spaces, transportation, entertainment, and other nonmedical support services as well as environmentally sensitive design and sustainable operations.

5. Provide required parking for the residential senior care facility, and limit the visibility of parking and service loading areas from the existing residential uses to the east by using techniques such as an underground/basement parking structure, screening of surface parking through building placement, grading design, and landscape design.

6. Maintain the character of Marine View Avenue and create a potential amenity for the surrounding neighborhood and the project's future residents by establishing an open, landscaped area with pedestrian connections to the neighborhood adjacent to Marine View Avenue and limiting vehicular driveway access to the site to Genevieve Street only.

4.3 PROJECT CHARACTERISTICS

A "project," as defined by the CEQA Guidelines, means "... an activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies. (14 Cal. Code of Reg. § 15378[a][3])

4.3.1 Development Plan

The proposed project would consist of the demolition of all existing onsite structures and construction and operation of a state-licensed, 96-bed residential senior care facility for the elderly. A single building would be constructed along the western perimeter of the site. Other improvements include surface parking and below-ground parking facilities, and landscaped and paved/hardscaped areas. The building itself would be accessible from both the western and eastern sides. Access from the west would be into the first floor of the building, and access from the east, near the north end of the building, would be into the second floor. A landscaped area at the corner of Marine View Avenue and Genevieve Street would be available to the public and would support community use. All improvements would be required to comply with the latest California Building Code (CBC) and Americans with Disabilities Act (ADA). Table 4-1, *Site Summary,* breaks down the areas of proposed development. Figure 4-1, *Site Plan,* illustrates the proposed site layout.

Table 4-1 Proposed Project Overview - Site Summary

Use	Area (SF)	Percentage of Site (%)
Assisted Living Facility Building Footprint	36,789	29
Parking/Vehicle Use Areas	21,408	17
Landscaped Areas	52,343	41
Hardscaped Areas	16,335	13
Total	126,875	100

4.3.1.1 RESIDENTIAL SENIOR CARE BUILDING

As required by the proposed Specific Plan's limitations on buildable area and setbacks for the site, the proposed building would be oriented in a north-south direction, paralleling I-5. The building would be terraced and segmented to maintain a 25-foot height limit as measured from the lower of either the existing or finished grade as required by the SBMC. Three elevator pitches would be 26 to 31 feet tall and would be exempt from the 25-foot height limit in accordance with the Specific Plan. The building would have two stories plus a basement/garage level. The northern and southern halves of the building would be internally separated by a two-story lobby or "breezeway." Table 4-2, *Building Area,* show the proposed area of each floor. Figure 4-2, *Massing Model,* shows an aerial massing of the proposed building, and Figure 4-3, *Western Elevation*, illustrates the tiered levels of the building. Additionally, Figure 5.1-3, *Visual Simulation – Westward View at Project Buildout,* and

Figure 5.1-4, *Eastward View from Ida Avenue*, provide visual simulations of the improvements facing west and east, respectively.

Table 4-2 Building Area

Floor (Story)	Area (SF)	Rooms
Garage/Basement Level	17,478	0
First Floor	34,672	41
Second Floor	35,106	44
Total	87,256	85

Note: Resident rooms can include one or two beds depending on their use.

Interior

The northern half of the building would be developed with three floor levels, including the basement level (i.e., parking garage; electrical, mechanical, and storage areas; and enclosed trash storage facility). Vehicle access to the garage would be via a driveway along the western perimeter of the property which takes access from Genevieve Street. The first floor would include a dining area, kitchen, café, and fitness room. The second floor would include a library, spa/salon, living room, administration area, support areas, and mechanical and storage rooms. Both floors would have assisted-living resident rooms, a care room, and a lobby area.

The southern half of the building would begin at the southern end of the breezeway and would have two floor levels; there is no basement level in the southern half of the building. The first floor would house resident rooms for assisted living, a theatre, and an art room. The second floor would have resident rooms for memory care (e.g., residents with Alzheimer's and other types of dementia). Due to the site's higher base elevation in the south, the second floor would be at ground level and provide access to an outdoor courtyard at the end of the building.

The interior configuration of resident rooms and common living areas would comply with the interior space standards of the Specific Plan, which exceed the minimum standards for residential senior care in the Solana Beach zoning code. Additionally, due to the site's topography, the height of the building at the southern end would be less than the maximum allowed by the Specific Plan and the underlying SBMC zoning.

Exterior

Consistent with the proposed Specific Plan criteria, the exterior features of the residential senior care facility would incorporate elements of California Craftsman, California Bungalow, and local beach cottage and Torrey Pines Lodge design and building materials. The building exterior would have stucco and stone siding. Exterior lighting would be installed throughout the property, including around the building, walkways, and parking areas for security purposes. All lighting would comply with the City's dark sky overlay zone requirements, as described in SBMC Section 17.60.060(C). Additionally, a 12-foot tall sound attenuation wall curving around the western and southern sides of that proposed exterior courtyard would be constructed to reduce traffic noise from I-5 from entering into the courtyard (see Figure 5.10-2 in Section 5.10, *Noise*).

4. Project Description

Residential Room Configuration

The proposed Specific Plan authorizes up to 99 beds, but the residential senior care facility as proposed would have 85 rooms with one- and two-bed options, for a total of 96 beds, as shown in Table 4-3, *Room Types*. Each room would include its own bathroom with a toilet, sink, and shower. The rooms in the assisted living section would include a convenience kitchen.

Table 4-3 Room Types

Type	Rooms	Beds	Area (SF)
Assisted Living – 1 Bed	25	25	13,071
Assisted Living – 2 Bed	7	14	5,725
Assisted Living, Studio – 1 Bed	25	25	9,827
Memory Care – 1 Bed	24	24	9,186
Memory Care – 2 Bed	4	8	2,165
Total	85	96	39,974

Access and Circulation

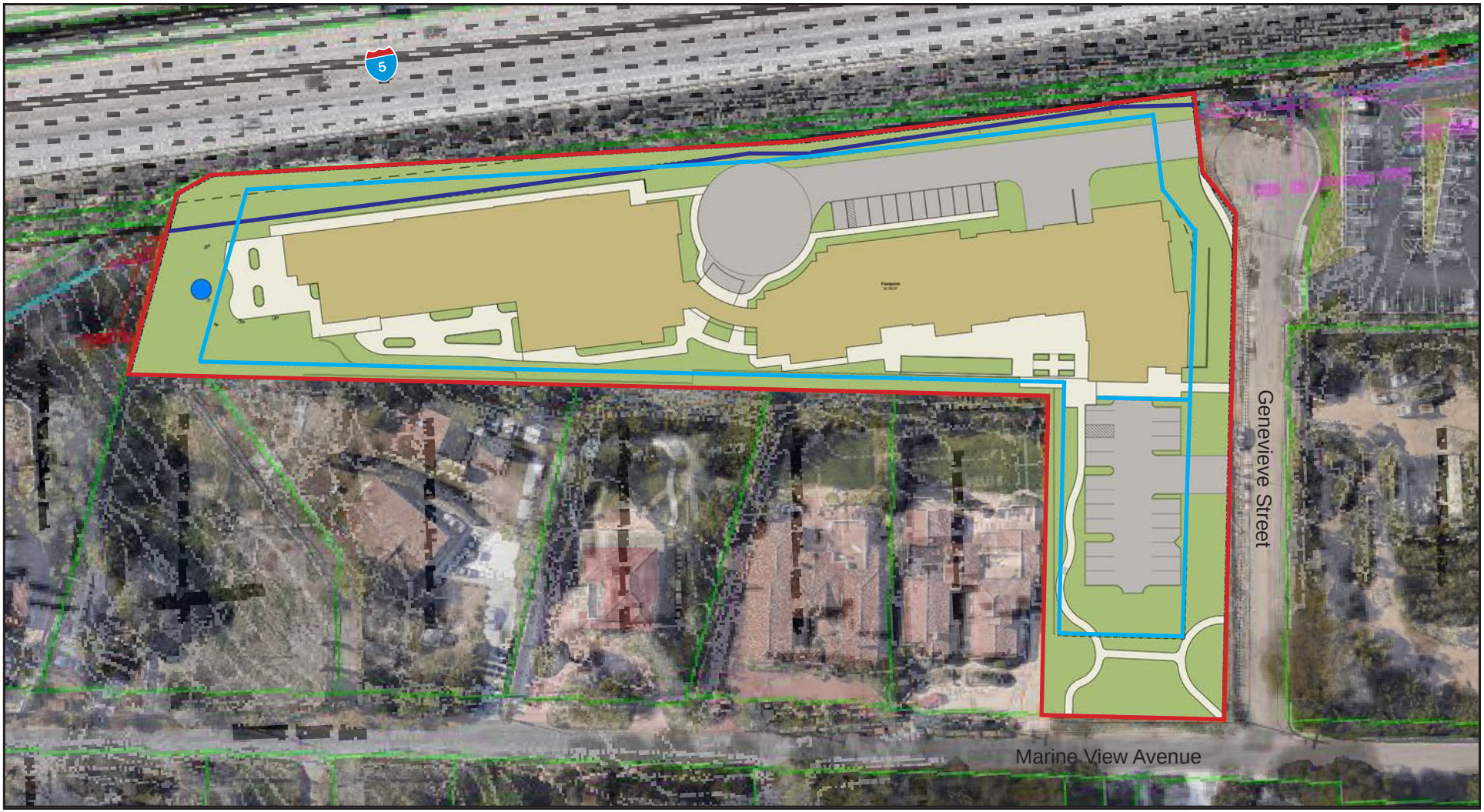
In accordance with the proposed Specific Plan criteria, vehicular access to the site would be via two driveways off of Genevieve Street. The eastern driveway would provide access to a surface, visitor parking lot and the public entry into the second-floor lobby near the administration offices in the north half of the building. The eastern driveway, visitor parking lot, and public building entry would be visible from Marine View Avenue and Genevieve Street.

The western driveway would provide access into the site via the existing curb-cut at the end of the Genevieve Street cul-de-sac. It would provide vehicular access to the secondary building entry point and basement parking garage. The western driveway would also provide fire access to the property's western perimeter. The driveway would terminate at the breezeway, near the center of the building, and would have a turnaround large enough to accommodate emergency vehicles and passenger pick-ups and drop-offs. Building entry would be into the first-floor breezeway.

Other building entry points include the basement garage via two sets of stairs and an elevator. Emergency doors are also proposed throughout the ground-level areas of the building. The eastern side of the building would have four emergency access points, and the western side of the building would have two. Building access would also be provided from the outdoor garden at the south end of the property.

A concrete walkway would encircle most of the building, as shown on Figure 4-1. The western and northern building exteriors would be accessible by the public, as would the eastern portion adjacent to the northeast visitor parking lot. The rest of the eastern boundary would be separated from the adjacent residential properties by a retaining wall. This eastern area and the southern side of the building would only be open to residents, caretakers, and authorized visitors.

Figure 4-1 - Site Plan



Project Site
Paved Area
Building Footprint
Vehicular Use Area
Irrigated Landscape
Water Features
Building Setback (10' side, 25' front, 40' rear)
Caltrans Setback
Lot Line

0 80
Scale (Feet)

Source: Pacific Sound Investors, 2017

4. Project Description

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Figure 4-2 - Massing Model

4. Project Description

Source: Pacific Sound Investors, 2017

4. Project Description

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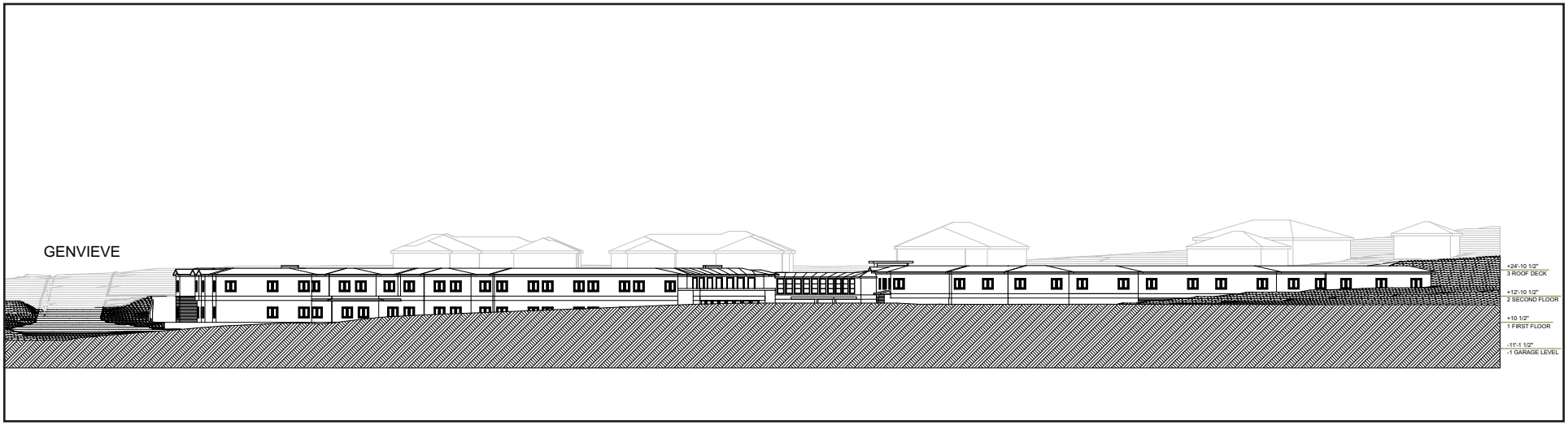
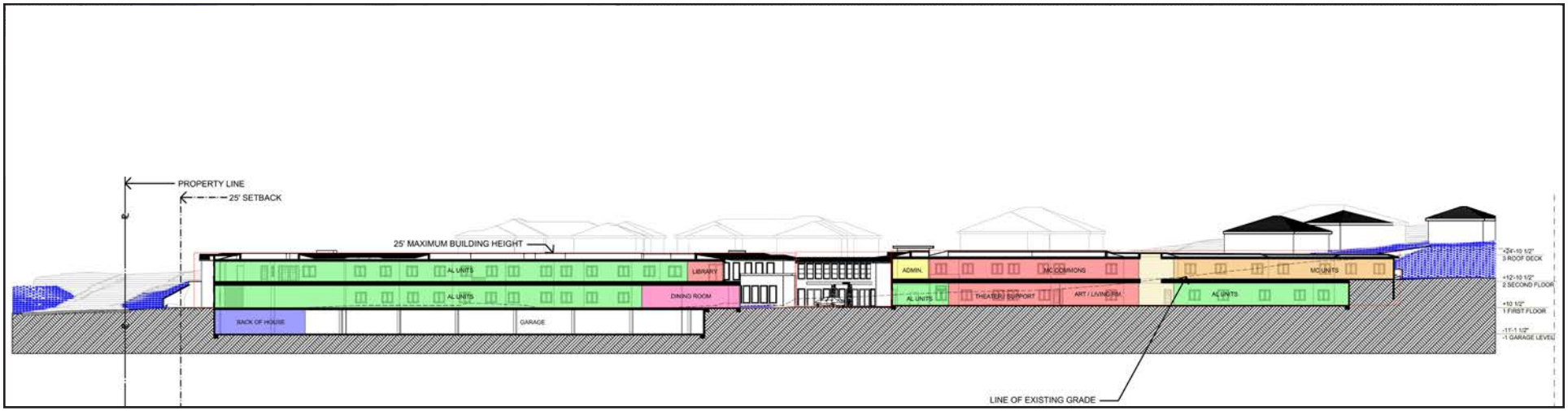
Figure 4-3 - Western Elevation

4. Project Description



View of building looking east from Interstate 5.



Cross-section of building looking east.

Source: Pacific Sound Investors, 2017

4. Project Description

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Parking Facilities and Shuttle Van

The proposed Specific Plan requires 1 off-street parking space per employee and 1 off-street parking space per 7 beds. The proposed development would include a basement parking garage with 32 stalls and 2 surface parking areas: a visitor parking lot in the northeast portion of the site with 19 stalls, and another along the western driveway with 11 stalls. The development would have a total of 62 off-street parking stalls, including 57 standard stalls and 3 ADA accessible stalls and 2 van-accessible stalls (which are both required as accessible spaces under CBC Section 1109a.5). The proposed development would also have 1 motorcycle space, 6 bicycle spaces, and 1 loading space. The applicant estimates hiring a maximum of 65 staff; however, due to the nature of the facility and shifts that employees would work, only 45 staff would be onsite at any one time, and the project would therefore need to accommodate the parking demand for 45 staff (see further discussion in Project Operations, below).

In addition, the proposed project includes a shuttle van that will be driven by staff and would be typically used to drive residents to doctor's appointments two days a week, and for regular outings such as shopping, services, etc. two days a week and be available for other uses as needed. The van would have one of the proposed 62 available spaces reserved.

Landscaping

The proposed Specific Plan requires a minimum of 100 square feet of common open space area per bed, with specifications for water-efficient landscape design and criteria for the various functional areas such as streetscape, parking, courtyards, and entries. The proposed development would comply with these criteria. The proposed landscaped courtyards, gardens, and walkways would be made of decomposed granite and concrete. Drought-tolerant, native, and ornamental trees and shrubs would be used; plant watering would not use reclaimed water as it is currently not available to the site. The closest reclaimed water pipeline is under Lomas Santa Fe Road, approximately 4,000 feet north of the site.

Four open space areas are proposed: the Memory Garden at the southern end of the site; East and North gardens along the eastern perimeter of the site; and an open, informal garden at the corner of Marine View Avenue and Genevieve Street. The garden along Marine View Avenue would be open to the public, maintained by the project applicant, and available for use by residents in the surrounding community as well as by residents of the proposed residential senior care facility. All the landscape and hardscape on the property would be maintained by the operator of the residential senior care facility. Landscaped areas would total 52,343 square feet, approximately 41 percent of the project site as shown in Table 4-1.

Infrastructure Improvements

There are existing services and utilities available in the project area that have previously served the project site. Therefore, infrastructure improvements needed for the proposed Specific Plan are limited to project-specific improvements and upgrades, including underground connections to existing public utilities in the adjacent roadways—water, sewer, and dry utilities. No offsite infrastructure improvements would be required.

4. Project Description

The proposed site improvements would include perimeter slope grading, retaining walls, brow ditches, and a private onsite storm drain system to divert stormwater away from courtyard areas adjacent to the new building (see Figure 4-4, *Grading Plan*). The stormwater drainage improvements would mitigate stormwater runoff created by the proposed development, as well as offsite stormwater that currently enters the site. The proposed drainage improvements include:

- A new 18-inch diameter underdrain would be developed on the south side of Genevieve Street. Runoff from the northern portion of the site would discharge into this new underdrain and be conveyed to an existing concrete drainage channel in the Caltrans right-of-way before entering the public storm drain system.

- Offsite runoff that currently enters the southeast area of the site and new runoff created by the impervious areas of the proposed improvements would be collected by a new storm drain inlet on the southeast property line and conveyed by a new 1.5-feet by 4-feet box culvert. The storm drain would run east to west under the breezeway of the proposed building and driveway cul-de-sac, and similar to the underdrain, runoff would discharge into the public storm drain system in the Caltrans right-of-way.

- An underground stormwater retention system would be developed underneath the driveway along the western property line. The system would have the capacity to contain the increased runoff volume created by the proposed improvements.

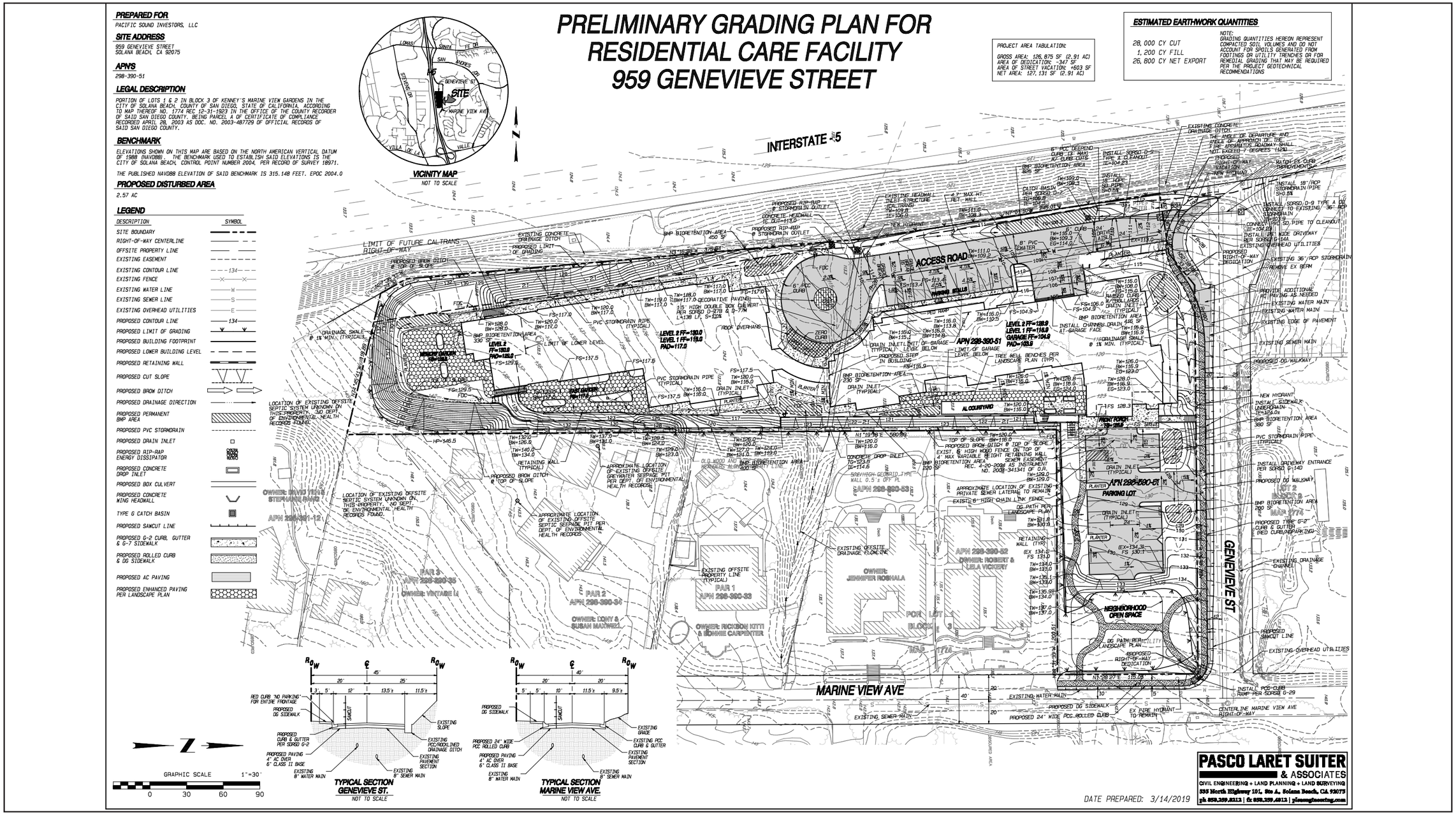
- The site would also include a number of landscaped drainage swales, catch basins, brow ditches, landscaped areas, and retention areas to retain and treat stormwater runoff.

Community Enhancements

During the site review and design process, City staff conducted a field review of the surrounding area and provided options for community enhancements for roadways in the vicinity of the project site (see Appendix 5.12-3 to this DEIR). Although not needed to mitigate impacts of the proposed project (see Section 5.12, *Transportation and Traffic*), the City Council may consider additional community enhancements to reduce vehicular speeds and improve walkability in the vicinity of the site to result in a beneficial impact. Some measures may include adding:

- Bike sharrows to Marine View Avenue and Highland Drive
- Striping, bike lanes, and buffers to Las Banderas Drive
- Bike sharrow markings, edge pavement markings, and buffered bike lane on Marine View Avenue at Solana Drive
- Pavement edge markings at the intersection of Highland Drive and Avocado Place
- Edge and bike sharrow markings
- Buffered bike lane with parking restrictions (see Appendix 5.12-3).

Figure 4-4 - Grading Plan
4. Project Description



0 90
Scale (Feet)

Source: Pasco Laret Suiter and Associates, March 14, 2019

4. Project Description

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Sales visits and vendor deliveries would mainly occur during typical business hours on weekdays. There could be up to half a dozen deliveries during a week for food, produce, linen, medical equipment, etc. Other vehicles may access the site for postal/package delivery, trash pick-up, and emergency services.

4.3.2 Specific Plan

The proposed project includes a Specific Plan that is subject to voter approval pursuant to Ordinance No.266. The specific plan would support development of a 99-bed residential senior care facility for the elderly with a maximum floor area ratio of 0.55. The proposed project, however, includes 96 beds within 85 assisted living units.

The DEIR evaluates the 99 beds maximum that would be allowed by the Specific Plan if approved. The facility would also require a license from the state of California. The proposed Specific Plan would not change the existing land use designation of Estate Residential or the zoning of ER-2, but would legislatively establish an overlay for the property that would apply to the Residential Care Facility and Neighborhood Open Space uses. The proposed Specific Plan would establish new site-specific zoning and development regulations, such as the permitted uses, including open space requirements and other uses allowed under the ER-2 zone; density, height, and parking limits; and development setbacks on the project site. The Specific Plan also describes required infrastructure, design guidelines, and development standards for implementing future site improvements. The final draft of the Solana Beach Senior Care Specific Plan is included in Appendix 4-1 of the DEIR.

4.4 INTENDED USES OF THE EIR

This Draft EIR is a project DEIR that examines the potential environmental impacts of the proposed project. This DEIR also addresses various actions by the City and others to approve and implement the proposed project. It is the intent of this DEIR to evaluate the environmental impacts of the proposed project, thereby enabling the City, other responsible agencies, and interested parties to be informed with respect to the requested entitlements. The anticipated approvals required for this project are:

Lead Agency	Action
Solana Beach Voters	Approval of Specific Plan by an affirmative public vote.
Solana Beach City Council	Certification of Final EIR; Adoption of a Specific Plan; Approval of a Development Review Permit and Structure Development Permit.
	Adopt Mitigation Monitoring and Reporting Program (MMRP)
Reviewing Agencies	**Action**
San Diego County Air Pollution Control District	Permit to Construct
San Diego Regional Water Quality Control Board	Storm Water Management Plan
California Coastal Commission	Issuance of a Coastal Development Permit

4.3.1.2 PROJECT CONSTRUCTION

The entire project site would be affected during construction activities. Construction of the proposed improvements would occur in one phase, projected to last between 12 to 14 months, starting in early 2021 Demolition of the existing structures would require about four days. The project site would be mass graded over a 2- to 4-week period. The finish grade of the site would require 2 to 4 weeks to complete, and trenching for all utilities would occur over approximately 2 weeks. Construction of the proposed building, surface parking lots, driveways, and landscaping would require 10 to 12 months to complete. Note that these construction times are only estimates for purposes of analysis and may change to reflect site conditions, operational requirements, weather, and other similar limits on construction. All construction activity would occur within the City's allowable construction hours (SBMC Section 7.34.100), between 7:00 AM and 7:00 PM, Monday through Friday, and between 8:00 AM and 7:00 PM on Saturday. There would be approximately 1 to 30 construction staff working on the site at a given time, depending on the phase of construction; demolition and grading would require fewer onsite workers than construction of the building.

Project implementation would require moving approximately 28,000 cubic yards of soil, with an estimated export of about 26,800 cubic yards to an approved fill site. If qualified, the proposed development would participate in the City's Sand Compatibility and Opportunistic Use Program (SCOUP), a comprehensive, long-term shoreline management program where all beach-quality material targeted for off-site export would be placed on City beaches for the dual purpose of shoreline protection and public recreational benefit.

The City requires a construction worksite traffic control plan, which would identify haul routes, hours of operation, protective devices, warning signs, and access. This plan would be finalized at the time of grading permit issuance. Construction equipment may include concrete and industrial saws, dozers, tractors, loaders, backhoes, graders, cement and mortar mixers, pavers, rollers, cranes, forklifts, generator sets, and welders.

4.3.1.3 PROJECT OPERATIONS

Operation of the proposed facility would be subject to regulation by the Community Care Licensing Division of the state Department of Social Services and would be in accordance with the required state license for assisted-living and memory-care-support facilities. The proposed Specific Plan would limit this license to an RCFE (Residential Care Facility for the Elderly) license, as defined by the State of California. The Specific Plan would allow for up to 99 beds. For a facility of this nature, the operational estimate is for a maximum of 65 staff (45 staff would be onsite at any one time) to provide administration, resident care, activities management, food services, linen services, and janitorial and maintenance services. The staff would work in shifts that begin morning, midafternoon, and evening; these shifts typically overlap briefly to ensure adequate staff support 24 hours per day, 7 days per week. Shift changes will be scheduled to avoid conflicting with peak visiting hours.

Designated visiting hours for residents would be established throughout the week, and holidays would likely bring greater numbers of visitors. It is anticipated that a small number of the assisted living residents may drive, but none of the memory care residents will drive. The proposed residential senior care facility would offer a shuttle bus/van program to transport residents to shops, doctor visits, and other off-site activities.

5. Environmental Analysis

Chapter 5 of the DEIR, which includes Sections 5.1 through 5.15, examines the environmental setting of the proposed project, analyzes its effects and the potential significance of its impacts, and where required, defines mitigation measures to be implemented that will reduce or avoid impacts. The residual environmental effects/impacts following the implementation of regulatory compliance and any mitigation measures are also identified in this analysis.

This chapter contains a separate section for each environmental area that was determined to warrant further analysis in the EIR. The scope of the EIR was refined based on the CEQA Initial Study and notice of preparation (NOP), which were published by the City in June 2017 (see Appendix 2-1), as well as through public and agency comments received during the NOP public review and comment period from June 23, 2017 to July 24, 2017 (see Appendix 2-2). The Initial Study prepared and circulated by the City determined that certain issues under various environmental topics would not be significantly affected by the project; therefore, these issues were excluded from further analysis in this EIR. Environmental issues and their corresponding sections are:

- 5.1 Aesthetics
- 5.2 Air Quality
- 5.3 Biological Resources
- 5.4 Cultural Resources
- 5.5 Geology and Soils
- 5.6 Greenhouse Gas Emissions
- 5.7 Hazards and Hazardous Materials
- 5.8 Hydrology and Water Quality
- 5.9 Land Use and Planning
- 5.10 Noise
- 5.11 Public Services
- 5.12 Transportation and Traffic
- 5.13 Tribal Cultural Resources
- 5.14 Utilities and Service Systems
- 5.15 Energy

5. Environmental Analysis

Organization of Environmental Analysis

To assist the reader with comparing information between environmental issues, each topical section is organized under the following headings:

- Environmental Setting
- Regulatory Setting
- Methodology
- Thresholds of Significance
- Potential Environmental Impacts
  - Mitigation Measures
  - Level of Significance After Mitigation
- Cumulative Impacts
- References

Impact Terminology

The thresholds of significance criteria are identified before the impact discussion, under the heading, "Thresholds of Significance." These thresholds are based on City standards and Appendix G of the CEQA Guidelines. For each impact, a level of significance is determined that falls in one of four classifications:

- A designation of "no impact" is given when no adverse changes in the environment are expected.
- A "less than significant impact" would cause no substantial adverse change in the environment.
- A "less than significant impact with mitigation incorporated" means a substantial adverse impact on the environment would be reduced or avoided through implementation of mitigation measures.
- A "significant and unavoidable impact" would cause a substantial adverse effect on the environment, and feasible mitigation measures are either not available or would not reduce the impact to less than significant.

For each impact identified as potentially significant, the DEIR provides mitigation measures to reduce, eliminate, or avoid the significant adverse effect. Whether the mitigation measures would reduce the impact to a less than significant level is stated in the EIR.

5.1 AESTHETICS

This section of the Draft Environmental Impact Report (DEIR) discusses the potential impacts to the visual and aesthetic character of the project site and its surroundings associated with implementation of the proposed Solana Beach Senior Care Specific Plan project. This section includes (1) a qualitative discussion of the existing aesthetic characteristics of the environment that could be potentially degraded by the project's implementation and (2) an analysis of the consistency of the proposed project with relevant visual and aesthetic resource policies. The information presented in this section is based on field reconnaissance, review of the project site and aerial photographs, and graphic representation of the project as presented in the proposed Specific Plan.

CEQA is concerned with the potential impacts of a proposed project on public views, not private views. However, a project's potential effects on private views are addressed under the View Assessment provisions of Chapter 17.63 of the City's Municipal Code, as part of the City's Structure Development Permit (SDP) process. Therefore, this section of the EIR is focused on the required aesthetic analyses outlined in CEQA Appendix G and not the City's SDP permit process.

The assessment of aesthetic impacts is subjective by nature. Aesthetics generally refer to the identification of visual resources and the quality of what can be seen, as well as an overall visual perception of the environment. This analysis attempts to identify and objectively examine factors that contribute to the perception of aesthetic impacts. Potential aesthetic impacts can be evaluated by considering the proposed landform alteration, structural/building setbacks, scale, massing, and landscaping features associated with the design of the proposed project.

5.1.1 Environmental Setting

5.1.1.1 VISUAL CHARACTER

The project site is an infill development project located within an urbanized area of the City with single family residences to the south and east, commercial uses to the north, and Interstate 5 (I-5) to the west. The project site is 2.91 acres in size and is roughly L-shaped, and is bounded by I-5 to the west, Genevieve Street along the northern site boundary, and Marine View Avenue and residences forming the eastern boundary.

As shown in Figure 3-4, *Site Photographs*, the project site has been previously developed and disturbed with a few vacant structures remaining onsite. The onsite vegetation is generally weedy, with various grass, shrub, and ornamental palm tree species. Additionally, dumped debris such as tires, tools, paints and cleaning products, cut trees, household trash, etc. are visible on the site. Figure 3-5, *Surrounding Land Uses*, shows the uses surrounding the project site.

Landform and Topography

The site sits mostly below the grade of the surrounding land uses, and onsite elevations range from approximately 110 feet above mean sea level (amsl) at the northwest corner to 140 feet amsl along the eastern perimeter of the site. A slope leading to I-5 forms the western boundary of the property, with the freeway elevation at approximately 125 amsl. The southern end of the project site is approximately 10 feet above I-5,

but the site elevation at the northern boundary is approximately 10 feet lower than the grade of the adjacent I-5.

Scenic Vistas and Corridors

The City of Solana Beach Local Coastal Program (LCP) identifies City-wide view corridors to establish key public viewsheds in the City. The City has also established Scenic Overlay Zones to control development patterns in areas that have unique or aesthetically pleasing viewsheds. The project site is not in a City-wide view corridor or a Scenic Overlay Zone; the closest established City-wide view corridors are approximately 0.5 mile west of the project site.

5.1.1.2 LIGHT AND GLARE

There are no existing operational light sources onsite. Existing light sources near the site include exterior and interior building lights, roadway lights on Genevieve Street and I-5, and vehicle lights on roadways including I-5.

5.1.2 Regulatory Setting

5.1.2.1 LOCAL

Local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

Solana Beach General Plan

The General Plan provides policies and objectives to protect and preserve sensitive open space areas and viewsheds.

Goal 3.2: To Protect and Enhance Sensitive Open Space Areas and Viewsheds.

- **Policy 2.a:** The city shall enact a hillside development ordinance which contains development standards to: 1) maintain the natural visual character of the hillsides to the maximum feasible extent, 2) integrate architecture and landscaping into the hillside setting, 3) preserve significant visual and environmental elements, 4) minimize grading impacts, 5) restrict development on slopes of greater than 25 percent, 6) preserve prominent ridgelines, 7) require the contouring of manufactured slopes to blend with natural slopes, 8) encourage the use of innovative structural designs which adapt to the natural topography, 9) discourage "stair-stepping" of building pads, 10) require the blending of colors and materials with the hillside environment, and 11) provide for the planting of slopes with fire-retardant, drought-tolerant materials.

- **Policy 3.a:** The city shall require new developments to be subjected to visual impact analyses where potential impacts upon sensitive locations are identified.

- **Policy 3.b:** The city shall require that new structures and improvements be integrated with the surrounding environment to the greatest possible extent.

- **Policy 3.c:** The city shall enforce its adopted design guidelines as specified in the community design element of this general plan.
- **Policy 3.d:** The city shall encourage the preservation of private views, including policies for tree trimming and removal.

City of Solana Beach Municipal Code

The City of Solana Beach Municipal Code (SBMC) identifies land use categories, development standards, and other general provisions that ensure consistency between the General Plan and proposed development projects. The following provisions from the SBMC help minimize visual and light and glare impacts associated with new development projects and are relevant to the proposed project.

SBMC 17.60.060 Exterior Lighting Regulations.

The project site is in the Dark Sky Overlay Area regulated by SBMC Section 17.60.060. Section 17.60.060(C) states, in part:

> C. Dark Sky Areas. The following additional regulations are applicable only to those areas designated as "Dark Sky" areas on Map Drawing 17.16.060-A, on file with the city clerk and the department of community development:
>
> 1. No new street lighting standards shall be installed, unless the city engineer recommends and the city council, after a noticed public hearing, approves such standard(s) upon finding that such lighting is necessary to protect the public safety.
>
> 2. The lighting of subdivision entrances, entrance signs and residential identification signs is prohibited. Security lighting and external illumination of building address signs are exempted.
>
> 3. The outside illumination for aesthetic or dramatic purposes of any building and/or surrounding landscape, including environmentally sensitive habitat areas (public or private) is prohibited.
>
> 4. Area lighting for any purpose, public or private, is prohibited, except where a temporary use permit has been issued by the director of community development for a special event.
>
> 5. The lighting of outdoor commercial parking areas shall be prohibited between 9:00 p.m. and dawn. Security lights may be exempted pursuant to a conditional use permit issued by the director of community development.
>
> 6. Commercial wall signs or monument signs (within the "dark sky area") which are visible from a residentially zoned area immediately adjacent to the commercial premises shall not be internally lighted. External illumination is permitted subject to the provisions of subsection B of this section. Internally illuminated signs which are

not visible from residentially zoned areas immediately adjacent to the commercial premises shall be permitted.

The SBMC also regulates the design of exterior lighting by mandating horizontal cutoff for all lights, including streetlights, and limiting the amount of light trespass onto adjacent property to 0.02 foot-candles.

SBMC 17.63 View Assessment.

SBMC 17.63 regulates new development within the City in order to protect the scenic value of hillsides, canyons, and natural geographic features of the City. The intent of SBMC 17.63 is to:

A. Provide a process for the view assessment committee to review all feasible solutions for development and choose that alternative which provides the best balance between the owner's desire to develop his/her property in accordance with applicable regulations and the neighbor's desire to protect his/her view. This chapter does not create a right to an unobstructed view.

B. Preserve the existing character of established residential neighborhoods, and the desire to protect, where feasible, public and private views, aesthetics, and other property values in a manner which is compatible with reasonable development of property.

C. Implement those sections of the general plan land use element which call for the adoption of ordinances to encourage the preservation of private views where feasible.

D. Promote the health, safety and general welfare of the public by preventing the needless destruction and impairment of these limited, unique, and irreplaceable views for this and future generations.

E. Provide a public notification process to encourage the resolution of view impairment issues by those property owners directly affected without further involvement of the City.

Further, the Structure Development Permit process, which is to provide a public notification process to encourage the resolution of potential view impairment issues, is applicable to all zones within the entire City. An SDP is required to be obtained if anyone in the City proposes to build a new structure or add on to an existing structure that would be more than 16 feet in height above existing grade.

The View Assessment Commission uses SBMC 17.63 and the City Council's adopted "guidelines and toolkit" to review all feasible solutions for development, and selects the alternative that would provide the best balance between the owner's desire to develop his/her property in accordance with applicable regulations and the neighbor's desire to protect their private view.

Local Coastal Program

The Local Coastal Program identifies scenic and visual resources in Solana Beach and establishes policies pertaining to the maintenance, restoration, and protection of scenic and visual resources. The following

provisions from the Local Coastal Program help minimize visual and scenic impacts with new development projects and are relevant to the proposed project.

- **Policy 6.1:** The City of Solana Beach contains scenic resources of local, regional and national importance. The scenic and visual qualities of these areas shall be protected and where feasible, enhanced.

- **Policy 6.4:** Locations along public roads, railways, trails, parklands and beaches that offer views of scenic resources are considered public viewing areas. Existing public roads where there are major views of the ocean and other scenic resources are considered Scenic Roads and include:
  - Highway 101/Pacific Coast Highway and Railway Corridor
  - I-5
  - Lomas Santa Fe Drive

  Public views to scenic resources from Scenic Roads shall also be protected.

- **Policy 6.5:** Regulate development in areas with high scenic value to preserve and enhance the scenic resources within and adjacent to such areas to the extent feasible, as well as, to assure exclusion of incompatible uses and structures.

- **Policy 6.10:** New development shall be sited and designed to minimize adverse impacts on scenic resources visible from scenic roads or major public viewing areas. If there is no feasible building site location on the proposed project site where development would not be visible then the development shall be sited and designed to minimize impacts on scenic areas visible from Scenic Roads or major public viewing areas, through measures including, but not limited to, siting development in the least visible portion of the site, breaking up the mass of new structures, designing structures to blend into the natural hillside setting, restricting the building maximum size, reducing maximum height standards, clustering development, minimizing grading, incorporating landscape elements, and where appropriate berming.

- **Policy 6.12:** All new development shall be sited and designed to minimize alteration of natural landforms by:
  - Conforming to the natural topography
  - Preventing substantial grading or reconfiguration of the project site
  - Eliminating flat building pads on slopes and utilizing split level or stepped-pad designs
  - Requiring that man-made contours mimic the natural contours to and blend with the existing terrain of the site and surrounding area
  - Minimize grading outside of the building footprint
  - Clustering structures to minimize site disturbance and to minimize development area
  - Minimizing height and length of cut and fill slopes
  - Minimizing the height and length of retaining walls
  - Cut and fill operations may be balanced onsite, where the grading does not substantially alter the existing topography and blends with the surrounding area

- Export of cut material may be required to preserve the natural topography

- **Policy 6.13:** New development, including a building pad, if provided, shall be sited on the flattest area of the project site, except where there is an alternative location that would be more protective of scenic resources or ESHA.

- **Policy 6.14:** All new structures shall be sited and designed to minimize impacts to scenic resources by:
  - Ensuring visual compatibility with the character of surrounding areas
  - Avoiding large cantilevers or under stories
  - Setting back higher elements of the structure toward the center or uphill portion of the building

- **Policy 6.19:** The removal of native vegetation shall be minimized and the replacement vegetation and landscaping shall be compatible with the vegetation of the designated area. Landscaping and plantings shall be used to the maximum extent practicable to screen roads and utilities. Landscaping and plantings shall be designed so that they do not obstruct significant views, either when installed, or when they reach mature growth.

- **Policy 6.23:** The interior and exterior lighting of the buildings and structures and the lighting of signs, roads, and parking areas shall be compatible with the lighting permitted in the designated area.

5.1.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

AE-1 Have a substantial adverse effect on a scenic vista.

AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

AE-3 Substantially degrade the existing visual character or quality of the site and its surroundings.

AE-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The Initial Study, included as Appendix 2-1 to this EIR, substantiates that impacts associated with the following threshold would be less than significant:

- Threshold AE-1

Therefore, this impact is not addressed in the following DEIR analysis.

5.1.4 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts associated with Project implementation. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.1-1: Would project development substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? [Threshold AE-2] [Less than significant]

Impact Analysis: The project site is visible from I-5; the roadway is designated as a Scenic Roadway in the City of Solana Beach's Local Coastal Program Land Use Plan (LUP). Scenic resources identified in the LUP visible from I-5 include the Pacific Ocean and lagoons (San Elijo Lagoon is next to the north City boundary). Beyond I-5, no other scenic resources identified in the LUP are present on, or visible from the project site. The site is only visible from the I-5 to the east due to the elevation of the freeway above the project site. Project development would not adversely affect scenic roadways such as I-5 or scenic resources, and impacts would be less than significant.

Impact 5.1-2: Would project development substantially degrade the existing visual character or quality of the site and its surroundings? [Threshold AE-3] [Less than significant]

Impact Analysis: Project development would change the appearance of the site from a previously developed and disturbed vacant site to a two-story assisted living facility with landscaping, parking, driveways, and outdoor recreation areas. The top of the building would be approximately 11 feet above ground level at the south end of the building, and approximately 25 feet above ground level at the north end of the building; three elevator pitches would be approximately 26 to 31 feet at their peak. Because of the adjacent topography, the existing homes nearby would have views of the second floor of the building and would be able to look over the roof of the building. The proposed building would block views of I-5 from some of the rear yards of the existing homes located east and south of the site.

Interstate 5 and the two-story residences east of the site, on the east and west sides of Marine View Avenue, are generally two-stories and are located on land that sits at a higher elevation than the provide views above the project site. Interstate 5 (west of the site) is also at a higher elevation relative to the project site. Views of the site from most of Marine View Avenue, directly east of the site, are blocked by the existing houses located between the site and Marine View Avenue. Public views that would be potentially impacted would be those from I-5, Genevieve Street, and from public roads that bound the project site. It should be noted that although an adverse effect on scenic views enjoyed by the public is significant, obstruction of private views would not constitute a significant impact under CEQA (*Ocean View Estates Homeowners Assn v. Montecito Water Dist.* (2004) 116 CA4th 396, 402). Potential effects on private views are addressed under the View Assessment provisions of Chapter 17.63 of the City's Municipal Code, as part of the City's Structure Development Permit process.

Visual simulations were prepared by the applicant to illustrate how views onto the site would change due to as a result of construction of the proposed project. Figure 5.1-1, *Visual Simulation – Westward View with Building*

Only, provides a view from the northeast corner of the project site looking across the planned public open space toward I-5 with the residential senior care facility only. The proposed building is visible as a low earth-toned structure, similar to nearby residences, and is visually lower than the adjacent home. The proposed building height at this viewpoint is 25 feet tall. Figure 5.1-2, *Visual Simulation – Westward View at Year One*, illustrates the view of landscape improvements for the public area at the first year of installation with walking paths along both Genevieve Street and Marine View Avenue. Figure 5.1-3, *Visual Simulation – Westward View at Project Buildout*, represents the public area landscaping at maturity. As shown in Figures 5.1-1 through 5.1-3, the proposed improvements would have similar building massing, color tone, and surrounding landscaping; the improvements would be visually consistent with the surrounding development.

Figure 5.1-4, *Eastward View from Ida Avenue*, shows the view from an elevation above Ida Avenue looking east across I-5 at the approximate level of cars on the freeway.[1] Much of the proposed building will be blocked by the elevated freeway, with only the top floor being visible for much of the length of the property. Building materials and colors are proposed to be similar to the office building at the far left in Figure 5.1-4, and landscaping is shown adjacent to the proposed building.

There are several ornamental trees on the project site, including some palm trees. Most of the trees on the project site are near the vacant house or next to the Caltrans right-of-way boundary. Construction of the project would require the removal of all existing vegetation on the project site; no trees would be removed from the City's public right-of-way that are protected by the City of Solana Beach's Streets, Sidewalks and Public Places Ordinance (Chapter 11.24, Trees and Shrubs). The proposed landscape plan (included as Appendix 5.1-1 to this DEIR) shows that the project would plant trees, shrubs, groundcover, provide paths, seating, lighting and amenities for the residents of the residential senior care facility. In addition, the vacant area on the southwest corner of the intersection of Genevieve Street and Marine View Avenue will be landscaped as community open space area (see Figures 5.1-1 through 5.1-3). The existing site is not well maintained and is overgrown. The proposed project will involve ground clearing and grading and will remove all existing vegetation. The project will include new landscaping consistent with City landscaping standards that will be maintained as part of the proposed project operations.

The existing house is vacant and, although built in 1957, is not considered historically significant (see Section 5.4, *Cultural Resources*, of this DEIR). There is a slope on both the eastern and western boundaries of the site, however there are no rock outcroppings or unique geological features, as shown in Figure 5.5-2, *Proposed Slopes*. The existing site, with three vacant buildings—a house, greenhouse, and shed—does not generally contribute to the positive aesthetic character of the surrounding area. While project development would change the visual character of the site, development improve the visual character of the site and its surroundings, and impacts would be less than significant.

[1] Because of the volume and speed of traffic, taking photographs from I-5 was considered hazardous. Because of the elevated freeway at this location, the proposed building will not be visible from Ida Avenue.

Figure 5.1-1 - Visual Simulation - Westward View with Building Only

5. Environmental Analysis

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Figure 5.1-2 - Visual Simulation - Westward View in Year One

5. Environmental Analysis

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Figure 5.1-3 - Visual Simulation - Westard View at Project Buildout

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Figure 5.1-4 - Eastward View from Ida Avenue

5. Environmental Analysis

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Impact 5.1-3: Would the proposed project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? [Threshold AE-4] [Less than significant]

Impact Analysis: The existing buildings are vacant, and there are no light sources on the project site. The existing lighting on a power pole is inactive. Light sources near the project site include exterior and interior building lights associated with single family homes to the east and the Timber office building to the north, a street light on a power pole on the south side of Genevieve Street along the project frontage, parking lot lights in the Timber Office Building, and vehicle lights on I-5. Project development would add interior and exterior building lights, parking lot lights, security lighting, and walkway lights to the site. All new exterior lights, such as those used for security purposes near the building and parking areas, would be shielded by horizontal cutoff to eliminate light directed above the horizontal plane as a condition of approval (SBMC 17.60.060).

Development of the proposed project would eliminate the existing streetlight on Genevieve Street and the light on the project site. Exterior lighting is required to comply with the SBMC, which allows less than 0.02 foot-candle spillage of light from the project onto adjacent properties. The SBMC 17.60.060 prohibits exterior lighting between 9:00 PM and dawn. The proposed project does not include a lighting plan for the building or adjacent areas, but it does include a provision requiring compliance with the Dark Sky provisions of the municipal code.

Windows in the building will exhibit light during the nighttime even with blinds or curtains closed. Lights on the ground floor of the structure will be shielded from view from I-5 because the project is roughly 10 feet below the level of the roadway. Similarly, the homes to the east are higher than the project site and are unlikely to see the ground-floor lighting. The second-story lighting will be visible to both travelers along I-5 and the adjacent homes. The interior lighting will shine out of the windows similar to other lights in homes and offices along the I-5 corridor. From the existing homes, the second floor of the building will block some of the lights associated with vehicles along I-5.

As proposed, the project would not result in the generation of light or glare that would adversely affect day or nighttime views in the area, and this impact is considered less than significant.

5.1.5 Cumulative Impacts

The cumulative aesthetic setting for the proposed project is the area east of I-5 from Lomas Santa Fe Drive to Via De La Valle, as this area is characterized as having similar visual character and consists of a mix of commercial, office, and residential buildings, generally one to three stories in height. Architectural styles in this area have concrete or wood façades, with numerous windows that face I-5. The residential homes are one and two stories in height, with windows, tile roofs, and stucco facades, and they occupy much of the parcel in terms of building massing and percentage of lot coverage. The proposed project is similar to the adjacent professional offices to the north in that the building itself will occupy most of the site, with a parking area, community open space area and, access drive and landscaping also provided onsite.

The proposed project would develop a previously developed, now vacant parcel along the I-5 corridor. The parcel is surrounded by existing urban development—residential to the east, professional office to the north, and the interstate highway to the west. The proposed project is an infill project which will add to the number

of buildings along the I-5 corridor, and it is similar in lot coverage to the Timber office building to the north. Because of the surrounding existing development, and the unique nature of the site adjacent to I-5 with a single access point, there is no potential for additional growth to occur near the project site as a result of the proposed project.

Improvements to I-5 will alter the western boundary of the site and bring the freeway closer to the proposed project site because the freeway will be widened. The proposed project has been designed to accommodate the anticipated future widening/changes in roadway alignment and storm drainage improvements necessary to support the freeway improvements. The proposed project will not impact the planned I-5 improvements but rather has been designed in coordination with Caltrans.

Most of the proposed project would not be visible to either the travelling public or the adjacent homes because of existing topography. The architectural features that are visible will be similar to existing commercial buildings along the I-5 corridor and will use materials similar (stucco, tile, glass, wood, concrete) to the buildings in the area. Because most of the building will be below the existing grade and therefore not visible from surrounding properties or roadways, and because building materials will be similar to other buildings in the area, this impact is not considered cumulatively considerable. Additionally, future projects—including those cumulative projects identified in Table 3-1, *Related Cumulative Projects*—would be subject to the requirements of SBMC Section 17.63, View Assessment, to determine individual project impacts on community character and visual quality to prevent cumulatively considerable impacts to visual quality and character within the region.

Design of the proposed project, along with compliance with the City's municipal code requirements (Section 17.63 [View Assessment Provisions] and Section 17.60.060 [Exterior Lighting Regulations]) and development standards will ensure that the increase in light and glare is less than significant. Light from the ground floor, and exterior of the project, will not be visible from I-5 or the adjacent homes due to existing topography. Light from the second floor of the building will be visible, but will be similar to the night light emanating from other residential and commercial windows along the I-5 corridor in terms of brightness and color. As there are existing buildings that transmit light through windows surrounding the proposed project, the impact is not considered cumulatively significant. Additionally, future projects, including the cumulative projects identified in Table 3-1, *Related Cumulative Projects*, would be subject to the requirements of Section 17.60.060 to assess light and glare impacts, and other future projects within the Dark Sky Overlay zone would also need to comply with lighting requirements of the SBMC.

5.1.6 References

Solana Beach, City of. 2013, February 27. "Scenic and Visual Resources." Chapter 6 of Solana Beach Local Coastal Program Land Use Plan. http://solana-beach.hdso.net/LCPLUP/LCPLUP-Chapter6.pdf.

———. 2014, November 19. City of Solana Beach General Plan.

———. 2016, January 27. Exterior Lighting Regulations. Section 17.60.060 of Solana Beach Municipal Code. http://www.codepublishing.com/CA/SolanaBeach/#!/SolanaBeach17/SolanaBeach1760.html#17.60.060.

_____. 2018. Elections. https://www.ci.solana-beach.ca.us/?SEC=801712E0-D2B7-45EF-91AC-4896EFD95DA1.

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5.2 AIR QUALITY

The analysis in this section is based in part on the following technical reports:

- *Air Quality Assessment,* Ldn Consulting, August 7, 2017.
- *Solana Beach Senior Housing Health Risk Screening Letter*, Ldn Consulting, August 8, 2017.

Complete copies of these studies are included in the technical Appendices to this Draft EIR (Appendix 5.2-1 and Appendix 5.2-2, respectively).

5.2.1 Environmental Setting

5.2.1.1 SAN DIEGO AIR BASIN

The San Diego Air Basin (SDAB) includes the entire County of San Diego. Emissions sources are primarily in the western region. The climate in the project area is dominated by the semi-permanent high pressure center over the Pacific Ocean near Hawaii. This high-pressure center creates cool summers, mild winters, and infrequent rainfall, and drives the cool, daytime breezes, maintaining a comfortable level of humidity and ample sunshine.

Inversions

The high-pressure system results in strong, high-altitude temperature inversions because of warm descending air. The subsidence inversions generally occur during the warmer months (May through October) as descending air from the Pacific high-pressure cell comes into contact with cool marine air. The inversion layer in the SDAB is approximately 2,000 feet above mean sea level (alms) between May and October. During the winter months (November through April), the temperature inversion rises to approximately 3,000 feet amsl. Inversion layers are important to local air quality because they inhibit the dispersion of pollutants, resulting in a temporary degradation of air quality. On days without inversions or on days of winds averaging over 15 mph, smog potential is greatly reduced in the SDAB.

Temperature and Precipitation

The annual average temperature varies little throughout the 4,225-square-mile basin. The overall climate is Mediterranean, with average temperatures reaching 92°F in the summer and 38°F in the winter. High temperatures are often accompanied by very low relative humidity (often less than 20 percent). The Western Regional Climate Center maintains historical climate information for the western US. Its closest meteorological monitoring station to the planning area is the Lockwood Mesa, California, Monitoring Station (ID No. 045023).

Rainfall is seasonally and annually highly variable. The total average annual precipitation is 9.58 inches as measured by the Western Regional Climate Center, and the majority of precipitation falls between November and April (WRCC 2017).

Wind

Wind patterns across the south coastal region are characterized by westerly onshore winds during the day and occasional easterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season. The offshore flow is less persistent in the winter when occasional hot, dry Santa Ana winds blow from the east with great force.

Air Pollutants of Concern

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_X), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that AAQS have been established for them. VOC and NO_X are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

Each of the primary and secondary criteria air pollutants and its known health effects is described here.

- **Carbon Monoxide** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005; USEPA 2017). The SDAB is designated in attainment of CO criteria levels under the California and National AAQS (SDAPCD 2017).

- **Volatile Organic Compounds** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (SCAQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O_3, SDAPCD has established a significance threshold (see Section 5.2.4.1, *San Diego Air Pollution Control District Thresholds*).

- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_X produced by combustion is NO, but NO reacts quickly with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant and more injurious than NO in equal concentrations. At atmospheric

concentrations, however, NO_2 is only potentially irritating. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO_2 exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO_2 exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO_2 concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (SCAQMD 2005; USEPA 2017). The SDAB is designated an attainment area for NO_2 under the National and California AAQS (SDAPCD 2017).

- **Sulfur Dioxide** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO_2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing.) At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (SCAQMD 2005; USEPA 2017). The SDAB is designated attainment for SO_2 under the California and National AAQS (SDAPCD 2017).

- **Suspended Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (SCAQMD 2005). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), have human health implications, because ultrafine particulates' toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the EPA or CARB has yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified

by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[1] environmental damage,[2] and aesthetic damage[3] (SCAQMD 2005; USEPA 2017). The SDAB is a nonattainment area for $PM_{2.5}$ under the California AAQS and unclassifiable under the National AAQS. For PM_{10}, the SDAB is also designated a nonattainment area under the California AAQS and an attainment area under the National AAQS (SDAPCD 2017).

- **Ozone** is commonly referred to as "smog" and is a gas that is formed when VOCs and NO_X, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (SCAQMD 2005; USEPA 2017). The SDAB is designated nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (SDAPCD 2017).

- **Lead** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (SCAQMD 2005; USEPA 2017). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted stricter lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[4] The SDAB is designated as in attainment under both the

[1] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.
[2] Particulate matter can be carried over long distances by wind and settle on ground or water, making lakes and streams acidic, changing the nutrient balance in coastal waters and large river basins, depleting the nutrients in soil, damaging sensitive forests and farm crops, and affecting the diversity of ecosystems.
[3] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.
[4] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the South Coast Air Basin, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa

California and National AAQS (SDAPCD 2017). Because emissions of lead are found only in projects that are permitted by SDAPCD, lead is not an air quality of concern for the proposed project.

Toxic Air Contaminants

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

Community Risk

To reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when siting sensitive receptors near existing pollution sources. CARB's recommendations were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity substantially increases exposure and the potential for adverse health effects. Three carcinogenic TACs constitute the majority of the known health risks from motor vehicle traffic—DPM from trucks and benzene and 1,3 butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB's minimum distance separations:

- **Freeways and High-Traffic Roads.** Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
- **Distribution Centers.** Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units [TRUs] per day, or where TRU unit operations exceed 300 hours per week).
- **Rail Yards.** Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.

Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2012).

- **Ports.** Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones.
- **Refineries.** Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
- **Chrome Platers.** Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
- **Dry Cleaners Using Perchloroethylene.** Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
- **Gasoline Dispensing Facilities.** Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities. (CARB 2005)

5.2.1.2 SDAB NONATTAINMENT AREAS

The San Diego Regional Air Quality Strategy (RAQS) provides the framework for the SDAB to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. Severity classifications for ozone nonattainment range in magnitude: marginal, moderate, serious, severe, and extreme. The following are descriptions of the attainment classifications; the attainment status for the SDAB is in Table 5.2-1, *Attainment Status of Criteria Pollutants in the San Diego Air Basin*:

- ***Unclassified:*** a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- ***Attainment:*** a pollutant is in attainment if the Ambient Air Quality Standards (AAQS) for that pollutant was not violated at any site in the area during a three-year period.
- ***Nonattainment:*** a pollutant is in nonattainment if there was at least one violation of a state AAQS for that pollutant in the area.
- ***Nonattainment/Transitional:*** a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

Table 5.2-1 Attainment Status of Criteria Pollutants in the San Diego Air Basin

Pollutant	California	National
Ozone – 1-hour	Nonattainment	Revoked
Ozone – 8-hour	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Unclassified[1]
$PM_{2.5}$	Nonattainment[2]	Attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
All others	Attainment/Unclassified	No federal standard

Source: SDAPCD 2017.
[1] At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.
[2] The SDAB is designated as nonattainment for fine particulate matter due to the 8-hour ozone nonattainment designation. $PM_{2.5}$ is precursor to ozone formation.

5.2.1.3 EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality, historical trends, and projections in the vicinity of the proposed project site are best documented by measurements taken by the San Diego Air Pollution Control District (SDAPCD). There are three SDAPCD air quality monitoring stations near the project site: the Del Mar, Escondido, and Camp Pendleton monitoring stations, which monitor O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$. The most current five years of data monitored at these stations are in Table 5.2-2, *Ambient Air Quality Monitoring Summary*.

Table 5.2-2 Ambient Air Quality Monitoring Summary

Pollutant	Closest Recorded Ambient Monitoring Station	Distance to the Project Site (miles)	Averaging Time	California AAQS	National AAQS	2012	2013	2014
O_3 (ppm)	Del Mar	2.5	1 hour	0.09 ppm	—	0.09	0.08	0.10
		2.5	8 hour	0.070 ppm	0.075 ppm	0.08	0.07	0.09
CO (µg/m^3)	Escondido	14	8 hour	9 ppm	9 ppm	3.8	2.6	3.1
PM_{10} (µg/m^3)		14	24 hour	50 µg/m3	150 µg/m3	33	80	43
$PM_{2.5}$ (µg/m^3)		17	24 hour		35 µg/m3	N/A	34.2	26.9
NO_2 (ppm)	Camp Pendleton	17	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.007	0.007	0.007
NO_2 (ppm)		17	1 hour	0.18 ppm	—	0.061	0.081	0.060

5.2.1.4 SENSITIVE RECEPTORS

Some land uses are considered more sensitive to the effects of air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include residential senior care facilities (such as the proposed project), hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

The nearest offsite sensitive receptors to the site include residences to the east and south and office uses to the north. Additionally, the project would introduce senior residents to the site, who are typically more sensitive to air pollution/air quality impacts.

5.2.2 Regulatory Setting

AAQS have been adopted and are periodically updated at state and federal levels for criteria air pollutants. In addition, both the state and federal governments regulate the release of toxic air contaminants (TACs). The planning area is within the SDAB. Land use is subject to the rules and regulations imposed by SDAPCD, the California AAQS adopted by the California Air Resources Board (CARB), and National AAQS adopted by the United States Environmental Protection Agency (EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

5.2.2.1 FEDERAL AND STATE

Ambient Air Quality Standards

The Clean Air Act was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments are the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollutants. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before suffering adverse effects.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.2-3, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Table 5.2-3 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm[2]	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.

5. Environmental Analysis
AIR QUALITY

Table 5.2-3 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	*	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	*	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	*	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.
Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
1 California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California AAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2 National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
4 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were maintained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were maintained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
5 On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

Tanner Air Toxics Act and Air Toxics Hots Information and Assessment Act

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and to reduce exposure to them. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health" (17 CCR § 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 U.S. Code § 7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate "toxics best available control technology" to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10, § 2485**, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **13 CCR Chapter 10, § 2480**, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- **13 CCR § 2477 and Article 8**, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

5.2.2.2 REGIONAL

Air Quality Management Plan

To ensure continued progress toward clean air and to comply with state and federal requirements, the SDAPCD in conjunction with CARB and San Diego Association of Governments, prepared the San Diego Regional Air Quality Strategy (2016 RAQS). The 2016 RAQS employs up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

Regional RAQS were first adopted for the SDAB in 1992. The first, second, third, fourth, fifth, and sixth RAQS revisions were in 1995, 1998, 2001, 2004, 2009, and 2016. The current 2016 Triennial Revision of the RAQS, adopted in December 2016, is an update of the 2009 RAQS. Overall, the amended and new rules considered in this RAQS Revision are estimated to reduce NO_X by approximately 1.2 tons per day and VOC by approximately 0.3 ton per day. The 2016 RAQS provides additional reductions of ozone precursor emissions compared to the 2009 RAQS and is therefore more effective in improving air quality.

The SDAPCD is required to submit separate attainment plans to demonstrate to the EPA how the San Diego Air Basin will achieve compliance with the Federal Clean Air Act for nonattainment designations. These plans include:

- 2016 Attainment Plan: 8-Hour Ozone (2008 Standard)
- 2012 Maintenance Plan: 8-Hour Ozone (1997 Standard)
- 2007 Attainment Plan: 8-Hour Ozone (1997 Standard)
- 2005 Wildfire Natural Events Action Plan
- 2002 Maintenance Plan: 1-Hour Ozone (1979 Standard)

SDAPCD Rules and Regulations

All projects are subject to SDAPCD rules and regulations in effect at the time of activity, including:

- **Rule 51, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that 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.

- **Rule 55, Fugitive Dust Control.** This rule is intended to reduce the amount of fugitive emitted from commercial construction or demolition activities. Specifically, this rule limits the amount of visible dust emissions discharged into the atmosphere beyond the property line and also imposes requirements to minimize visible roadway dust associated with transport trucks, erosion, or track-out/carry-out.

- **Rule 67.0.1, Architectural Coatings.** This rule limits the VOC content of architectural coatings used on projects in the SDAPCD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the SDAPCD must comply with the current VOC standards set in this rule.

5.2.2.3 LOCAL

Solana Beach General Plan

The Circulation Element of the General Plan provides goals and policies that aim to reduce transportation-related air quality impacts.

Goal 8.0: Safe Alternatives to Motorized Transportation That Meet the Needs of All City Residents, Reduce Vehicle Trips, Save Energy, and Improve Air Quality.

- **Policy 8.1:** Encourage businesses to provide flexible work schedules for employees.
- **Policy 8.2:** Encourage employers to offer shared commute programs and/or incentives for employees to use transit.
- **Policy 8.3:** Require new or expanded uses to provide adequate bicycle parking and support facilities.
- **Policy 8.4:** Encourage carpooling and other shred commute programs.
- **Policy 8.5:** Encourage the use of alternative transportation modes.
- **Policy 8.7:** Seek opportunities to reduce vehicle trips before requiring roadway improvements.

Goal 11.0. An Adequate Supply of Private Off-Street and Public Parking to Meet the Needs of Residents and Visitors to the City in a way that Balances Economic Development, Livable Neighborhoods, Environmental Health, and Public Safety.

- **Policy 11.1:** In general, maintain parking requirements for specified land uses, but allow for a reduction in parking requirements for existing buildings that change uses and cannot accommodate current parking standards without significantly altering the site. In determining what constitutes sufficient parking under these circumstances, the City may take into consideration: 1) the overall effectiveness of the circulation system as a whole (i.e., pedestrians, bicyclists, motorized vehicles, etc.); 2) the particular needs of a specific location and/or project; 3) the parking generation demand of the proposed use; 4) the availability of public parking spaces; and 5) the ability of the project to aid in the reduction of personal vehicle use and the corresponding reduction in air pollution, energy consumption, greenhouse gas emissions, and other environmental effects.

City of Solana Beach Municipal Code

SBMC 6.20.010 Purpose and Intent

Chapter 6.20, *Solid Waste Collection and Disposal,* outlines the importance of storing and collecting solid waste so as not to create a public nuisance.

The City Council hereby finds and determines that the storage, accumulation, collection, and disposal of garbage, trash, litter, rubbish, debris, and other discarded matter, goods and materials is a matter of great public

concern, in that improper control of such matters creates a public nuisance, can lead to air pollution, fire hazards, illegal dumping, insect breeding and rat infestation and other conditions affecting the health, welfare and safety of the residents of this and surrounding cities.

SBMC 11.24.030 Conditions for Issuance of Permit for Removal

Chapter 11.24, *Trees and Shrubs,* of the SBMC provides criteria on the decision to issue or deny a removal permit, which includes the tree or shrubs' effect in reducing air pollution.

> A. The decision to issue or deny a removal permit and any terms and conditions of the permit shall be based on the following criteria:
>
> 4. The number, species, size, and location of existing trees in the area and the effect of the requested action in terms of providing shade, protection from wind, air pollution reduction, historic value and scenic beauty upon the health, safety, aesthetics and general welfare of the City as a whole.

SBMC 17.56.010 Purpose

Chapter 17.56, *Water Efficient Landscape Regulations,* indicates how landscaping should protect air quality.

> F. Landscapes that are planned, designed, installed, managed, and maintained with the watershed-based approach can improve California's environmental conditions and provide benefits and realize sustainability goals. Such landscapes will make the urban environment resilient in the dace of climatic extremes. Consistent with the legislative findings and purpose of the Ordinance, conditions in the urban setting will be improved by:
>
> 4. Protecting air and water quality by reducing power equipment use and landfill disposal trips, selecting recycled and locally sourced materials, and using compost, mulch and efficient irrigation equipment to prevent erosion.

Local Coastal Program

Chapter 7, *Public Works,* of the LCP provides the following policies on air quality:

- **Policy 7.12:** Promote land use policies, which encourage reduced automobile use to attain and maintain healthy air quality.

5.2.3 Methodology

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur with construction and/or operation of the proposed project. Modeling of criteria air pollutants was conducted using the California Emissions Estimator Model (CalEEMod), version 2016.3.1, based on the following:

- **Transportation:** Average daily trip (ADT) generation data was provided by LOS Engineering, Inc., Traffic and Transportation (see Appendix 5-12.1 of this DEIR). For purposes of this analysis, approximately 271 ADT are assumed based on the land use type. Default emission factors were used with the CalEEMod analysis.

- **Area Sources:** Area Sources include consumer products, landscaping, and architectural coatings as part of regular maintenance. It was assumed that an average of 10 percent of the structural surface area would be repainted each year.

- **Energy:** The project would consume natural gas for cooking and heating; therefore, criteria air pollutant emissions associated with use of natural gas are considered in the analysis.

- **Construction:** For purposes of this analysis, the project construction dates were estimated based on a hypothetical construction kick-off in early 2021; demolition of the existing residential unit onsite, grading, and paving are expected to last about two months. Once building construction begins, it is anticipated that the project would be completed roughly ten months later, for a total construction duration of one year. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates. A more near-term construction date is considered a conservation analysis in that it would represent more of a worst-case condition as emissions factors in future years are modeled as relatively lower than the current year due to emissions reductions mandates.

  The air quality assessment for the proposed project analyzed a preliminary grading plan which accounted for soil and debris export of 26,200 cubic yards from the site; the version of the grading plan included in this EIR estimates an export of 26,800 cubic yards of soil, 600 more cubic yards than was analyzed. The revised export amount is an increase of approximately 2 percent over the amount was analyze in the air quality analysis[5]. As the construction emissions are more than 2 percent below the threshold as shown in Table 5.2-7, the increase in soil export is considered less than significant. Table 5.2-4, *Construction Equipment*, identifies the construction equipment and time frames for their use during project construction.

Table 5.2-4 Construction Equipment

Equipment	Proposed Start	Proposed End	Quantity
Demolition	1/1/2018	1/7/2018	
Concrete/Industrial Saws			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			1
Site Preparation	1/8/2018	1/12/2018	
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			1
Grading	1/16/2018	2/20/2018	
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2

[5] 600 cubic yards / 26,200 cubic yards = 0.023 or 2 percent.

Table 5.2-4 Construction Equipment

Equipment	Proposed Start	Proposed End	Quantity
Paving	2/21/2018	2/28/2018	
Cement and Mortar Mixers			1
Pavers			1
Paving Equipment			1
Rollers			2
Tractors/Loaders/Backhoes			1
Building Construction	3/1/2018	12/31/2018	
Forklifts			2
Generator Sets			1
Tractors/Loaders/Backhoes			1
Welders			3
Building Construction Crane	6/1/2018	6/21/2018	
Forklifts			2
Architectural Coating	5/1/2018	12/31/2018	

Note: This equipment list is based upon equipment inventory from CalEEMod. The quantity and types are based upon assumptions provided by the project applicant.

5.2.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

AQ-4 Expose sensitive receptors to substantial pollutant concentrations.

AQ-5 Create objectionable odors affecting a substantial number of people.

The Initial Study, included as Appendix 2-1, substantiates that impacts associated with the following threshold would be less than significant:

- Threshold AQ-5

Therefore, this impact is not addressed in the following DEIR analysis.

5.2.4.1 REGIONAL SIGNIFICANCE THRESHOLDS

CEQA allows for the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. However, the SDAPCD does not provide CEQA significance thresholds for any air pollutant source they do not directly regulate. The SDAPCD regulates emissions from stationary sources and not mobile sources under SDAPCD Regulation II, Rule 20.2, Table 20-2-1, Air Quality Impact Analysis (AQIA) Trigger Levels. Because the SDAPCD does not prescribe emissions thresholds for volatile organic compounds (VOCs), their significance thresholds from the South Coast Air Quality Management District for Coachella Valley were used to evaluate potential air quality impacts relative to CEQA (Ldn 2017). Table 5.2-5, *Screening Thresholds for Criteria Pollutants*, lists regional emissions thresholds used in the following analysis.

Table 5.2-5 Screening Threshold for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)	Total Emissions (Tons per Year)
Construction Emissions		
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55	15
Nitrogen Oxide (NOx)	250	40
Sulfur Oxide (SOx)	250	40
Carbon Monoxide (CO)	550	100
Volatile Organic Compounds (VOCs)	75	40
Reactive Organic Gases (ROG) SCAQMD	75	40
Operational Emissions		
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55	15
Nitrogen Oxide (NOx)	250	40
Sulfur Oxide (SOx)	250	40
Carbon Monoxide (CO)	550	100
Lead and Lead Compounds	3.2	0.6
Volatile Organic Compounds (VOCs)	75	40
Reactive Organic Gases (ROG) SCAQMD	75	40

Note: The Air Quality Assessment assumes that Volatile Organic Compounds (VOC) and Reactive Organic Gases (ROG) are the same due to the fact that emissions generated from the project represent non-methane organic compounds.

5.2.4.2 CO HOTSPOT ANALYSIS

The significance of localized project air quality-related impacts depends on whether the project would cause substantial concentrations of CO. Prior to 1998, the SDAB was designated as nonattainment under the California and National AAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in the SDAB and in the state have steadily declined. In 1998, the SDAPCD was designated as in attainment for CO under both the California and National AAQS and was under a 10-year federal maintenance plan for CO as a result of its redesignation. The current version of the maintenance plan is the 2004 revision to the *California State Implementation Plan (SIP)*

for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas, which was approved as an SIP revision in January 2006.

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017). Therefore, the potential for CO hotspots to be generated in the SDAB is extremely unlikely because of the improvements in vehicle emission rates and control efficiencies. Typical projects would not expose sensitive receptors to substantial pollutant concentrations, and analysis of CO hotspots is not warranted.

5.2.4.3 HEALTH RISK ANALYSIS

Whenever a project would require use of chemical compounds that have been identified in SDAPCD Rule 1200; placed on CARB's air toxics list pursuant to AB 1807, the Air Contaminant Identification and Control Act (1983); or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment (HRA) is required by SDAPCD. Table 5.2-6, *SDAPCD Toxic Air Contaminants Incremental Risk Thresholds*, lists SDAPCD's TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478)). CEQA does not require analysis of the effects of existing environmental hazards on a proposed project or its future users, including sensitive receptors. However, the environmental document must analyze the impacts of environmental hazards on future users when a proposed project exacerbates an existing environmental hazard or condition. Residential, commercial, school, office, and recreational uses do not use or generate substantial quantities of TACs, and these thresholds are typically applied to new industrial projects.

Table 5.2-6 SDAPCD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Individual Cancer Risk	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 1.0 excess cancer cases
Hazard Index (project increment)	≥ 1.0

Source: SDAPCD Rule 1210.

A health risk assessment was prepared for the proposed project to identify potential health risks at the project site from toxic air contaminants originating from Interstate-5 (I-5) and is included as Appendix 5.2-2, Solana Beach Senior Housing Health Risk Screening Letter, to this DEIR. The HRA analyzes two types of projects: Type A, which are projects that have the potential to emit toxic emissions and have potential to impact nearby receptors; and Type B, which are projects that place receptors in the vicinity of existing toxic sources like freeways, high traffic roads, and rail yards. Based on this information, the project is classified as Type B. According to the HRA, there are no clear significance thresholds for Type B, so thresholds under Type A projects were used for the purposes of the HRA. For Type A projects, the significance threshold for excess

cancer risk is set at 10 in a million and for acute and chronic, noncarcinogenic health effect, a hazard index of one must not be exceeded (see Table 5.2-6, above).

5.2.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.2-1: Would project-related construction activities violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? [Thresholds AQ-2 and AQ-3] [Less than significant]

Impact Analysis: The project construction dates were estimated with a hypothetical construction kick-off in early 2021. Demolition of the existing residential unit and other structures onsite, grading, and paving are expected to last about two months. Once building construction begins, it is estimated that the project would be completed roughly ten months later for a total construction duration of approximately one year. Facility operations were assumed to begin in early 2022. Although the air quality assessment analyzed a preliminary grading plan which accounted for 26,200 cubic yards of export, it should be noted that the final proposed grading for the project would export roughly 26,800 cubic yards of soil and all demolition debris from the site. This would be an increase in 2 percent from what was analyzed, which would be a negligible increase and would not increase construction-related air quality impacts to a level of significance. A summary of the daily and annual construction emissions calculated through CalEEMod is shown in Table 5.2-7, *Daily Construction Emissions Summary*, and Table 5.2-8, *Annual Construction Emissions Summary*.

Table 5.2-7 Daily Construction Emissions Summary

Year	VOC	NOx	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2018 (lb/day) Unmitigated Summer	12.81	59.80	23.32	0.11	8.71	1.40	10.02	3.94	1.35	5.15
2018 (lb/day) Unmitigated Winter	12.90	60.18	23.12	0.11	8.71	1.40	10.02	3.94	1.35	5.15
Significance Threshold (lb/day)	75	250	550	20	-	-	100	-	-	55
SDAPCD Impact?	NO	NO	NO	NO	-	-	NO	-	-	NO

Table 5.2-8 Annual Construction Emissions Summary

Year	VOC	NOx	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2018 (lb/day) Unmitigated	1.17	2.91	2.30	0.01	0.22	0.15	0.36	0.08	0.14	0.22
Significance Threshold (lb/day)	40	40	100	40	-	-	15	-	-	15
SDAPCD Impact?	NO	NO	NO	NO	-	-	NO	-	-	NO

As shown in Tables 5.2-7 and 5.2-8, construction of the project would not exceed SDAPCD thresholds for daily or annual construction emissions, and therefore would not cumulative contribute to the nonattainment designations of the SDAB. Therefore, the project would result in a less than significant impact to the RAQS.

Impact 5.2-2: Would the long-term operation of the project violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? [Thresholds AQ-2 and AQ-3] [Less than significant]

Impact Analysis: The project site is currently undeveloped and does not currently generate trips. According to the traffic study prepared for the project, operation of the new residential senior care facility for the elderly would result in an increase of 263 daily trips (see Appendix 5.12-1). However, at the time the air quality assessment was prepared, it was assumed that the project would generate 271 trips, which would result in a more conservative analysis. The anticipated daily pollutant generation was calculated in the Air Quality Report using average daily miles traveled and expected emissions inventory via CalEEMod. The calculated daily pollutant emissions are shown in Table 5.2-9, *Daily Pollutant Generation*.

Table 5.2-9 Daily Pollutant Generation

	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Summer Scenario						
Area	2.45	0.10	8.21	0.00	0.05	0.05
Energy	0.03	0.22	0.09	0.00	0.02	0.02
Mobile	0.56	0.23	6.57	0.02	1.67	0.46
Total (lb/day)	3.04	2.65	14.88	0.02	1.73	0.52
SDAPCD Thresholds	75	250	550	250	100	55
Significant?	NO	NO	NO	NO	NO	NO
Winter Scenario						
Area	2.45	0.10	8.21	0.00	0.05	0.05
Energy	0.03	0.22	0.09	0.00	0.02	0.02
Mobile	0.55	2.40	6.48	0.02	1.67	0.46
Total (lb/day)	3.03	2.72	14.78	0.02	1.73	0.52
SDAPCD Thresholds	75	250	550	250	100	55
Significant?	NO	NO	NO	NO	NO	NO

Daily pollutant generation assumes trip distances within URBEMIS 2007.

As shown in Table 5.2-9, operation of the proposed project would not result in pollutants that would exceed SDAPCD thresholds under winter and summer scenarios, and therefore the project would not cumulatively contribute to the nonattainment designations of the SDAB. Therefore, the project would result in a less than significant impact.

Impact 5.2-3: Would the project expose sensitive receptors to substantial pollutant concentrations? [Threshold AQ-4] [Less than Significant with Mitigation Incorporated]

Impact Analysis: The proposed project could expose sensitive receptors to elevated pollutant concentrations if it would cause or contribute significantly to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects. The nearest sensitive receptors to the project site are the residential land uses which adjoin the project site to the east and south.

Construction Phase

Localized Criteria Air Pollutants

Air pollutant emissions generated by construction activities are anticipated to increase air pollutant concentrations. Table 5.2-7, *Daily Construction Emissions Summary*, compares the maximum daily construction emissions against the regional significance thresholds. This table shows that project-related construction activities would not exceed the regional significance thresholds, and therefore an ambient air quality analysis for criteria air pollutants is not warranted. Localized construction phase criteria air pollutant emissions are less than significant.

Construction Health Risk Assessment

According to the Air Quality report prepared for the project, the worst-case onsite PM_{10} from onsite construction exhaust would cumulatively produce 0.1421 tons over the construction duration (260 working days) or an average of 0.0172 grams/second. The peak maximum annual concentration is 5.82 $\mu g/m^3$ during the worst-case construction period of 260 days; therefore, the 70-year cancer risk would be 763.11 individuals per million exposed, which would be a significant impact (see Appendix 5.2-2). However, implementation of mitigation measure AQ-1 would result in the use of Tier IV diesel equipment with diesel particulate filters attached inline to the exhaust system. Use of this equipment would result in reduction of worst-case PM_{10} from exhaust to 0.00058 tons over the construction duration or an average of 0.000072 grams/second, and the inhalation cancer risk would be reduced to 3.11 individuals per one million exposed, which would be less than significant.

Mitigation Measure

AQ-1 During the 260-day construction period for the proposed improvements, construction equipment with Tier IV with diesel particulate filters attached inline to the exhaust system shall be used.

Level of Significance after Mitigation

Mitigation measure AQ-1 would reduce potential impacts to sensitive receptors to a level that is less than significant.

Operation Phase

Criteria Air Pollutants

Operation of the proposed project would not generate substantial emissions from onsite, stationary sources. Land uses that have the potential to generate substantial stationary-source emissions would require a permit from SDAPCD and include industrial land uses such as chemical processing and warehousing operations where substantial truck idling could occur onsite. The proposed project does not fall within this category of uses. Operation of the proposed project would entail the occasional use of landscaping equipment for project site maintenance, but air pollutant emissions generated from these activities would be below the regional significance thresholds shown in Table 5.2-9, and therefore an ambient air quality analysis for criteria air pollutants is not warranted. Localized operational phase criteria air pollutant emissions are less than significant.

Operational Health Risk Assessment

Pursuant to *CBIA v BAAQMD* (2015), the purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. However, a health risk assessment (HRA) was conducted to evaluate whether the project would need to be designed to minimize air pollutant exposure from proximity to I-5. According to the HRA, based on the emissions exposures calculated for the site there are three receptor areas along the south portion of the residential senior care facility on the western facade that would experience the greatest emission concentrations (see Figure 2, *Discreet Receptor Locations*, on page 4 of the Appendix 5.2-2). These three receptor

areas were used as a means to calculate the worst-case cancer risks at the residential senior care facility for the elderly. Based on the calculations in the HRA, cancer risks would be less than ten in one million exposed, which would not exceed significance thresholds (see Appendix 5.2-2). Furthermore, the project would be constructed using mechanical filtration systems having a Minimum Efficiency Reporting Value (MERV) of 13, which have been found to reduce particulates 2.5 microns or less by 87 to 95 percent. Therefore, the project would result in a less than significant impact for exposure to diesel particulates and would not result in significant impacts from cancer risk.

Impact 5.2-4: Would the proposed project conflict with or obstruct implementation of the applicable air quality plan? [Threshold AQ-1] [Less than significant]

Impact Analysis: SDAPCD is directly responsible for reducing emissions from area, stationary, and mobile sources in the SDAB to achieve National and California AAQS. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the RAQS, which is the air quality management plan prepared for the region. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the RAQS. The most current RAQS is the 2016 RAQS. Only new or amended general plan elements, specific plans, and major projects need to undergo a consistency review. This is because the RAQS is based on projections from local general plans. Projects that are consistent with the local general plan or do not trigger the San Diego Association of Governments' intergovernmental review criteria are considered consistent with the RAQS.

The proposed improvements associated with the proposed project are consistent with the City's General Plan and zoning ordinance. The proposed project would result in negligible population growth and growth in employment. Furthermore, the proposed project would not result in long-term criteria air pollutant emissions that would exceed the regional significance thresholds. Therefore, the proposed project would not conflict or obstruct implementation of the RAQS, and impacts are less than significant in this regard.

5.2.6 Cumulative Impacts

The City of Solana Beach has not established specific significance criteria for cumulative impacts; consequently, the methodology established by the County of San Diego is utilized to evaluate potential cumulative air quality impacts. Pursuant to the County of San Diego's *Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality* (SDAPCD 2007), cumulative construction and operation-related air quality impact could occur if a project has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NO_X, and/or VOCs since these are pollutants for which the SDAB are designated nonattainment and/or that contribute to the ozone nonattainment designation. For purposes of this analysis, a significant direct impact would occur if project-related short- and long-term emissions of PM_{10}, $PM_{2.5}$, NO_X, and/or VOC exceed the regional significance thresholds. Furthermore, for operation, a cumulative impact may also occur if a project is inconsistent with the RAQS or implementation of the project results in a CO hotspot. Based on the Air Quality Report, no cumulative projects were identified near the project site, and because the projects point of maximum

exposure is 100 meters from the project boundaries, no cumulative construction impacts would be expected at distances greater than four times this distance.

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5.3 BIOLOGICAL RESOURCES

The analysis in this section is based in part on the following technical report:

- *Biological Resources Survey Report Update for the Solana Beach Senior Care Center Site Project No. DRP/SDP 17-14-20*, REC Consultants, Inc. , March 13, 2019.

A copy of this study is included as Appendix 5.3-1 to this Draft EIR.

5.3.1 Environmental Setting

The 2.9-acre project site was originally surveyed by Affinis in 2011 and a report was prepared at that time. A survey update report was prepared by Affinis in 2014. A second update report was prepared by Affinis in 2016, but additional surveying was not conducted and revised mitigation was recommended. Those reports are provided in Attachment 1 to Appendix 5.3-1. Because several years have passed since the last biological survey was conducted, the project site was survey and a revised report was prepared to summarize current site conditions. biological resources survey

Vegetation and Ground-Cover Type

During the original 2011 biological survey, no native vegetation were observed on the project site. A band of coastal sage scrub was identified offsite on the slope below Interstate 5 (I-5). Only nonnative vegetation was found on the site. However, during the 2019 site survey a 4-inch diameter coast live oak was found adjacent to the eastern fence line. Portions of the project site were nearly impassible due to dense strands of wild radish (*Raphanus sativa*), a noxious weed that has spread to other areas of the site that formerly supported nonnative grassland. Five vegetative communities/associations were observed on the site:

- **Nonnative grassland.** Non-native (annual) grassland onsite is dominated by ripgut brome grass (*Bromus diandrus*) and wild radish (*Raphanus sativus*). Other species in the non-native grassland include white-stem filaree (*Erodium moschatum*), London rocket (*Sisymbrium irio*), and oats. Non-native grassland occupies 0.52-acre onsite. A few native wildflowers (California poppy, Lupino) were noted near the slopes below I-5 onsite during the 2011 survey.

- **Nonnative vegetation.** Non-native vegetation onsite consists of thickets of tall castor bean in the northern area, ornamentals outside of landscaped areas, and areas dominated wild radish, dwarf nettle (*Urtica urens*), long-beak filaree (*Erodium botrys*), and other non-native species with not enough annual grass cover to qualify as non-native grassland. In the southern portion of the site, some native shrubs such as spreading goldenbush (*Isocoma menziesii var. menziesii*), coastal sagebrush (*Artemisia californica*) and California encelia (*Encelia californica*) have begun to spread onto the site from the adjacent Interstate 5 slope which is revegetated with planted coastal sage scrub species, but these native shrubs are not extensive enough onsite to be classified as coastal sage scrub habitat. Non-native vegetation occupies 1.74-acres onsite.

- **Developed.** This includes the area of the abandoned house, driveway, outbuilding, and associated driveways/paths. Developed land occupies 0.15-acre of the site.

- **Landscaped.** Landscaping for residences to the east has spread onto portions of the eastern site boundary and includes species such as iceplant (*Carpobrotus* and *Aptenia* sp.), eucalyptus, fan palms, acacias, and tamarisk. Landscaped land occupies 0.31-acre of the site.

- **Disturbed.** An area largely devoid of vegetation is present along the northeastern edge of the property and was noted as disturbed habitat. Disturbed land occupies 0.18-acre of the site.

Wildlife

Limited wildlife was observed on the property and consisted primarily of common birds adapted to urban settings. These included bushtit (*Psaltriparusminimus*), California towhee (*Pipilo crisialis*), scrub jay (*Aphelocoma coerulescens*), house finch (*Carpodacus mexicanus*), and Anna's hummingbird (*Calypte anna*). Pocket gopher (*Thomomys bottae*) mounds were abundant, as were signs of ground squirrel (*Thermopolis beecheyi*). No reptiles were observed.

Sensitive Species

No rare, endangered, or sensitive species were observed onsite or are expected to occur onsite due to the urban/disturbed nature of the property and its surroundings and proximity to I-5. The coastal California gnatcatcher (*Polioptila californica californica*) is most frequently found in coastal sage scrub habitat. However, according to the biological resources survey, it would not likely be in the off-site habitat due to the isolation of the habitat and the high noise levels of the freeway.

5.3.1.1 BIOLOGICAL RESOURCES SURVEYS

Plants

The 2019 vegetative conditions were similar to those observed in the 2014 and 2011 surveys, except that the site supported more weedy vegetation. Coastal sage scrub remained along the off-site slope below I-5, but only nonnative vegetation was found on the site itself. Portions of the project site remain nearly impassible due to dense strands of wild radish. The same five habitat classifications were observed during the 2014 survey as were found in the 2011 survey, and Table 5.3-1, *Habitat Acreage Comparison*, presents the differences in habitat acreage between the 2011 and 2014 surveys for the sake of comparison.

Table 5.3-1 Habitat Acreage Comparison

Habitat Type	2011 Acreage	2014 Acreage	2019 Acreage
Nonnative grassland	1.53	0.61	0.52
Nonnative vegetation	0.74	1.62	1.74
Developed	0.22	0.22	0.31
Landscaped	0.25	0.25	0.18
Disturbed	0.17	0.20	0.15
TOTAL	2.91	2.90	2.90

Note: The 2016 Affinis report did not include an additional site survey and lists habitat acreages from the 2014 survey (see Appendix 5.3-1).

Wildlife

During the 2019 survey, the most common wildlife species were house finches (*Haemorhous Mexicana*), California towhee (*Melozone cirssalis*), Anna's hummingbird (*Calypte anna*), and honey bees (*Apis mellifera*). Pocket gopher (*Thomomys bottae*) mounds were abundant. No reptiles were observed. Anecdotally, the caretaker of the site advised that he has seen raccoons, coyotes, and on some occasions, cranes on the property.

Sensitive Species

No rare, endangered, or sensitive species were observed or are expected to occur, due to the urban/disturbed nature of the property and its surroundings. The coastal California gnatcatcher is most frequently found in coastal sage scrub habitat, but it would not likely be in the off-site habitat due to the isolation of the habitat and the high noise levels on the freeway.

Sensitive Habitats

No sensitive habitats occur onsite. According to the Solana Beach LUP, the project site is not designated as Environmentally Sensitive Habitat Area (ESHA) or potential ESHA due to lack of native habitat. There are no jurisdictional wetlands or Waters of the US on the property, and no waters under the State's jurisdiction are on the property.

5.3.2 Regulatory Setting

5.3.2.1 FEDERAL

Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973, as amended, protects and conserves any species of plant or animal that is endangered or threatened with extinction, as well as the habitats where these species are found. "Take" of endangered species is prohibited under Section 9 of the FESA. "Take" means to "harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Section 7 of the FESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) on proposed federal actions that may affect any endangered, threatened, or proposed (for listing) species or critical habitat that may support the species. Section 4(a) of the FESA requires that critical habitat be designated by the USFWS "to the maximum extent prudent and determinable, at the time a species is determined to be endangered or threatened." This provides guidance for planners/managers and biologists by indicating locations of suitable habitat and where preservation of a particular species has high priority. Section 10 of the FESA provides the regulatory mechanism for incidental take of a listed species by private interests and nonfederal government agencies during lawful activities. Habitat conservation plans (HCPs) for the impacted species must be developed in support of incidental take permits to minimize impacts to the species and formulate viable mitigation measures.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) affirms and implements the United States' commitment to four international conventions—with Canada, Japan, Mexico, and Russia—to protect shared migratory bird resources. The MBTA governs the take, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these items, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the MBTA.

Coastal Zone Management Act

The Federal Coastal Zone Management Act of 1972 established a federal coastal management zone policy, which promotes the effective management, beneficial use, protection, and development of the nation's coastal zones in order to balance the natural, environmental, and aesthetic resource needs with commercial and economic growth. This policy encourages and provides assistance to coastal states for enactment of coastal programs that achieved wise use of the land and water resources of the coastal zone.

5.3.2.2 STATE

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA and is administered by the California Department of Fish and Wildlife (CDFW). Its intent is to prohibit take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Com-mission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through a 2081 permit or Memorandum of Understanding. In addition, some sensitive mammals and birds are protected by the State as Fully Protected Species. California Species of Special Concern are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's California Natural Diversity Data Base project, which maintains a database of known and recorded occurrences of sensitive species. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biological resources assessments.

California Fish and Game Code

Sections 3503, 3503.5, and 3800 of the California Fish and Game Code establish that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by other sections of the Fish and Game Code.

California Coastal Act

The California Coastal Act of 1976, codified in Public Resources Code, Division 20, Sections 30000 et seq., was established to plan for and regulate new development and to protect public access to and along the

shoreline. The Coastal Act contains policies to guide local and state decision makers in the management of coastal and marine resources.

5.3.2.3 REGIONAL

Multiple Habitat Conservation Plan

The City of Solana Beach is covered under the SANDAG-approved North County Multiple Habitat Conservation Program, but the City does not have its own Habitat Conservation/Subarea plan. Based on the Composite Habitat Value Multiple Habitat Conservation Plan Study Area the site is considered "developed" (SANDAG 2003).

5.3.2.4 LOCAL

Solana Beach General Plan

The Solana Beach General Plan addresses biological resources in the conservation and open space element. This element includes policies and objectives that support management of natural and man-made resources to assure their continued availability for use, appreciation, and enjoyment. According to the conservation and open space element, the only sensitive biological resources in the City's planning area are wetlands, namely the San Elijo Lagoon. The lagoon supports endangered animal species, including the least tern, the Belding's Savannah sparrow, and snowy plover, and rare and endangered plant species such as San Diego thornmint, coast barrel cactus, coast white lilac, Cleveland sage chocolate lilies, and coast spice bush (Solana Beach 2014a).

Goal 3.1: To protect and Conserve the City's Natural and Cultural Resources.

- **Policy 1.b:** The City shall require the incorporation of adequate erosion control measures into development projects that may otherwise impact water resources adversely. Such measures shall be reviewed by the Planning and Engineering Departments and shall include sandbagging of newly graded slopes, prompt planting of disturbed areas, phasing of grading and construction activities to minimize exposed areas susceptible to erosion, and the routing of runoff flows through desilting basins prior to discharge into any watercourse.

- **Policy 2.a:** The City shall require all new developments to incorporate water conservation measures into project design to the greatest extent possible. Such measures may include, but are not limited to, the use of plumbing fixtures which reduce water usage (in accordance with Title 24 of the California Administrative Code) and xeriscape landscaping which maximizes the use of drought-tolerant plant species and drip irrigation systems.

- **Policy 2.b:** The City shall support projects involving water reclamation (such as the San Elijo treatment plant) by using reclaimed water for irrigation of public landscaped areas to the greatest feasible extent. Further, the City shall encourage the use of such water in privately owned areas.

- **Policy 4.a:** The City shall use the environmental review procedures established by the California Environmental Quality Act (CEQA) to ensure that potential adverse effects upon natural and cultural resources are identified.

- **Policy 4.b:** The City shall not permit land uses that would have unavoidable significant adverse impacts upon natural or cultural resources unless a statement of overriding considerations is adopted by the Solana Beach City Council.

- **Policy 4.c:** Technical reports made available to the public in conjunction with environmental documentation shall include summaries written for laypersons (e.g., soils and geology reports that minimize the use of technical jargon).

- **Policy 5.a:** The City shall require that all development proposals provide adequate mitigation measures for identified significant biological resources, including selective preservation, replanting, sensitive site planning techniques, the provision of replacement habitat, and/or other appropriate measures.

- **Policy 5.c:** The City shall establish a heritage tree program which identifies mature trees that are to be preserved and protected from public and private development activities. Further, this program shall set forth procedures to be followed by the City staff in the site plan review process to ensure compliance with the program and shall outline appropriate measures to preserve mature trees.

City of Solana Beach Municipal Code

The Solana Beach Municipal Code (SBMC) provides requirements for planting on slopes in the Buildings and Construction Ordinance, Chapter 15.40.160, Planting of Slopes. Chapter 11.24 requires a permit to trim, break, deface, destroy, remove, or plant a tree, palm, hedge, or shrub on public property or in the public right-of-way. The findings for issuance of a tree permit are in section 11.24.030 of the municipal code:

A. The decision to issue or deny a removal permit and any terms and conditions of the permit shall be based on the following criteria:

1. The condition of the tree or shrub with respect to disease, general health, damage, public nuisance, danger of falling, proximity to existing or proposed structures and interface with utility services, age or remaining life span and whether or not the tree acts as host for a plant which is parasitic to other species of trees which are in danger of being infested or exterminated by the parasite;

2. The necessity of the requested action to construct improvements, or allow economic or other enjoyment of the property;

3. The topography of the land and the effect of the requested action on erosion, soil retention, water retention, and diversion or increased flow of surface water;

4. The number, species, size and location of existing trees in the area and the effect of the requested action in terms of providing shade, protection from wind, air pollution

reduction, historic value and scenic beauty upon the health, safety, aesthetics and general welfare of the city as a whole;

5. Good forestry practices such as, but not limited to, the number of healthy trees as a given parcel of land will support; and

6. The removal is consistent with the city general plan and any applicable scenic area regulations or laws.

B. The cost of removal of any tree, palm, shrub or plant at the request of and for the benefit or convenience of a property owner shall be paid for by such property owner.

C. Where an existing tree, palm or shrub prevents access to a building site, such tree or plant may be removed at the applicant's expense upon issuance of proper removal permit; provided, however, that a valid building permit has been issued for the construction of the improvement necessitating the removal of the tree or plant. In the event that trees or plants are so removed in conformance with this section, and the improvement for which the building permit was issued is not constructed within six months of the date of issuance, the holder of the removal permit shall be liable for the replacement cost of trees or plants of equal size and variety to those removed.

Chapter 15.40.160, Planting of Slopes, states that the surface of all cut slopes more than five feet in height and fill slopes more than three feet in height shall be protected against damage by erosion by planting with drought-resistant groundcover plants. Slopes exceeding 15 feet in vertical height shall also be planted with drought-resistant shrubs, spaced at not to exceed 10 feet on centers, or a combination of shrubs and trees at equivalent spacings, in addition to the drought-resistant groundcover plants. The plants selected and planting methods used shall be suitable for the soil and climatic conditions of the site.

Local Coastal Program

The City Council adopted the CCC-modified and -approved Local Coastal Program (LCP) Land Use Plan (LUP) under Solana Beach City Council Resolution 2013-018. The LCP is a planning document prepared by cities and counties in coastal areas to further address environmental planning concerns with shorelines, bluffs, and coastal conditions as required by the California Coastal Act of 1976 (Solana Beach 2014b). The Solana Beach LCP LUP strategies and policies provide for the comprehensive, citywide land use planning and sustainable development of shoreline and bluff protection focused on local conditions, goals, and interests. The LUP contains biological resources protection policies, including tree protection policies that are applicable to native tree species.

The City is entirely encompassed by the state-designated Coastal Zone. Pursuant to the LUP, there are 12 sensitive vegetation communities in the City: southern coastal salt marsh, freshwater marsh, southern willow scrub, mulefat scrub, open water/estuarine, beach, southern coastal bluff scrub, southern maritime chaparral, Diegan coastal sage scrub, southern mixed chaparral, coastal sage-chaparral scrub, and nonnative grasslands.

F. Environmental Review

- **Policy 3.32:** For development in locations known, or determined by environmental review, to potentially have breeding or nesting sensitive birds species, two weeks prior to any scheduled development, a qualified biological monitor shall conduct a pre-construction survey of the site and within 500 feet of the project site. Sensitive bird species are those species designated "threatened" or "endangered" by state or federal agencies, California Species of Special Concern, California Fully Protected Species, raptors, and large wading birds. In addition, surveys must be conducted every two weeks for sensitive nesting birds during the breeding season. If nesting sensitive birds are detected at any time during the breeding season, CDFW shall be notified and an appropriate disturbance set-back will be determined and imposed until the young-of-the-year are no longer reliant upon the nest. The set-back or buffer shall be no less than 100 feet.

H. Native Tree Protection

- **Policy 3.51**: New development shall be sited and designed to preserve oak, sycamore, alder, willow, toyon, or other native trees that are not otherwise protected as ESHA. Removal of native trees shall be prohibited except where no other feasible alternative exists. Structures, including roads or driveways, shall be sited to prevent any encroachment into the root zone and to provide an adequate buffer outside of the root zone of individual native trees in order to allow for future growth.

- **Policy 3.52**: New development on sites containing native trees shall include a tree protection plan.

- **Policy 3.53**: Where the removal of native trees cannot be avoided through the implementation of project alternatives or where development encroachments into the protected zone of native trees result in the loss or worsened health of the trees, mitigation measures shall include, at a minimum, the planting of replacement trees on-site, if suitable area exists on the project site, at a ratio of 1:1 for every tree removed. Where onsite mitigation is not feasible, off-site mitigation shall be provided through planting replacement trees or by providing an in-lieu fee based on the type, size and age of the tree(s) removed. The number of replacement trees allowed to be planted within the very high fire hazard severity zone will be approved by the Fire Marshal. Proper spacing of tree trunks and canopies will be maintained in accordance with the Fire Code for trees in this zone. Any new or replacement tree planted in this zone shall be fire resistive and on the Planning and Fire Department approved planting list.

5.3.3 Methodology

Two general biological resources surveys were conducted on the project site by Affinis Environmental Services. Prior to these surveys, Affinis conducted a literature search to identify special status plants, wildlife, and habitats known to occur in the vicinity of the project site. Vegetation mapping and general plant surveys were conducted on April 4, 2011, April 23, 2014, and March 11, 2019. The purpose of the mapping was to describe the vegetation conditions on the project site and to evaluate the potential for onsite habitats to support special status species. The second survey was conducted to observe changes at the project site since the revised field survey. Vegetation mapping and general wildlife surveys were conducted at the same time. All wildlife and vegetation species observed were recorded and are listed in Table 5.3-2, *Plant and Animal Species Observed*, below.

Table 5.3-2 Plant and Animal Species Observed

Plant Species		
Species Name	Common Name	Family
*Acacia cyclops**	western coastal wattle	Fabaceae
Acmispon glaber var. glaber	coastal deerweed	Fabaceae
Ambrosia psilostachya	western ragweed	Asteraceae
Amsinckia menziesii	rigid fiddleneck	Boraginaceae
Artemisia californica	coastal sagebrush	Asteraceae
*Arundo donax**	giant reed	Poaceae
*Avena sp.**	oats	Poaceae
Baccharis pilularis subsp. consanguinea	chaparral broom, coyote brush	Asteraceae
*Brassica tournefortii**	Sahara mustard	Brassicaceae
Bromus carinatus var. carinatus	California brome	Poaceae
*Bromus diandrus**	ripgut grass	Poaceae
*Bromus madritensis subsp. rubens**	red brome, foxtail chess	Poaceae
*Carpobrotus sp.**	sea- or hottentot-fig	Aizoaceae
*Chenopodium murale**	nettle-leaf goosefoot	Chenopodiaceae
*Cotula australis**	Australian brass-buttons	Asteraceae
Crassula connata	pygmyweed	Crassulaceae
Datura wrightii	western jimson weed	Solanaceae
*Ehrharta erecta**	panic veldt grass	Poaceae
*Emex spinosa**	devil's thorn, spiny emex	Polygonaceae
Encelia californica	California encelia	Asteraceae
Erigeron sp.(*)	horseweed, fleabane	Asteraceae
*Erodium botrys**	long-beak filaree/storksbill	Geraniaceae
*Erodium cicutarium**	red-stem filaree/storksbill	Geraniaceae
*Erodium moschatum**	white-stem filaree/storksbill	Geraniaceae
*Eucalyptus sp.**	eucalyptus	Myrtaceae
*Euphorbia peplus**	petty spurge	Euphorbiaceae
*Festuca myuros**	rat-tail fescue	Poaceae
*Freesia sp.**	freesia	Iridaceae
*Glebionis coronaria**	garland/crown daisy	Asteraceae
Heterotheca grandiflora	telegraph weed	Asteraceae
*Hirschfeldia incana**	short-pod mustard	Brassicaceae
Hordeum sp.(*)	barley	Poaceae
*Hypochaeris glabra**	smooth cat's ear	Asteraceae
Isocoma menziesii var. menziesii	spreading goldenbush	Asteraceae
*Kalanchoe sp.**	kalanchoe	Crassulaceae
*Lactuca serriola**	prickly lettuce	Asteraceae
*Lamium amplexicaule**	henbit	Lamiaceae
*Malva sp.**	mallow	Malvaceae
*Medicago sp.**	burclover	Fabaceae
*Melaleuca viminalis**	weeping bottlebrush	Myrtaceae
*Opuntia sp.**	prickly-pear (ornamental)	Cactaceae
*Oxalis pes-caprae**	Bermuda-buttercup	Oxalidaceae
Parietaria hespera var. hespera	western pellitory	Urticaceae

5. Environmental Analysis
BIOLOGICAL RESOURCES

Table 5.3-2 Plant and Animal Species Observed

Plant Species		
Species Name	Common Name	Family
*Pennisetum setaceum**	African fountain grass	Poaceae
*Persea americana**	avocado	Lauraceae
*Phoenix canariensis**	Canary Island date palm	Arecaceae
*Pinus thunbergii**	Japanese black pine	Pinaceae
*Portulacaria afra**	elephant food, dwarf jade	Didiereaceae
Pseudognaphalium biolettii	bicolor cudweed	Asteraceae
Pseudognaphalium californicum	California everlasting	Asteraceae
Quercus agrifolia var. agrifolia	coast live oak, encina	Fagaceae
*Raphanus sativus**	wild radish	Brassicaceae
*Ricinus communis**	castor bean	Euphorbiaceae
*Salsola sp.**	Russian-thistle	Chenopodiaceae
*Schinus terebinthifolius**	Brazilian pepper tree	Anacardiaceae
*Schismus barbatus**	Mediterranean schismus	Poaceae
*Sisymbrium irio**	London rocket	Brassicaceae
Solanum sp.(*)	nightshade	Solanaceae
*Sonchus asper subsp. asper**	prickly sow-thistle	Asteraceae
*Sonchus oleraceus**	common sow-thistle	Asteraceae
Stephanomeria sp.	wreath-plant	Asteraceae
*Strelitzia nicolai**	giant white bird of paradise	Strelitziaceae
*Syzygium sp.**	-	Myrtaceae
*Tropaeolum majus**	garden nasturtium	Tropaeolaceae
*Urtica urens**	dwarf nettle	Urticaceae
*Washingtonia robusta**	Mexican fan palm	Arecaceae
Animal Species		
Species Name	Common Name	Number
Invertebrates		
*Apis mellifera**	western honey bee	several
Eleodes sp.	desert stink beetle	3
Family Formicidae	ant	several
*Helix aspersa**	brown garden snail	several
Order Araneae	spider	several
Birds		
Calypte anna	Anna's hummingbird	4
Haemorhous mexicanus	house finch	7
Kieneria crissalis	California towhee	3
Melospiza melodia	song sparrow	2
Vireo swainsoni	western warbling-vireo	1
Zonotrichia leucophrys	white-crowned sparrow	1
Mammals		
Thomomys bottae	Botta's pocket gopher	many mounds

Source: REC Consultants, Inc. Biological Resources Survey Report Update for the Solana Beach Senior Care Center Site Project No. DRP/SDP 17-14-20
* non-native

The project site was also surveyed to determine whether jurisdictional "Waters of the U.S.," including wetlands, and/or "Waters of the State" are present at the site (see Appendix 5.3-1). The biological resources survey determined that there are/are not any jurisdictional waters or wetlands present on the project site.

5.3.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

B-1 Have a substantial 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 Game or U.S. Fish and Wildlife Service.

B-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 Game or U.S. Fish and Wildlife Service.

B-3 Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

B-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.

B-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

B-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.

5.3.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.3-1: Would the project have a substantial effect, either directly or through habitat modifications, on any species, riparian habitat, or other sensitive natural community 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 Game or U.S. Fish and Wildlife Service? [Threshold B-1 and B-2] [Less than significant]

Impact Analysis: Special status and sensitive species for the City of Solana Beach include those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act;

species otherwise given certain designations by the California Department of Fish and Wildlife; and plant species listed as rare by the California Native Plant Society.

No rare, endangered, or sensitive plant or wildlife species were observed on the project site during the two biological resource surveys. According to the biological surveys, these species are not expected onsite due to the urban/disturbed nature of the property and its surroundings. The coastal California gnatcatcher, a threatened species, is most frequently found in coastal sage scrub habitat, which can be found along the western off-site slope below I-5. However, according to the surveys, it would not likely be present in the off-site habitat due to the isolation of the habitat and the high noise levels from the adjacent freeway (Appendix 5.3-1). Thus, it is unlikely that threatened bird species or other sensitive species will be present in the project area.

Additionally, no sensitive native habitats are onsite. The Solana Beach Certified LUP indicates that the site is not ESHA or potential ESHA. Thus, development of the proposed project would not impact sensitive or special status species, and, therefore, the project would not result in a significant impact and no mitigation measures are required.

Impact 5.3-2:	**Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? [Threshold B-3] [No Impact]**

Impact Analysis: According to the biological report, no federal, state or local jurisdictional waters or wetlands were discovered on the project site (Appendix 5.3-1). Additionally, the project site is not in the U.S Fish and Wildlife National Wetlands Inventory of wetlands and riparian habitat. Thus, development of the proposed project would not impact jurisdictional waters. The project would not result in a significant impact and no mitigation measures are required.

Impact 5.3-3:	**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? [Threshold B-4] [Less than significant]**

Impact Analysis: The project site is surrounded by urban development and borders I-5. The biological resources report did not identify any migratory pattern or movement of wildlife on the site. The project site supports vegetation communities, including nonnative grassland, nonnative vegetation, landscaped/ornamental vegetation, and disturbed land (see Section 5.3.1.1, above), and contains mature trees that could support nesting sites for bird species which are protected under the MBTA. However, demolition of the existing site features and vegetation clearing would begin outside of the general avian breeding season (beginning February 1 and ending in August 31). According to Policy 3.32 of the Solana Beach LCP, if vegetation clearing cannot be conducted outside of avian breeding season, two weeks prior to any scheduled development or vegetation clearing, the project applicant is required to retain a qualified biological monitor to conduct a survey of the project site and within 500 feet of the project site. If no active nests are discovered, the clearing can proceed. If active nests are discovered, no clearing may take place within a buffer zone of no less than 100 feet of any

active nest until the qualified biologist determines the nest is no longer active. Compliance with the policies and regulations of the LCP would ensure compliance with the MBTA by conducting a survey and restricting construction, if necessary, to ensure that no significant impact to migratory birds would occur. Because compliance with LCP is already required by the City as a condition of approval for the Specific Plan, the proposed project would not result in a significant impact and no mitigation measures are required.

Impact 5.3-4: Would the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? [Threshold B-5] [Less than significant]

Impact Analysis. The project would not conflict with relevant goals and policies of the Solana Beach General Plan, the City's Certified LCP LUP, or SBMC as they relate to protection of biological resources.

The project would comply with Objective 5 of the City's General Plan Conservation and Open Space Element, which includes policies that preserve important biological habitat and protect sensitive, rare, and endangered species of flora and fauna (Solana Beach 2014a). The biological surveys conducted for the site (2011,2014, and 2019) did not reveal the presence of any special-status species, sensitive natural communities, wetlands, or other important biological resources on the project site.

The City of Solana Beach's LCP LUP includes a Native Tree Protection policy and protections for trees and landscaping within an ESHA; there are no City ordinances related to the project site that protect nonnative vegetation or trees. The project site is not within an ESHA, but one native young coast live oak was discovered on the project site during the 2019 site survey. Removal of native vegetation without mitigation would result in a significant impact. According to the Solana Beach LCP, any loss of native coast live oak is required to be mitigated with provision of replacement at a 1:1 ratio. Mitigation BIO-1 would allow for the onsite mitigation of coast live oak, and would require planting of coast live oak in the onsite landscaping.

BIO-1 Prior to certificate of occupancy, the applicant shall complete, to the satisfaction of the City of Solana Beach, a tree protection plan. As required by Policy 3.53 of the Solana Beach LCP Land Use Plan, the applicant shall replace all native trees (one coast live oak) at a 1:1 ratio on the project site, and shall ensure maturity and viability of the root zone. Further, based on the removal of other trees on site as a result of development, and as outlined in the project's Tree Protection Plan, the applicant shall provide an arborist's certification that the replacement tree is in good health and thriving. Monitoring will occur three times during year 1, twice during year 2, and annually during years 3 through 5. Following each monitoring inspection, a monitoring report will be provided by the arborist as notification to the City of Solana Beach that the tree is healthy and establishing. The final monitoring report will provide certification that the tree is healthy and established. Should the tree die during the monitoring period, it will be replaced and will be monitored for the remainder of the 5-year period. If the oak declines it will be provided appropriate measures to improve health or structural condition, or the oak will be replaced.

Level of Significance After Mitigation

With implementation of mitigation measure BIO-1, impacts associated with coast live oak would be mitigated to less than significant.

Impact 5.3-5: Would the proposed 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? [Threshold B-6] [Less than Significant with Mitigation Incorporated]

Impact Analysis: The City of Solana Beach and project site are within the jurisdiction of the SANDAG-approved North County Multiple Habitat Conservation Program (NCMHCP) for the region. The City of Solana Beach does not have its own approved Habitat Conservation/Subarea Plan and is not within a Focused Planning Area per the NCMHCP; therefore, the project site would be subject to the NCMHCP's policies and regulations for the region.

Construction of the facility and associated landscaping and roadway improvements would result in the loss of the 0.52 acre of existing nonnative grassland on the project site, as shown in Table 5.3-1. According to the NCMHCP, any loss of nonnative grassland is required to be mitigated with provision of replacement non-native grassland at a 0.5:1 ratio. Therefore, approximately 0.3 acre of nonnative grassland mitigation would be required as per the requirements of the NCMHCP.

As the entire site will be occupied by the project, it is unlikely that mitigation of the nonnative grassland will occur onsite. However, mitigation measure BIO-2 allows for the onsite mitigation of the nonnative grasslands. It is more likely that offsite mitigation will be required in the form of the purchase of mitigation fee credits in a local or regional mitigation bank. Mitigation measure BIO-2, set forth in full below, requires that purchase of the credits be verified by the City prior to issuance of a grading permit for the project. As shown in Table 5.3-3, there are currently adequate credits available to meet the 0.3-acre mitigation need of the project.

Table 5.3-3 Mitigation Banks Available for Purchase of Nonnative Grassland Credits

Bank Name[1]	Mitigation Type	Credits Available
Brook Forest Mitigation Bank	Diegan coastal sage scrub; Open Engelmann oak woodland; Engelmann oak; Mafic southern mixed chaprarral; Native grassland; Southern coast live oak riparian; Non-native grassland; Wetland credits	202.19
Cornerstone Lands Conservation Bank	MSCP species credits	900.8
Crestridge Conservation Bank	Oak riparian woodland; Inland sage scrub; Chaparral; Non-native grassland	1,676.8
Heights of Pala Mesa Conservation Bank	Conservation credits for biological impacts within the San Diego MHCP and MSCP areas	1.2
Ramona Grasslands Conservation Bank	Non-native grassland; Vernal pool; Burrowing owl	138.34
Willow Road Conservation Bank	California gnatcatcher-occupied Coastal sage scrub; Coastal scrub-chaparral scrub, Chamise chaparral; Non-native grassland	67

[1] California Fish and Wildlife. 2018, January. California Conservation and Mitigation Banking. Report to the Legislature

Mitigation Measure

BIO-2 Prior to issuance of a grading permit, the project applicant shall either:

- Provide for 0.3 acre (1,307 SF) of nonnative grassland within the project boundaries with low-fuel volume (low foliage when dormant). Native grasses and fire-resistant shrubs, including but not limited to wild lilac (Ceanothus sp.), toyon (*Heteromeles arbutifolia*), and lemonade berry (*Rhus integrifolia*), shall be planted onsite in conjunction with completion of project grading/slope preparation, and would satisfy the requirement for 0.3-acre of restoration of native habitat. Other nonnative vegetation types may be considered and would be determined by the projects' landscape architect in consultation with the City; or
- Provide written proof to the satisfaction of the City of the purchase of mitigation credits from a California Department of Fish and Wildlife certified mitigation bank for 0.3 acre of nonnative grassland.

Level of Significance After Mitigation

With implementation of mitigation measure BIO-2, impacts associated with the loss of nonnative grassland would be less than significant.

5.3.6 Cumulative Impacts

The geographic context for the cumulative impact analysis on biological resources includes Solana Beach and the surrounding cities, such as Encinitas and Del Mar, that share similar coastal biological resources. Since the project site does not contain any sensitive species or habitat, its proposed development would not contribute to potential cumulative effects to the region's biological resources. Potential impacts to coast live oak are localized to the single tree on the project site and would be fully mitigated with implementation of Mitigation Measure BIO-1. In addition, the project's potential impact to nonnative grassland is localized to the project site which is surrounded by urban development and therefore not part of a contiguous area of nonnative grassland. Impacts to the nonnative grassland would be fully mitigated with the implementation of Mitigation Measure BIO-2. Therefore, project impacts to biological resources would not be cumulatively considerable.

5.3.7 References

Affinis Environmental Services. 2015, October 6. Biological Resources Survey. (Attachment A of EIR Appendix 5.3-1).

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Helix Environmental Planning. n.d. City of Solana Beach ESHA Map. http://www.ci.solana-beach.ca.us/vertical/sites/%7B840804C2-F869-4904-9AE3-720581350CE7%7D/uploads/ESHA_MAP_FINAL_sm.pdf.

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United States Environmental Protection Agency (USEPA). 2015, June 29. Clean Water Rule: Definition of "Waters of the United States" 40 CFR 230.3. https://www.epa.gov/cwa-404/definition-waters-united-states-under-clean-water-act.

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5.4 CULTURAL RESOURCES

This section of the DEIR evaluates the potential for implementation of the Solana Beach Senior Care Specific Plan project to impact cultural resources. This section discusses federal and state laws and regulations protecting cultural resources, along with cultural resource conditions on and near the project site.

The analysis in this section is based in part on the following information:

- *An Archaeological Survey and Evaluation of a Cultural Resource for the Health Care Group Project*, Brian F. Smith and Associates, 2000 (see Appendix 5.4-2)
- *Department of Parks and Recreation (DPR) Form for 959 Genevieve Street*, Ronald V. May, RPA, and Kiley Wallace, March 2016 (historical resources record; see Appendix 5.4-1)
- *959 Genevieve Street/Residential Care Facility Cultural Resources Study Addendum*, Helix Environmental Planning, January 29, 2016. (see Appendix 5.4-2)
- *Addendum to Residential Care Facility, 959 Genevieve Street: Archaeology (Affinis Job No. 2428)*, Affinis Environmental Services, December 16, 2011 (see Appendix 5.4-2)
- *Paleontological Record Search for the Solana Beach Seniors Project (APN 289-390-51)*, San Diego Natural History Museum, November 12, 2015 (see Appendix 5.4-3)

Terminology used in this section is defined below.

Archaeological resources. Cultural resources of prehistoric or historic origin that reflect human activity. Archaeological resources include both structural ruins and buried resources, as well as artifacts, objects, human/skeletal remains, and sites. The term "unique archaeological resources" is defined in Public Resources Code (PRC) Section 21083.2(g):

> … "unique archaeological resources" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> (1) Contains information need to answer important scientific research questions and there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Architectural resources. Buildings, structures, objects, and sites of the built environment.

Cultural resources. Places, objects, and settlements that reflect group or individual religious, archaeological, or architectural activities, or paleontological resources. Such resources provide information on scientific progress, environmental adaptations, group ideology, or human advancements

Historical resources. A historical resource may include the following: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.); (2) a resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant; or (3) any buildings, structures, objects, sites, and districts that have been formally evaluated and found to meet one or more of the significance criteria in CEQA Guidelines Section 15064.5 (a)(3). While most historical resources will be 50 years old or older, resources that have achieved significance in less than 50 years may also be considered historic, provided that a sufficient time has passed to understand their historical importance (14 CCR, Chapter 11.5, Section 4852(d)(2)).

Historic district. A concentration of historic buildings, structures, objects, or sites within precise boundaries that share a common historical, cultural, or architectural background, and meet one of the criteria for significance in 14 CCR, Chapter 11.5, Section 4852(b).

Historic context. Patterns or trends in history by which a specific occurrence, property, or site is understood and its meaning (and ultimately its significance) is made clear. A context may be organized by theme, geographic area, or chronology, but regardless of the frame of reference, a historic context is associated with a defined area and an identified period of significance. Historic contexts are linked to physical artifacts through the concept of *property types*.

Paleontological resources. Paleontological resources are fossils—the remains of prehistoric plants and animals—that are important scientific and educational resources because of their use in (1) documenting the presence and evolutionary history of extinct and existing organisms, (2) reconstructing the environments in which these organisms lived, and (3) determining the relative ages of the soil layers they are found in and the geologic events that deposited the sediments that formed these layers.

5.4.1 Environmental Setting

5.4.1.1 NATURAL SETTING

At the time of the field survey (2016), the project site contained an abandoned house, greenhouse, utility structures, and debris piles. About 98 percent of the site was vacant and covered with grasses, small shrubs, and ornamental palm trees and the remaining two percent was occupied by the existing structures.

5.4.1.2 CULTURAL SETTING

Historical Resources

The project site is located between two areas with archaeological and cultural sensitivity: the San Dieguito River Valley to the south and San Elijo Lagoon to the north. The lagoon margins were historically centers of habitation and resource gathering and processing for Native Americans because of the abundance of natural resources. The proximity to riverine, lagoon, marsh, open coast, and upland habitats gave inhabitants access to a variety of plant and animal resources, and water would have been available in seasonal drainages. However, few cultural resources have been recorded in the vicinity of the project site (Helix 2016).

One residential building constructed in 1957 is on the project site.

Archaeological Resources

A records search from the SCIC shows 57 cultural resource studies have been conducted within a one-mile search radius of the project site. Several of these studies addressed the I-5 corridor, and one specifically covered the project site. A survey report by Affinis Environmental Services and dated December 16, 2011, found 17 cultural resources within the one-mile-radius records-search area. These sites include prehistoric shell artifact scatter, prehistoric habitation sites, historic foundations, and various other recorded sites (Helix 2016). According to the cultural resources report, one shell-scatter with no artifacts, identified as site CA-SDI-15885, was discovered on the project site during the 2011 survey (see Appendix 5.4-2). CA-SDI-15885 was originally recorded in May of 2000 by ASM Affiliates, Inc., as an isolate containing "two pieces of Chione shell, scattered and probably in secondary context." CA-SDI-15885 was relocated and found as described when last recorded in 2000. Brian F Smith & Associates personnel revisited the site later that year as part of a survey and testing program covering the current project area, and no further resources were found.

Tribal Cultural Resources

The Native American Heritage Commission (NAHC) was contacted in April 2011 by Affinis to conduct a Sacred Lands File Search. The NAHC indicated that no Native American cultural resources have been recorded within 0.5 mile of the project area (Helix 2016). Affinis coordinated with Clint Linton of Red Tail Monitoring and Research and the Iipay Nation of Santa Ysabel; outreach to other tribal entities was not undertaken. Mr. Linton was not able to visit the project site, but he indicated that no further work was required based on the results of the testing conducted by Brian F. Smith and Associates (BFSA) and the disturbed nature of the project site (Helix 2016). In January 2016, Mr. Linton reviewed the 2011 report and information regarding CA-SDI-15885 and sent a letter stating his agreement that no further measures were required for the proposed project (Helix 2016).

Tribal Consultation

The City received one tribal request to be notified about projects from the Mesa Grande Band of Mission Indians. The City of Solana Beach notified the Mesa Grande Band of Mission Indians about this project via certified mail on June 29, 2017; therefore, the City initiated consultation with the Mesa Grande Band of Mission Indians in accordance with AB 52. No response has been received from the Mesa Grande Band of Mission Indians.

In a separate letter received on December 23, 2015, the Viejas Band of Kumeyaay Indians determined that the project site would have cultural significance or ties to the Viejas tribe. The Viejas Band requested that a Kumeyaay Cultural Monitor be onsite for ground-disturbing activities to inform the tribe of any new development such as inadvertent discovery of cultural artifacts, cremation sites, or human remains. However, as determined by the cultural resources report, due to the amount of past ground disturbance at the site, subsurface cultural resources are not anticipated at the site.

Paleontological Resources

The San Diego Natural History Museum record search found twenty-four recorded fossil-collecting sites within a one-mile radius of the project site; no paleontological resources sites are documented on the project site. Three of these localities were discovered in a late-Pleistocene-age (80,000 to 220,000 years old), unnamed lagoonal deposit and produced shell remains of marine invertebrates, fossilized remains of marine vertebrates, and fossilized remains of terrestrial vertebrates. Thirteen localities were discovered in lagoonal and estuarine deposits of the late-Pleistocene-age Bay Point Formation. Fossils from these localities included leaf impressions of plants (e.g., flowering plants), shell remains and molds of marine invertebrates (e.g., shellfish, sponges), mineralized remains of marine vertebrates, and fossilized remains of terrestrial vertebrates (May and Wallace 2016).

One locality was discovered in marine deposits of the early-Eocene-age Torrey Sandstone (48 to 49 million years old). Recovered fossils included molds of marine invertebrates. The remaining seven localities were found in estuarine deposits of the early-Eocene-age Delmar Formation (49 to 50 million years old). These localities produced shell remains and molds of marine invertebrates, fossilized remains of marine vertebrates, and mineralized remains of terrestrial vertebrates (May and Wallace 2016).

5.4.2 Regulatory Setting

Regulations that apply to cultural resources impacts are the federal and state regulations described here.

5.4.2.1 FEDERAL

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966 is the primary federal law governing the preservation of cultural and historic resources in the United States. The law establishes a national preservation program and a system of procedural protections that encourage the identification and protection of cultural and historic resources of national, state, tribal, and local significance. Primary components of the NHPA include:

- Articulation of a national policy governing the protection of historic and cultural resources.
- Establishment of a comprehensive program for identifying historic and cultural resources for listing in the National Register of Historic Places.
- Creation of a federal-state/tribal-local partnership for implementing programs established by the act.

- Requirement that under Section 106 (Protection of Historic Properties) of the NHPA, federal agencies take into consideration actions that could adversely affect historic properties listed or eligible for listing on the National Register of Historic Places, known as the Section 106 Review Process.
- Establishment of the Advisory Council on Historic Preservation, which oversees federal agency responsibilities governing the Section 106 Review Process.
- Placement of specific stewardship responsibilities on federal agencies for historic properties owned or within their control (Section 110 of the NHPA).

National Register of Historic Places

The National Register of Historic Places (National Register) is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The National Register recognizes resources of local, state, and national significance that have been documented and evaluated according to uniform standards and criteria. Authorized under the NHPA, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The National Register is administered by the National Park Service, which is part of the US Department of the Interior.

To be eligible for listing in the National Register, a resource must meet at least one of four criteria:

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

B. Is associated with the lives of persons significant in our past.

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

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

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites on federal and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that mandates 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 or culturally affiliated Indian tribes.

5.4.2.2 STATE

California Register of Historical Resources

In 1992, Governor Wilson signed Assembly Bill 2881 to establish the California Register of Historical Resources (CRHR). The CRHR is an authoritative guide used by state and local agencies, private groups, and citizens to identify historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse impacts.

The CRHR consists of properties that are listed automatically as well as those that must be nominated through an application and public hearing process. The CRHR automatically includes:

- California properties listed on the National Register or formally Determined Eligible for the National Register.
- California Registered Historical Landmarks from No. 0770 onward.
- California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Resources Commission for inclusion on the CRHR.

The criteria for eligibility of listing in the CRHR are based on the National Register criteria. To be eligible for listing in the CRHR, a property must be at least 50 years old and possess significance at the local, state, or national level under one or more of four criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

B. It is associated with the lives of persons important to local, California, or national history.

C. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values.

D. It has yielded, or has the potential to yield, information important in the prehistory or history of the local area, California, or the nation.

Historical resources eligible for listing in the CRHR may include buildings, sites, structures, objects, and historic districts. Resources less than 50 years old may be eligible if it can be demonstrated that sufficient time has passed to understand their historical importance. Although the enabling legislation for the CRHR is less rigorous than the federal register with regard to integrity, properties are expected to reflect their appearance during their period of significance, as stipulated in Public Resources Code Section 4852.

The CRHR may also include properties identified during historical resource surveys. However, in accordance with Public Resources Code Section 5024.1, the survey must meet all of the following criteria:

- The survey has been or will be included in the State Historical Resources Inventory.
- The survey and the survey documentation were prepared in accordance with OHP procedures and requirements.
- The resource is evaluated and determined by OHP to have a significance rating of Category 1 to 5 on a Department of Parks and Recreation Form 523.

If the survey is five or more years old at the time of the resource's nomination for the CRHR, the survey is updated to identify historical resources that have become eligible or ineligible due to changed circumstances or further documentation and those that have been demolished or altered in a manner that substantially diminishes the significance of the resource.

California Public Resources Code

Archaeological, paleontological, and historical sites are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. In addition, cultural and paleontological resources are recognized as nonrenewable resources and therefore receive protection under the California Public Resources Code and CEQA.

- **California Public Resources Code 5020–5029.5** continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.
- **California Public Resources Code 5079–5079.65** defines the functions and duties of the OHP. The OHP is responsible for the administration of federal- and state-mandated historic preservation programs in California and the California Heritage Fund.
- **California Public Resources Code 5097.5** prohibits a person from moving, destroying, injuring, or defacing any historic or prehistoric ruins; burial grounds; archaeological or vertebrate paleontological site, including fossilized footprints; inscriptions made by human agency; rock art; or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.
- **California Public Resources Code 5097.9–5097.991** provides protection to Native American historical and cultural resources and sacred sites, and identifies the powers and duties of the Native American Heritage Commission. It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

California Code of Regulations Title 14 (CEQA Guidelines)

CEQA Guidelines Section 15064.5 defines historical resources and significant impacts on historical and archaeological resources and Native American and other human remains. Resources eligible for listing on the

CRHR and local register of historical resources, as well as those deemed historically significant by a lead agency (see criteria A through D, above) are considered historical resources.

Historical Resources

Historical resources pursuant to CEQA Guidelines Section 15064.5 are defined in the beginning of this section. Historical resources include: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 CCR, Section 4850 et seq.); (2) a resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant; or (3) any buildings, structures, objects, sites, and districts that have been formally evaluated and found to meet one or more of the significance criteria in CEQA Guidelines Section 15064.5 (a)(3).

Archaeological Resources

CEQA Guidelines Section 15064.5(c) states that CEQA applies to effects on archaeological sites when the following occur: (1) if a project will impact an archaeological site, when a lead agency determines whether the site is an historical resource (as defined in Section 15064.5[a]); (2) if a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code and Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply; (3) if an archaeological site does not meet the criteria defined in subdivision 15064.5(a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources; (4) if an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Senate Bill 18

SB 18 requires a city or county to consult with the NAHC and any appropriate Native American tribe prior to the adoption, revision, amendment, or update of its general plan. Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, the Final Tribal Guidelines advises that SB 18 requirements extend to specific plans as well, because state planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code § 65453).

Assembly Bill 52

The Native American Historic Resource Protection Act (AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to tribal cultural resources (TCR) into the CEQA process. It requires TCRs to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. Projects that require a Notice of Preparation (NOP) for an EIR or Notice of Intent to adopt a ND or MND are subject to AB 52. A significant impact on a TCR is considered a significant environmental impact, requiring feasible mitigation measures.

5.4.2.3 LOCAL

Solana Beach General Plan

The City's General Plan, Conservation and Open Space Element, provides policies regarding the protection of cultural and historic resources in the City.

- **Goal 3.1:** To Protect and Conserve the City's Natural and Cultural Resources
  - **Policy 4.a:** The City shall use the environmental review procedures established by the California Environmental Quality Act (CEQA) to ensure that potential adverse effects upon natural and cultural resources are identified.
  - **Policy 4.b:** The City shall not permit land uses that would have unavoidable significant adverse impacts upon natural or cultural resources unless a statement of overriding considerations is adopted by the Solana Beach City Council.
  - **Policy 4.c:** Technical reports made available to the public in conjunction with environmental documentation shall include summaries written for laypersons (e.g. soils and geology reports that minimize the use of technical jargon).
  - **Policy 6.a:** The City shall complete an inventory of local historic resources and cultural landmarks and shall establish a list of significant resources to be preserved.
  - **Policy 6.b:** The City shall require that sites proposed for future development are to be evaluated by certified archaeologists and/or paleontologists in accordance with the California Environmental Quality Act. Where potentially significant adverse impacts are identified, the city shall require appropriate mitigation measures such as in situ preservation or professional retrieval.
  - **Policy 6.c:** The City shall implement the objectives and policies established in the community design element of the general plan which promote the preservation of historic landmarks, focal points, and special features.
  - **Policy 6.d:** The City shall encourage and support the acquisition of significant cultural resources by private and/or public entities interested in preserving such resources.
  - **Policy 6.e:** The City shall establish a historic preservation section within its zoning ordinance.

City of Solana Beach Municipal Code

SBMC 17.60.160 Historic/Cultural Landmark Designations.

The purpose of these provisions is to establish a procedure for the designation of historic, cultural, archaeological, or architectural landmarks, herein referred to as historic/cultural landmarks.

E. City Council Action. The City Council shall have jurisdiction over the designation of historic/cultural landmarks. If the City Council finds that the building, structure, site, or collection of buildings or sites has historic, cultural, archaeological or architectural values significant in the history of the City, the City Council may initiate the hearings to designate such building, structure, or site as a historic/cultural landmark. Designation of historic/cultural landmarks may include sites listed on the National Register of Historic Sites or sites listed as California Registered Landmarks; however, the City may designate sites which are not listed on federal or state registers.

G. Development Review Permit Required. No building or grading permit shall be issued for the construction or alteration of any building or structure, or site (nor shall any person construct or alter a building, structure, or site) which has a historic/cultural landmark designator applied to the building, structure, or site until a development review permit has been submitted and approved in accordance with SBMC 17.68.040 (Development Review Permits) and the criteria and procedures established by this section. A development review permit is not required for alterations to the interior of a structure which the planning director finds do not degrade or detract from the historic, cultural, archaeological or architectural resource values which qualify the structure as a designated historic/cultural landmark.

I. Development Review Criteria. The general criterion of the development review is that the proposed construction, alteration, demolition, or relocation of any building, structure, or site shall enhance, the maximum extent feasible, and not interfere with, detract from or degrade the historic, cultural, architectural, or archaeological resource values of the designated historic/cultural landmark.

J. Demolition or Relocation of Designated Historic/Cultural Landmarks.

1. No person shall demolish, destroy, or move all or any part of a designated historic/cultural landmark, nor shall any permit be issued for such demolition, moving or earth movement, unless a conditional use permit has been approved by the City Council in accordance with SBMC 17.68.010.

2. A conditional use permit for demolition or moving of a designated historic/cultural landmark shall not be approved unless the City Council finds that one or more of the following conditions exist:

    a. A structure is a hazard to the public health or safety, and repairs or stabilization are not physically possible.

b. The site is required for a public use which will be of more benefit to the public than the historic/cultural landmark and there is no alternative location for the public use.

c. Retention of such landmark or structure thereon would cause undue financial hardship to the owner.

3. A conditional use permit for demolition of a designated historic/cultural landmark shall not be approved unless the structure or object cannot be moved or relocated.

4. A conditional use permit for the relocation of a designated historic/cultural landmark shall not be approved unless the relocation will not destroy the historical, cultural, archaeological or architectural values of the historic/cultural landmark, and the relocation is part of a definitive series of actions which will assure the preservation of the historic/cultural landmark.

Local Coastal Program

Section 10, Archaeology, of Chapter 5, New Development, of the Solana Beach LCP provides policies pertaining to the impact of archaeological resources as a result of new development.

- **Policy 5.51:** Identify and mitigate potential impacts of development on archaeological, paleontological and historic resources.
- **Policy 5.52:** New development shall protect and preserve archaeological, historical and paleontological resources from destruction, and shall avoid, and minimize impacts to such resources.
- **Policy 5.53:** Where development would adversely impact historical, archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.
- **Policy 5.54:** The City shall coordinate with appropriate agencies to identify archaeologically sensitive areas. Such information should be kept confidential to protect archaeological resources.
- **Policy 5.55:** CDPs for new development within archaeologically sensitive areas shall be conditioned upon the implementation of the appropriate mitigation measures.
- **Policy 5.56:** New development on sites identified as archaeologically sensitive shall include on-site monitoring of all grading, excavation, and site preparation that involve earth moving operations by a qualified archaeologist(s), and appropriate Native American consultant(s).
- **Policy 5.57:** The establishment of a museum/visitor center to display local archaeological and/or paleontological artifacts, and to provide public educational information on the cultural and historic value of these resources shall be encouraged.

5.4.3 Methodology

Affinis conducted an archaeological survey for the 2.91-acre parcel on April 12, 2011. A records search from the South Coastal Information Center (SCIC) was conducted for property within a one-mile search radius of the project site. The results of the study are included as Appendices 5.4-1 through 5.4-3 to this EIR.

5.4.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

C-1 Cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5.

C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

C-3 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

C-4 Disturb any human remains, including those interred outside of dedicated cemeteries.

The Initial Study, included as Appendix 2-1, substantiates that impacts associated with the following threshold would be less than significant:

- Threshold C-4

Therefore, this impact is not further addressed in the following DEIR analysis.

5.4.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study identified potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.4-1: Would the project cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5? [Threshold C-1] [Less than significant]

Impact Analysis: CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. The definition of historical resources in accordance with CEQA Guidelines Section 15064.5 (a)(1)-(3) is included in at the beginning of this section. Generally, a resource shall be considered "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1; 14 CCR, §§ 4850 et seq.):

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

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

The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource.

There are no resources on the project site which are considered "historical resources" within the meaning of CEQA. Neither the project site nor the existing structures are listed in, or determined to be eligible for listing in, state or local registers of historical resources. In addition, the City has not determined that the project site or existing structures are "historically significant" within the meaning of CEQA Guidelines section 15064.5(a)(3). The house constructed in 1957 on the project site does not sufficiently reflect the city's early development and was not found to qualify under Criterion A. The structure does not reflect special elements of the city's development to a greater extent than other typical structures of this era. An occupancy list and chain of title of owners are provided, and no significant associations or connections with historical persons were found. Therefore, the house was not found to qualify under Criterion B. The home is not significant under Criterion C because it fails to adequately embody the Minimal Traditional or Minimal Ranch architectural style due to a lack of original integrity—that is, a series of alterations and the moving of the resource in 1964. Lastly, the home's architect is unknown and therefore the home could not qualify under Criterion D as representative of the notable work a known master architect, nor does this home qualify the builder or architect to be considered a Master Architect or Master Builder (May and Wallace 2016).

In addition, based on surface examination and six shovel tests, BFSA concluded that the site is not important by CEQA standards based on a lack of artifacts, unique elements, and integrity (Helix 2016). Therefore, the proposed project would not have a significant impact on historical resources.

Impact 5.4-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? [Threshold C-2] [Less than Significant with Mitigation Incorporated]

Impact Analysis: CEQA Guidelines Sections 15064.5(c)(1)–(4) state that CEQA applies to effects on archaeological sites (defined in Archaeological Resources in Section 5.4.2.2. State, above). Archaeological sites include prehistoric and historic sites. An archaeological site is the location of a significant event; a prehistoric or historic occupation or activity; or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure (OHP 1995).

An isolate containing pieces of shell, scattered and probably in secondary context, was originally recorded in May of 2000 by ASM Affiliates during a survey of the I-5 right-of-way on the west side of the project site. The site, CA-SDI-15855, consists of a sparse, shallow deposit of heavily fragmented marine shell in a highly disturbed context. No artifacts or evidence of artifacts were found, so it was impossible to date the site.

With the exception of CA-SDI-15885, within the project area, and CA-SDI-13484, mapped 500 feet to the southwest, none of the recorded archaeological sites are closer than approximately 0.5 mile from the project site. Six of the recorded sites were along the northern edge of the San Dieguito River Valley, south of the project area. Other sites were on ridge fingers or along drainages to the north of the project site, near the southern margins of San Elijo Lagoon.

The project site has been subject to a great deal of disturbance from a previous palm tree nursery and residential use. Brian F. Smith & Associates (BSFA) personnel visited the project site in 2000 as part of a survey and testing program covering the current project site, and found that the site was not important by CEQA standards based on lack of artifacts, unique elements, and integrity (Helix 2016). The site was determined not to be a significant cultural resource. However, in the unexpected event that grading and excavation activities during construction of the proposed project unearth intact archaeological materials, a potential impact could result. Given that archaeological resources were previously discovered on the site, archaeological monitoring is recommended during any ground disturbance that extends beyond previously disturbed depths, in order to protect any previously unknown subsurface cultural deposits, including during any pre-construction soil testing and the initial grading of the site. In the event that any previously undetected cultural resources are encountered, all work should cease in the vicinity of the discovery in order to evaluate findings and determine whether additional archaeological work is needed. Impacts to archaeological resources are considered potentially significant. Accordingly, the following mitigation measure would be required:

Mitigation Measure

CUL-1 Prior to the start of any ground-disturbing activity, the project applicant shall retain an archaeological monitor, approved by the City of Solana Beach (City), to monitor ground-disturbing activities associated with the proposed project, including but not limited to grading, excavation, brush clearance, and grubbing. The archaeological monitor shall conduct preconstruction cultural resources worker sensitivity training to bring awareness to personnel of actions to be taken in the event of a cultural resources discovery. The duration and timing of monitoring shall be determined by the qualified archaeologist in consultation with the City. Initially, all ground-disturbing activities associated with the proposed project shall be monitored. However, the qualified archaeologist, based on observations of soil stratigraphy or other factors, and subject to the approval of the City, may reduce the level of monitoring as warranted. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor shall have the authority to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated. If the find is determined to be potentially significant, the archaeologist, in consultation with the City and group(s) (if the find is a prehistoric or Native American resource), shall develop a treatment plan. Construction activities shall be redirected to other work areas until the treatment plan has been implemented or the qualified archaeologist determines that work can resume in the vicinity of the find.

Level of Significance after Mitigation

Mitigation measure CUL-1 would reduce potential impacts to archaeological resources to a level that is less than significant.

Impact 5.4-3: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? [Threshold C-3] [Less than Significant with Mitigation Incorporated]

Impact Analysis: The Torrey Sandstone underlying the project site is assigned a moderate sensitivity for paleontological resources. Depending on the depth of excavation, ground-disturbing activities associated with the proposed project have the potential to impact previously undisturbed sedimentary deposits of the Torrey Sandstone, and thus have the potential to cause negative impacts to paleontological resources preserved in these deposits (SDNHM 2015).

According to the City's General Plan Program EIR, soils such as those beneath the site have a moderate sensitivity for paleontological resources. General Plan Policy OS-1.7 requires development projects to monitor for paleontological resources during grading in native soils if grading quantities exceed 2,000 cubic yards and 10 feet in depth in geologic formations with a known "moderate" sensitivity for paleontological resources. Site-disturbing activities for the proposed project therefore have the potential to affect paleontological resources.

Project grading would require moving 28,000 cubic yards of soil of earthwork, with an estimated export of about 26,800 cubic yards to an approved fill site. Therefore, construction activities requiring excavations to a depth below the Torrey Sandstone may encounter paleontological resources and could result in significant impacts unless proper mitigation measures are implemented. Impacts to paleontological resources are considered potentially significant. Accordingly, the following mitigation measure would be required:

Mitigation Measure

CUL-2 Prior to the issuance of grading permits, the project applicant shall retain a qualified paleontologist, satisfactory to the City, for the project. The paleontologist shall prepare a paleontological monitoring program, which must be reviewed and approved by the City prior to the commencement of any ground-disturbing activities on the project site. All grading and other significant ground-disturbing activities of more than 2,000 cubic yards and more than 10 feet below the ground surface shall be monitored by a paleontological monitor. If any evidence of paleontological resources is discovered, the project applicant immediately shall take the following measures:

- All below-grade work shall stop within a 50-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified paleontologist.
- A qualified paleontologist in coordination with the City shall assess the find(s) and determine if they are scientifically important. If the find(s) are of value then:
  - Scientifically important fossils shall be prepared by the paleontologist and/or his/her designee(s) to the point of identification, identified to the lowest taxonomic level possible, and curated in a museum repository with permanent, retrievable storage.

- Significant paleontological resources shall be preserved as determined necessary by the paleontological monitor.
- Excavated finds shall be offered to the San Diego Natural History Museum or its designee for curation on a first-refusal basis. After which, finds shall be offered to an accredited and permanent scientific institution for the benefit of current and future generations.
- Within 60 days after completion of earth-moving activities, the paleontologist shall prepare a report summarizing the finds and shall include the inspection period, an analysis of any resources found, and the present repository of the items.
- The paleontologist's report shall be submitted to the City for its review and approval within 48 hours after it is prepared. Any resulting reports shall also be filed with the permanent scientific institution where the resources are curated.

Level of Significance after Mitigation

Mitigation measure CUL-2 would reduce potential impacts to paleontological resources to a level that is less than significant.

5.4.6 Cumulative Impacts

Other development projects in the region as shown in Table 3-1, *Related Cumulative Projects*, would also involve ground disturbances and thus could disturb surface or buried archaeological and/or paleontological resources. The potential for cumulative impacts to cultural resources from other projects is unknown but likely similar due to their location in the area. Destruction of significant cultural resources from each of these projects would constitute a significant cumulative impact. Because the proposed project would not result in a significant impact on historical resources, its individual contribution to cumulative impacts to historical resources would not be cumulatively considerable.

However, similar to the proposed project, other projects would require mitigation of impacts, including construction monitoring, testing, archiving, and recovery of any found resources prior to development of the site. The proposed project has incorporated a mitigation measure that would reduce the potential project-related impacts to less than significant. Therefore, the project would not result cause or contribute to significant cumulative impacts to cultural resources. In consideration of the preceding factors, the project's contribution to cumulative cultural resource impacts would be rendered less than significant, and therefore, project impacts would not be cumulatively considerable.

5.4.7 References

Helix Environmental Planning (Helix). 2016, January 29. 959 Genevieve Street/Residential Care Facility Cultural Resources Study Addendum. (EIR Appendix 5.4-2)

May, Ronald V., and Kiley Wallace. 2016, March. Department of Parks and Recreation (DPR) Form for 959 Genevieve Street, Solana Beach, California, for the City of Solana Beach. (EIR Appendix 5.4-1)

Office of Historic Preservation (OHP). 1995, March. Instructions for Recording Historical Resources. http://ohp.parks.ca.gov/pages/1054/files/manual95.pdf.

San Diego Natural History Museum (SDNHM). 2015, November 12. Paleontological Record Search for the Solana Beach Seniors Project (APN 289-390-51). (EIR Appendix 5.4-3)

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5.5 GEOLOGY AND SOILS

This section of the DEIR evaluates the potential for implementation of the proposed project to impact geological and soil resources in the City of Solana Beach. The analysis in this section is based in part on the following technical report:

- *Preliminary Geotechnical Investigation for the Proposed Residential Care Facility*, Matrix Geotechnical Consulting, Inc., May 22, 2014 (including response to comment letter, January 6, 2016).

A complete copy of this study is included in the Technical Appendices to this Draft EIR (Appendix 5.5-1).

5.5.1 Environmental Setting

5.5.1.1 REGIONAL SETTING

Geologic Setting

The project site is in the Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges are characterized by steep, elongated valleys that trend west to northwest.

Faulting and Seismicity

The nearest faults to the project site are the Rose Canyon Fault Zone, offshore about 3.5 miles to the west; the Coronado Bank Fault Zone, offshore about 17.4 miles to the west; the San Diego Trough, offshore about 29 miles to the west; and the Elsinore Fault Zone, about 28 miles to the northeast (see Figure 5.5-1, *Fault Map*). Segments of each of those four faults are considered active, that is, they show evidence of surface displacement within the last 11,700 years. The segment of the Rose Canyon Fault Zone nearest to the project site (about 3.5 miles) is not mapped as active; the nearest active traces of the Rose Canyon Fault Zone are an offshore segment about 5.6 miles to the northwest and an offshore segment about 8.0 miles to the southwest (CGS 2017, 2007).

Surface Rupture of an Active Fault

The project site is not in an Alquist-Priolo Earthquake Fault Zone and there are no known faults (active, potentially active, or inactive) onsite. The possibility of surface rupture of a known active fault is considered nil.

Ground Shaking

The peak ground acceleration onsite with a 2 percent chance of exceedance in 50 years—that is, an average return period of 2,475 years—is 0.509g, where g is the acceleration of gravity (CGS 2017).[1] Acceleration of 0.51g correlates with intensity VIII on the Modified Mercalli Intensity (MMI) Scale (Wald et al. 1999), a subjective scale of how earthquakes are felt by people and the effects of earthquakes on buildings. The MMI

[1] The peak ground acceleration obtained from the California Geological Survey (Ground Motion Interpolator, http://www.quake.ca.gov/gmaps/PSHA/psha_interpolator.html, September 12, 2017), 0.509g, corresponds to two of the seismic design parameters calculated in the geotechnical investigation report, each of which were reported as 0.51g.

Scale is a 12-point scale—Intensity I earthquakes are generally not felt by people, and in Intensity XII earthquakes damage is total and objects are thrown into the air (USGS 2017).

In an intensity VIII earthquake, damage is slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; and great in poorly built structures, where chimneys, factory stacks, columns, monuments, and walls fall and heavy furniture is overturned (USGS 2017).

Earthquake-Induced Liquefaction and Seismic Settlement

Liquefaction is a seismic phenomenon in which loose, saturated, granular soil behaves similarly to a fluid when subjected to strong ground shaking. Liquefaction occurs when three general conditions exist: 1) shallow groundwater; 2) low density non-cohesive (granular) soil; and 3) high-intensity ground motion. Dry cohesionless soil may experience compaction during an earthquake. In general, cohesive soil is not considered susceptible to liquefaction. The site is underlain by Torrey Formation Sandstone, and the potential for liquefaction is considered negligible because of the absence of shallow groundwater and lack of low-density cohesionless soil. A dry sand settlement of approximately one inch is anticipated. Differential settlement of about 0.5 inch may be used for design purposes.

Landslides

The site slopes gently and is not subject to earthquake-induced landslides.

5.5.1.2 PROJECT SITE

Topography

The site and surroundings slope gently to the west; elevations onsite range from about 112 to 148 feet above mean sea level. Interstate 5, next to the west site boundary, is elevated on an embankment about 122 to 125 amsl.

Geologic Units

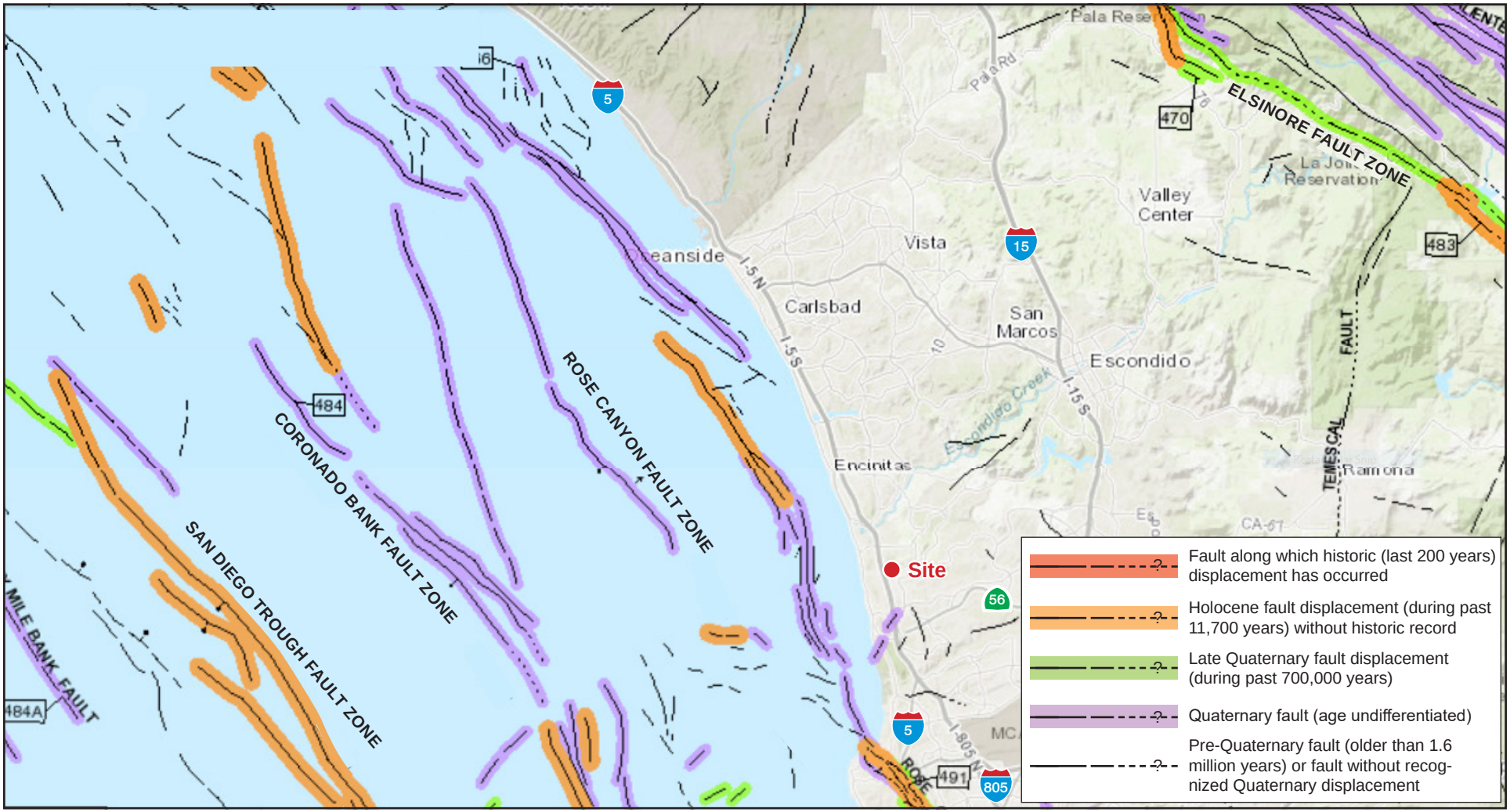
The following geologic units were observed onsite:

Artificial Fill, Undocumented (Afu)**.** Undocumented artificial fill was encountered within the existing residential pad and driveway areas within approximately 1 foot of the ground surface. This soil consists predominantly of light brown, dry to damp, medium dense silty sand.

Residual Soil. Residual soil was encountered above the Tertiary Torrey Sandstone throughout the site to a maximum depth of approximately 2.5 feet below ground surface. This soil consists predominantly of dark brown to brown, dry to moist, loose to medium dense silty sand.

Figure 5.5-1 - Fault Map

5. Environmental Analysis



NOTE: Fault traces on land are indicated by solid lines where well located, by dashed lines where approximately located or inferred, and by dotted lines where concealed by younger rocks or by lakes or bays. Fault traces are queried where continuation or existence is uncertain.

NOT TO SCALE

Source: Pacific Sound Investors, 2017

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Quaternary Alluvium (Qal)**.** Quaternary young alluvium was mapped within the drainage channel and low-relief portions of the site to an estimated depth of 4 to 6 feet below existing surface; The Quaternary Period extends from approximately 2.59 million years ago to the present (USGS 2010). These alluvial deposits consist predominantly of silty sand and sand which are generally light brown to dark brown, damp to moist, and loose to medium dense.

Tertiary Torrey Sandstone (Tt)**.** Tertiary Torrey Sandstone was encountered below the alluvium and extended across the site to the depths of the borings ranging from 16.5 feet to 50.5 feet below ground surface. The Tertiary Period extends from about 65.5 to 2.59 million years ago (USGS 2010). This formation consists predominantly of light brown to red brown, dry to moist, moderately hard to very hard, massive, slightly to intensely weathered sandstone.

Geologic Hazards

Subsidence

Major causes of ground subsidence are withdrawal of subsurface fluids such as oil or groundwater. The project site is not mapped in an area of known subsidence by the California Department of Water Resources (DWR 2017). The Santa Fe Irrigation District, which provides water to the City of Solana Beach, does not use groundwater (RMC 2016), and no oil wells in the City of Solana Beach are mapped on the Well Finder maintained by the Division of Oil, Gas, and Geothermal Resources (DOGGR 2017).

Collapsible Soils

Collapsible soils shrink upon being wetted and/or subjected to a load. The uppermost 2 to 6 feet of soil onsite are considered potentially collapsible.

Landslides

Strong ground shaking can worsen existing slope instability. Earthquake-induced landslides can overrun structures, harm people, sever utility lines, and block roads, thereby hindering rescue operations after an earthquake. Conditions contributing to such landslides include high earthquake potential; rapid uplift and erosion resulting in steep slopes and deeply incised canyons; highly fractured and folded rock; and rock with inherently weak components, such as silt or clay layers. The site slopes gently; and no landslides on or next to the site were identified in the geotechnical investigation.

Expansive Soils

Expansive soils swell when they become wet and shrink when they dry out; such swelling and shrinking can damage foundations and buildings. A test of near-surface soil yielded a very low expansion potential.

Erosion

Erosion is the movement of soil and rock from place to place. Erosion is a natural process; common forces that cause erosion include wind and flowing water. The project site is gently sloping and is vegetated—except for approximately 0.2 acre in the northwest part of the project site—and thus is not especially susceptible to

erosion. Ground-disturbing activities such as grading can greatly increase the rate of erosion if effective erosion-control measures are not employed.

5.5.2 Regulatory Setting

5.5.2.1 FEDERAL

Code of Federal Regulations, Title 40, Parts 122 et seq.

National Pollution Discharge Elimination System (NPDES) regulations are issued by the U.S. Environmental Protection Agency (EPA) for implementation of requirements of the Clean Water Act (US Code, Title 33, Sections 1342 et seq.). All counties with storm drain systems that serve a population of 50,000 or more, as well as construction sites of one acre or more, must file for and obtain an NPDES permit. The State Water Resources Control Board (SWRCB) issues the statewide general NPDES Permit for stormwater discharges from construction sites. Under this Construction General Permit, construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for discharges of stormwater or be covered by the Construction General Permit. Coverage by the Construction General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). Each applicant under the Construction General Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must list best management practices (BMPs) to be used on the construction site to protect stormwater runoff and must contain a visual monitoring program; a chemical monitoring program for "nonvisible" pollutants to be implemented if there is a failure of BMPs; and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters. The NPDES Program is a federal program which has been delegated to the State of California for implementation through the SWRCB and the nine Regional Water Quality Control Boards. In California, NPDES permits are also referred to as waste discharge requirements that regulate discharges to waters of the United States.

5.5.2.2 STATE

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act requires the state geologist to delineate earthquake fault zones along faults that are "sufficiently active" and "well defined." The act requires that cities and counties withhold development permits for a site in an earthquake fault zone until geologic investigations demonstrate that the site is not threatened by surface displacements from future faulting. An active fault is one showing expression of surface rupture within the last 11,000 years. Pursuant to this act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act (SHMA) was adopted by the state in 1990 to protect the public from the effects of nonsurface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure. The goal of the act is to minimize loss of life and property by identifying and mitigating seismic hazards. The California Geological Survey prepares seismic

hazard zone maps and provides them to local governments; these maps identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. SHMA requires responsible agencies to only approve projects within seismic hazard zones following a site-specific investigation to determine if the hazard is present, and if so, the inclusion of appropriate mitigation(s). In addition, the SHMA requires real estate sellers and agents at the time of sale to disclose whether a property is within one of the designated seismic hazard zones.

2016 California Building Code

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission, and the code is updated every three years. It is in Title 24, Part 2, of the California Code of Regulations. The most recent building standard adopted by the legislature and used throughout the state is the 2016 CBC, which took effect on January 1, 2017. Local jurisdictions may add amendments based on local geographic, topographic, or climatic conditions. These codes provide minimum standards to protect property and people by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC's provisions for earthquake safety are based on factors such as occupancy type, the types of soil and rock onsite, and the strength of ground motion with a specified probability of occurring at the site.

Chapter 18 of the CBC, Soils and Foundations, specifies the level of soil investigation required by law. Requirements in Chapter 18 apply to building and foundation systems and consider reduction of potential seismic hazards.

Requirements for geotechnical investigations are included in Appendix J, Section J104, of the CBC and adopted by reference in the SBMC. The California Health and Safety Code, Sections 17953 to 17955, and Section 1803 of the CBC, require soil testing and subsurface investigations subdivisions and specific types of structures. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

Storm Water Pollution Prevention Plans

The SWRCB issued a statewide general NPDES Permit for stormwater discharges from construction sites in 2012 pursuant to the federal Clean Water Act. Under this statewide permit, construction sites with a disturbed area of one or more acres are required to obtain individual NPDES permits for stormwater discharges or be covered by the general permit. Coverage by the general permit is accomplished by completing and filing a Notice of Intent with the SWRCB and developing and implementing a SWPPP. Each applicant under the Construction General Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must estimate sediment risk from construction activities to receiving waters; list BMPs to be implemented on the construction site to protect stormwater runoff; and contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there

is a failure of BMPs, and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters.

5.5.2.3 LOCAL

Solana Beach General Plan

The General Plan provides policies and objectives to reduce geologic hazards associated with new development. The General Plan Safety Element identifies existing conditions and issues involving potential hazards and public safety considerations affecting land developments in Solana Beach. The goals and policies provide for public health, safety, and welfare.

Goal 3.1: To Minimize Hazards to Public Health, Safety, and Welfare Resulting from Natural and Man-Made Phenomena.

- **Policy 1.a:** The City shall require geotechnical investigations by a certified engineering geologist for all grading and construction proposed within any area of significant erosion, slope instability, and/or areas subject to severe seismic hazards, including inland and coastal bluffs.

- **Policy 1.b:** The City shall provide qualified expertise for the review of geotechnical reports and sufficient personnel for the field inspection of grading operations and construction.

- **Policy 1.c:** The City shall require construction to be in conformance with the Uniform Building Code, specifically Chapter 23 as it provides for earthquake resistant design, Chapter 70 as it provides for excavation and grading, and with the City's adopted hillside development ordinance.

- **Policy 1.e:** The City shall encourage program to abate or modify structures deemed hazardous to human habitation.

- **Policy 3.a:** The City shall require the implementation of adequate erosion control measures for development projects to minimize sedimentation damage to drainage facilities.

The Open Space and Conservation Element of the City of Solana Beach is a combined element that describes existing conditions and issues related to geology and soils. The goals and policies ensure that natural resources are managed wisely.

Goal 3.1: To Protect and Conserve the City's Natural and Cultural Resources.

- **Policy 1.b:** The city shall require the incorporation of adequate erosion control measures into development projects that may otherwise impact water resources adversely. Such measures shall be reviewed by the Planning and Engineering Departments and shall include sandbagging of newly graded slopes, prompt planting of disturbed areas, phasing of grading and construction activities to minimize exposed areas susceptible to erosion, and the routing of runoff flows through desilting basins prior to discharge into any watercourse.

- **Policy 4.a:** The city shall use the environmental review procedures established by the California Environmental Quality Act (CEQA) to ensure effects upon natural and cultural resources are identified.
- **Policy 4.b:** The city shall not permit land uses that would have unavoidable significant adverse impacts upon natural or cultural resources unless a statement of overriding considerations is adopted by the Solana Beach City Council.
- **Policy 4.c:** Technical reports made available to the public in conjunction with environmental documentation shall include summaries written for laypersons (e.g., soils and geology reports that minimize the use of technical jargon).

City of Solana Beach Municipal Code

The City of Solana Beach Municipal Code (SBMC) identifies building and construction provisions in order to ensure that geological and soil impacts are minimized as a result of development.

SBMC 15.08.10 Adoption of the California Building Code, Part 2 Title 24 of the California Code of Regulations

The City of Solana Beach has adopted the 2016 California Building Code, with local amendments, as Chapter 15.08 of the SBMC.

SBMC 15.40 Excavation and Grading

The purpose of this chapter is to establish the minimum requirements for grading, excavating and filling of land, to provide for the issuance of permits and to provide for the enforcement of the requirements. The provisions of this chapter shall be administered to achieve the following goals:

A. Ensuring that future development of lands in the manner most compatible with surrounding areas and so as to have the least effect upon other persons or lands, or upon the general public;

B. Ensuring that soil will not be stripped and removed from lands in the City, leaving the same barren, unsightly, unproductive, and subject to erosion and the hazards of subsidence and faulty drainage;

C. Encouraging the planning, design and development of building sites in such fashion as to provide the maximum in safety and human enjoyment, while adapting development to and taking advantage of the best use of the natural terrain;

D. Encouraging and directing special attention toward retention, insofar as practical, of the natural planting and a maximum number of existing trees;

E. Ensuring that pollutants discharged from the site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality objectives;

F. Ensuring compliance with the City's storm water rules and regulations found in Chapter 13.10 SBMC and the City of Solana Beach SUSMP and in all implementing regulations which include the Jurisdictional

Urban Runoff Management Program, the City's storm water manual and San Diego Regional Water Quality Control Board NPDES Permit No. R9-2007-0001, as amended.

Local Coastal Program

The Local Coastal Program provides recommendations for development pertaining to project-related grading, maintenance of slopes and hillsides, and incorporating BMPs to improve geologic stability. The following provisions from the Local Coastal Program help reduce geologic hazard impacts with new development projects and are relevant to the proposed project.

- **Policy 3.106:** New development shall protect the absorption, purifying, and retentive functions of natural systems that exist on the site. Where feasible, drainage plans shall be designed to complement and utilize existing drainage patterns and systems, conveying drainage from the developed area of the site in a non-erosive manner. Disturbed or degraded natural drainage systems shall be restored, where feasible, except where there are geologic or public safety concerns.

- **Policy 4.1:** The City of Solana Beach contains areas subject to natural hazards that present risks to life and property. These areas require additional development controls to minimize risks. Potential hazards in the City include, but are not be limited to, the following:
  - Coastal Bluffs
  - Slopes with low stability and high landslide potential: Hillside areas that have the potential to slide, fail, or collapse.
  - Seismic ground shaking: Shaking induced by seismic waves traveling through an area as a result of an earthquake on a regional geologic fault.
  - Liquefaction: Areas where water-saturated artificial fill or sediment can potentially lose strength and fail during strong ground shaking.
  - Flood prone areas most likely to flood during major storms.
  - Wave action: The entire shoreline is subject to direct wave attack and damage from wave activity due to a lack of protective beach.
  - Tsunami: Low lying shoreline areas subject to inundation by a sea wave generated by local or distant earthquake, submarine landslide, subsidence, or volcanic eruption.
  - Fire hazard: Areas subject to major wildfires located in the City's WUI [Wildland Urban Interface].

- **Policy 4.2:** Minimize the exposure of new development to geologic, flood and fire hazards. The HOZ policies shall apply to all areas designated as within the HOZ on the City of Solana Beach LUP map (Exhibit 5-2) or where site-specific analysis indicates that the parcel contains slopes exceeding 25% grade.

- **Policy 4.7:** New development shall provide adequate drainage and erosion control facilities that convey site drainage in a non-erosive manner in order to minimize hazards resulting from increased runoff, erosion, and other hydrologic impacts to streams.

- **Policy 4.9:** Information should be provided to the public concerning hazards and appropriate means of minimizing the harmful effects of natural disasters upon persons and property relative to siting, design and construction.

- **Policy 4.10:** On ancient landslides, unstable slopes, and other geologic hazard areas new development shall only be permitted where an adequate factor of safety can be provided.

5.5.3 Methodology

A geotechnical investigation of the project site was completed by Matrix Geotechnical Consulting, Inc., on May 22, 2014 (Appendix 5.5-1). The investigation consisted of a review of published geologic maps and other literature; geologic field mapping of the site; a review of previous subsurface exploration and laboratory testing done by others; a review of the project plans and preparation of a report stating findings, conclusions, and recommendations.

5.5.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

G-1 Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42.)

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

G-2 Result in substantial soil erosion or the loss of topsoil.

G-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- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

G-4 Be located on expansive soil, as defined in Table 18-1B of the Uniform building Code (1994), creating substantial risks to life or property.

G-5 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The Initial Study, included as Appendix 2-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold G-1.i
- Threshold G-1.ii
- Threshold G-1.iii
- Threshold G-4
- Threshold G-5

Therefore, these impacts are not addressed in the following DEIR analysis.

5.5.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.5-1:	Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides? [Threshold G-1.iv] [Less than significant]

Impact Analysis: Project development would involve grading of existing manufactured slopes. Grading could cause some slope instability unless slope stability measures are implemented during grading and construction. A proposed slope between the south half of the west side of the building and the Caltrans I-5 right-of-way would have a slope of 2:1 (horizontal:vertical) and be up to about 12 feet high. The proposed slope on the east side of the site at the south end would have a slope of 1.5:1 and be up to approximately 15 feet high.

Section 4.0, Recommendations, of the geotechnical investigation report (Appendix 5.5-1) recommends some of the following measures for slope stability and retaining walls on the project site: retaining walls should be constructed and backfilled as soon as possible after backcut excavation to reduce potential for localized slope instability; retaining wall structures must be appropriately waterproofed and constructed with backdrains to include perforated drain pipe; temporary excavations over five feet should be slot-cut, shored, or cut at a 1:1 slope gradient; and temporary cuts should not be left open for an extended period of time. The project applicant would comply with the recommendation in the geotechnical investigation report for slope stability and retaining walls. Project development would not cause substantial slope instability. Impacts would be less than significant.

Impact 5.5-2:	Would the proposed project result in substantial soil erosion or the loss of topsoil? [Threshold G-2] [Less than significant]

Impact Analysis:

Construction

Grading temporarily increases the potential for erosion by removing protective vegetation, changing natural drainage patterns, and constructing slopes. Common means of soil erosion from construction sites include water, wind, and being tracked offsite by vehicles. The project applicant would have a SWPPP prepared for the project prior to grading that would be implemented during construction; the SWPPP would be required to meet the requirements of the state NPDES general construction permit and would be approved by the City of Solana Beach as a component of the Structural Development Permit. The SWPPP specifies BMPs for minimizing erosion and sedimentation. Erosion control BMPs cover and/or bind the soil surface to prevent soil particles from being detached and transported by water or wind—examples include mulch, geotextiles, mats, hydroseeding, earth dikes, and swales. Sediment control BMPs filter out soil particles that have been detached and transported in water—examples include barriers such as straw bales, sandbags, fiber rolls, and gravel bag berms; desilting basins; and cleaning measures such as street sweeping.

Loss of Topsoil

Existing site elevations range from approximately 140 feet above mean sea level (amsl) in the southern and northeastern areas to approximately 110 feet amsl in the northwest corner. Project implementation would require moving 28,000 cubic yards of soil, with an estimated export of about 26,800 cubic yards offsite. The largest volume of soil removal would occur at the southern portion of the site with project implementation, and the greatest grade difference would be at the southeastern portion of the site where the offsite grade would be 145 feet amsl and the grade of the proposed memory garden would be approximately 129.5 feet amsl. The project would include construction of retaining walls along the western and eastern perimeters of the site to improve slope stability, in accordance with the recommendations of the geotechnical report.

If qualified, the proposed development would participate in the City's SCOUP, a comprehensive, long-term shoreline management program where all beach-quality material targeted for off-site export would be placed on City beaches for the dual purpose of providing both shoreline protection and public recreational benefit.

Site grading would require removal of topsoil from the site. The existing topsoil does not support agricultural crops or sensitive native habitat; therefore, the loss of topsoil is not considered an impact. Impacts would be less than significant.

Post-construction/Operational Phase

After construction is complete, the entire site would be covered with the building, parking lots, driveways, walkways, and landscaping; soil onsite would not be subject to substantial erosion. Impacts would be less than significant.

Impact 5.5-3: 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- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? [Threshold G-3] [Less than significant]

Impact Analysis:

Landslides

Project development would involve site grading and creation of slopes in parts of the site up to about 15 feet high and with grades up to 1.5:1 (horizontal:vertical) at the southern portion of the site (see Figure 5.5-2, *Proposed Slopes*). The project would include construction of retaining walls along the western and eastern perimeters of the site to improve slope stability in accordance with the recommendations of the geotechnical report. Compliance with the recommendations in Section 4.0, Recommendations, of the geotechnical report is required. Impacts would be less than significant.

Lateral Spreading

Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. Hazards from lateral spreading would be negligible due to the very low potential for liquefaction in subsurface site soils.

Subsidence

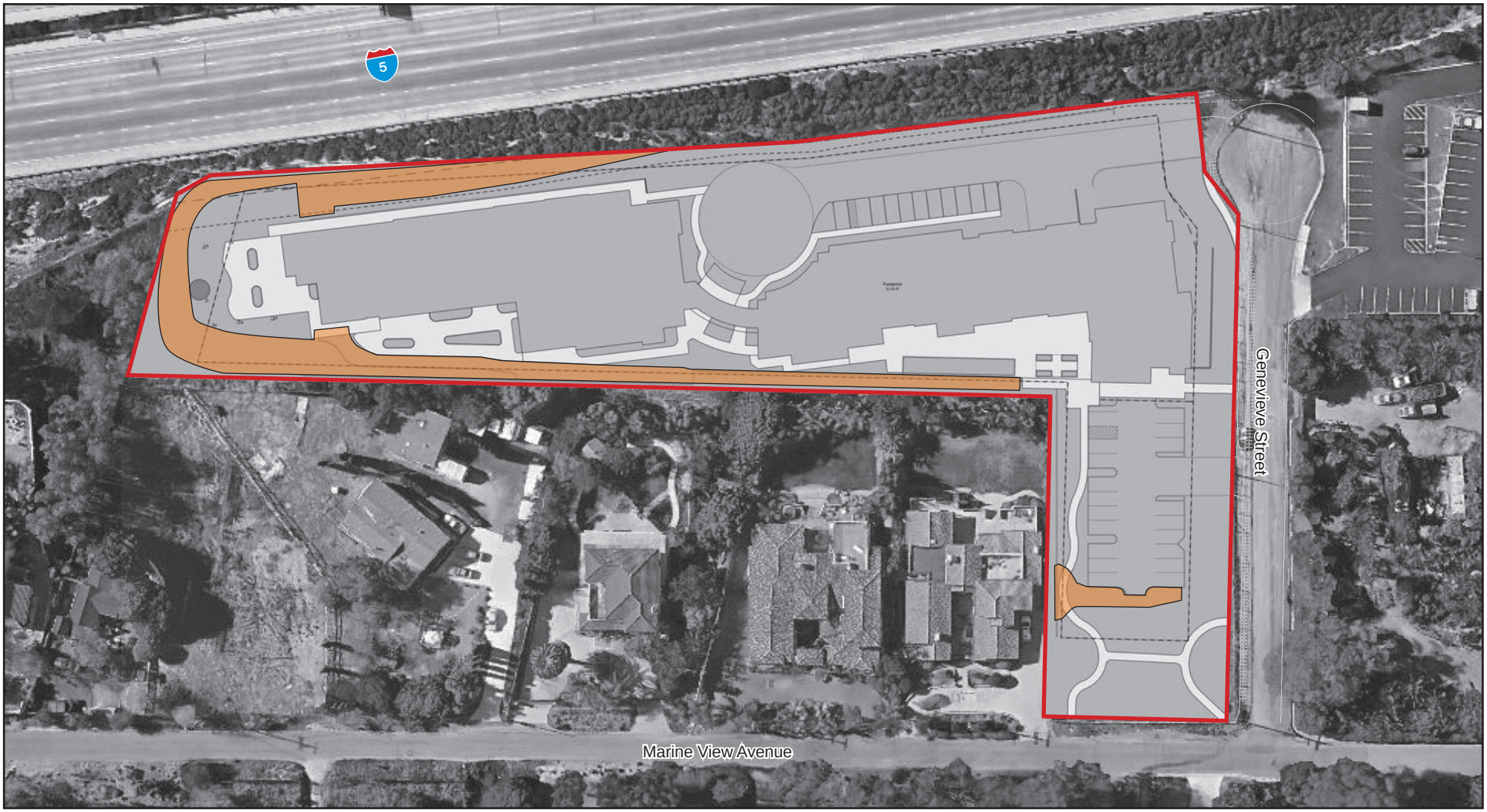
Project development would not exacerbate ground subsidence hazards. Major causes of ground subsidence are withdrawal of subsurface fluids such as oil and groundwater. The project site is not mapped in an area of known subsidence by the California Department of Water Resources (DWR 2017). The Santa Fe Irrigation District, which provides water to Solana Beach, does not use groundwater (RMC 2016), and no oil wells in Solana Beach are mapped on the Well Finder maintained by the Division of Oil, Gas, and Geothermal Resources (DOGGR 2017). Impacts would be less than significant.

Collapsible Soils

Collapsible soils shrink upon being wetted and/or being subject to a load. The uppermost 2 to 6 feet of sandstone soil onsite are considered potentially compressible. The geotechnical investigation report recommends removal of soil to depths of 2 to 6 feet and 5 feet around the building foundation, and replacement of removed soil with compacted fill. Compacted fill material would not be considered collapsible soils. The project is designed to be constructed in conformance with the recommendations in the geotechnical report and the project applicant's implementation of the recommendations will be required as a condition of approval. Accordingly, potential impacts would be less than significant.

Figure 5.5-2 - Proposed Slopes

5. Environmental Analysis



Project Site
Proposed Slopes
Lot Line

0 80
Scale (Feet)

Source: Pacific Sound Investors, 2017

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5.5.6 Cumulative Impacts

Geology and soils impacts are site specific and generally do not combine to result in cumulative impacts. Similar to the proposed project, future development projects would be required to comply with applicable state and local building regulations and geotechnical report recommendations. Future cumulative projects, listed in Table 3-1, would be designed and built in accordance with applicable standards in the CBC and City of Solana Beach Building Code. Site-specific geologic hazards would be addressed in each project's required geotechnical investigation. In consideration of the preceding factors, the project's contribution to cumulative geology and soils impacts is less than significant; therefore, project impacts would not be cumulatively considerable.

5.5.7 References

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5.6 GREENHOUSE GAS EMISSIONS

This section of the DEIR evaluates the potential for the implementation of the proposed project to cumulatively contribute to climate change and greenhouse gas (GHG) emissions. Because no single project is large enough to result in a measurable increase in global concentrations of GHG emissions, climate change impacts of a project are considered on a cumulative basis.

The analysis in this section is based in part on the following technical report(s):

- *Global Climate Change Analysis,* Ldn Consulting, August 7, 2017.

A complete copy of this study is included in the Technical Appendices to this Draft EIR (Appendix 5.6-1).

5.6.1 Environmental Setting

5.6.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed during the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[1,2] The major GHGs are briefly described below.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.

[1] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, because it is considered part of the feedback loop rather than a primary cause of change.

[2] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017b). However, state and national GHG inventories do not include black carbon yet due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.

  - ***Chlorofluorocarbons (CFCs)*** are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere, stratosphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down the ozone layer. These gases are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

  - ***Perfluorocarbons (PFCs)*** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoro methane [CF_4] and perfluoro ethane [C_2F_6]) were introduced as alternatives, along with hydrofluorocarbons (HFCs), to ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high GWP.

  - ***Sulfur Hexafluoride (SF_6)*** is a colorless gas soluble in alcohol and ether, and slightly soluble in water. SF_6 is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.

  - ***Hydrochlorofluorocarbons (HCFCs)*** contain hydrogen, fluorine, chlorine, and carbon atoms. Although they are ozone-depleting substances, they are less potent than CFCs. They have been introduced as temporary replacements for CFCs.

  - ***Hydrofluorocarbons (HFCs)*** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs. (IPCC 1995; USEPA 2017)

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.6-1, *GHG Emissions and Their Relative Global Warming Potential Compared to CO_2*. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fourth Assessment Report (AR4) GWP values for CH_4, a project that generates 10 metric tons (MT) of CH_4 would be equivalent to 250 MT of CO_2.

Table 5.6-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	SAR Atmospheric Lifetime (Years)	AR4 Atmospheric Lifetime (Years)	SAR GWP Relative to CO_2[1]	AR4 GWP Relative to CO_2[1]
Carbon Dioxide (CO_2)	50 to 200	50 to 200	1	1
Methane[2] (CH_4)	12 (±3)	12	21	25
Nitrous Oxide (N_2O)	120	114	310	298
Hydrofluorocarbons:				
HFC-23	264	270	11,700	14,800
HFC-32	5.6	4.9	650	675
HFC-125	32.6	29	2,800	3,500
HFC-134a	14.6	14	1,300	1,430
HFC-143a	48.3	52	3,800	4,470
HFC-152a	1.5	1.4	140	124
HFC-227ea	36.5	34.2	2,900	3,220
HFC-236fa	209	240	6,300	9,810
HFC-4310mee	17.1	15.9	1,300	1,030
Perfluoro methane: CF_4	50,000	50,000	6,500	7,390
Perfluoro ethane: C_2F_6	10,000	10,000	9,200	12,200
Perfluoro butane: C_4F_{10}	2,600	NA	7,000	8,860
Perfluoro-2-methylpentane: C_6F_{14}	3,200	NA	7,400	9,300
Sulfur Hexafluoride (SF_6)	3,200	NA	23,900	22,800

Source: IPCC 1995; IPCC 2007.
Note: The IPCC has published updated GWP values in its Fifth Assessment Report that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2 (2013). The 2014 Scoping Plan Update was based on the GWP values in the Fourth Assessment Report.
1 Based on 100-year time horizon of the GWP of the air pollutant compared to CO_2.
2 The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

California's GHG Sources and Relative Contribution

California is the 20th largest GHG emitter in the world and the 2nd largest emitter of GHG emissions in the United States, surpassed only by Texas (CARB 2014a). However, California also has over 12 million more people than Texas. Because of more stringent air emission regulations, in 2014, California ranked third lowest in energy-related carbon emissions per capita (EIA 2017).

In 2016, the statewide GHG emissions inventory was updated for 2000 to 2014 emissions using the AR4 GWPs.[3] Based on these GWPs, California produced 442 million metric tons (MMT) of CO_2e GHG emissions in 2014. California's transportation sector remains the single largest generator of GHG emissions, producing 36.1 percent of the state's total emissions; industrial sector emissions made up 21.1 percent, and electric power generation made up 20.0 percent. Other major sectors of GHG emissions include commercial and residential

[3] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

(8.7 percent), agriculture (8.2 percent), high-GWP GHGs (3.9 percent), and recycling and waste (2.0 percent) (CARB 2016).

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere was relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO_2 in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

The expected increase in global surface temperatures and the environmental consequences of gradual changes in the Earth's temperature are both hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions; on observations of the climate record that assess the human influence of the trend; and on projections for extreme weather events. However, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada. By 2050, California is projected to warm by approximately 2.7°F above 2000

averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase from 4.1 to 8.6°F, depending on emissions levels (CCCC 2012).

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) a shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms (CAT 2006). According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if we immediately curtailed climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 5.6-1), and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are considered unavoidable. Global climate change risks to California are shown in Table 5.6-2, *Summary of GHG Emissions Risks to California,* and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy impacts.

Specific climate change impacts that could affect the project include:

- **Water Resources Impacts.** By late this century, all projections show drying, and half of the projections suggest 30-year average precipitation will decline by more than 10 percent below the historical average. This drying trend is caused by an apparent decline in the frequency of rain and snowfall. Even in projections with relatively small or no declines in precipitation, central and southern parts of the state can be expected to be drier from the warming effects alone—the spring snowpack will melt sooner, and the moisture in soils will evaporate during long dry summer months (CCCC 2012).

- **Wildfire Risks.** Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Human activities will continue to be the biggest factor in ignition risk. The number of large fires statewide is estimated to increase from 58 percent to 128 percent above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57 percent to 169 percent, depending on location (CCCC 2012).

Table 5.6-2 Summary of GHG Emissions Risks to California

Impact Category	Potential Risk
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels
Water Resources Impacts	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation

Table 5.6-2 Summary of GHG Emissions Risks to California

Impact Category	Potential Risk
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: CEC 2006; CEC 2009; CCCC 2012; CNRA 2014.

- **Health Impacts.** Many of the gravest threats to public health in California stem from the increase of extreme conditions, principally more frequent, more intense, and longer heat waves. Particular concern centers on the increasing tendency for multiple hot days in succession and heat waves occurring simultaneously in several regions throughout the state. Public health could also be affected by climate change impacts on air quality, food production, the amount and quality of water supplies, energy pricing and availability, and the spread of infectious diseases. Higher temperatures also increase ground-level ozone levels. Furthermore, wildfires can increase particulate air pollution in the major air basins of California (CCCC 2012).

- **Increase Energy Demand.** Increases in average temperature and higher frequency of extreme heat events combined with new residential development across the state will drive up the demand for cooling in the increasingly hot and longer summer season and decrease demand for heating in the cooler season. Warmer, drier summers also increase system losses at natural gas plants (reduced efficiency in the electricity generation process at higher temperatures) and hydropower plants (lower reservoir levels). Transmission of electricity will also be affected by climate change. Transmission lines lose 7 percent to 8 percent of transmitting capacity in high temperatures while needing to transport greater loads. This means that more electricity needs to be produced to make up for the loss in capacity and the growing demand (CCCC 2012).

5.6.1.2 EXISTING CONDITIONS

The project site is currently unused and does not generate direct or indirect GHG emissions. The site occasionally generates trips to the site for maintenance purposes.

5.6.2 Regulatory Setting

This section describes the federal, state, and local regulations applicable to GHG emissions.

5.6.2.1 FEDERAL

The U.S. Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any emission reduction requirements but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, per San Diego Air Pollution Control District (SDAPCD) guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017–2025 that will require a fleet average of 54.5 miles per gallon in 2025. However, the EPA is reexamining the 2017-2025 emissions standards.

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources also. However, the EPA is reviewing the Clean Power Plan under President Trump's Energy Independence Executive Order.

5.6.2.2 STATE

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05 and B-30-15, Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32), and SB 375.

Executive Order S-03-05

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

Current State of California guidance and goals for reductions in GHG emissions are also embodied in AB 32, the Global Warming Solutions Act. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The final scoping plan was adopted by CARB on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be approximately 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB 2008a). In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

First Update to the Scoping Plan

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan was adopted at the May 22, 2014, board hearing. The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher at 431 $MMTCO_2e$ (CARB 2014b).

As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the update also addresses the state's longer-term GHG goals within a post-2020 element. The post-2020 element outlines a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014b). CARB identified that reducing emissions to 80 percent below 1990 levels will require a

fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014b).

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed Senate Bill 32 and Assembly Bill 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

2017 Climate Change Scoping Plan Update

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. The 2017 Scoping Plan's potential regulations and programs include strategies consistent with AB 197 requirements to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017a).

California's climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero-emission vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning, to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries will further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission buses and trucks.
- Low Carbon Fuel Standard with an increased stringency (18 percent by 2030).

- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of zero-emission trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20 percent reduction in GHG emissions from refineries by 2030.[4]
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and identified local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the state's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible. Or, a performance-based metric using a climate action plan or other plan to reduce GHG emissions is appropriate (CARB 2017a).

The Scoping Plan scenario is set against what is called the business-as-usual yardstick—that is, what the GHG emissions would look like if the state did nothing at all beyond the policies that are required and already in place to achieve the 2020 limit, as shown in Table 5.6-3, *2017 Climate Change Scoping Plan Emissions Reductions Gap to Achieve the 2030 GHG Target*. It includes the existing renewables requirements, advanced clean cars, the "10 percent" Low Carbon Fuel Standard, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 50 $MMTCO_2e$ above the target in 2030. In order to bridge the gap, a new Post-2020 Cap-and-Trade Program and refinery measure are key components of the 2017 Scoping Plan.

[4] The plan includes policies to require direct GHG reductions at some of the state's largest stationary sources and mobile sources in accordance with AB 197. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources.

Table 5.6-3 2017 Climate Change Scoping Plan Emissions Reductions Gap to Achieve 2030 GHG Target

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	392.4
With Known Commitments	310
2030 GHG Target	260

Source: CARB 2017a.

Table 5.6-4, *2017 Climate Change Scoping Plan Emissions Change by Sector to Achieve the 2030 Target*, shows estimated GHG emissions by sector for 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

Table 5.6-4 2017 Climate Change Scoping Plan Emissions Change by Sector to Achieve the 2030 Target

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24-25	-4% to -8%
Residential and Commercial	44	38-40	-9% to -14%
Electric Power	108	42-62	-43% to -61%
High GWP	3	8-11	167% to 267%
Industrial	98	77-87	-11% to -21%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-27% to -32%
Net Sink[1]	-7	TBD	TBD
Sub Total	431	300-345	-20% to -30%
Cap-and-Trade Program	NA	40-85	NA
Total	431	260	-40%

Source: CARB 2017a.
Notes: TCU = Transportation, Communications, and Utilities; TBD: To Be Determined.
[1] Work is underway to estimate the range of potential sequestration benefits from the natural and working lands sector; and CARB recently released the Draft California 2030 Natural and Working Lands Climate Change Implementation Plan" in January 2019.

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH_4. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 requires the state board to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants—methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also establishes targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the "Final Proposed Short-Lived Climate Pollutant Reduction Strategy," which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes.

According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite a tripling of diesel fuel use (CARB 2017b). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new low carbon fuel standard for transportation fuels sold within the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The low carbon fuel standard requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the RPS established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SBX1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects, because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon), was signed into law September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017.

The 2016 Standards continues to improve upon the previous 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Under the 2016 Standards, residential and nonresidential buildings are 28 and 5 percent more energy efficient than the 2013 Standards, respectively (CEC 2015a). Buildings that are constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the prior 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features. While the 2016 standards do not achieve zero net energy, they do get very close to the state's goal and make important steps toward changing residential building practices in California. The 2019 standards will take the final step to achieve zero net energy for newly constructed residential buildings throughout California (CEC 2015b).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code

requirements), water conservation, material conservation, and internal air contaminants.[5] The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2016. The 2016 Standards became effective on January 1, 2017.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Regulations

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses.

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

Section 5.408 of the 2013 California Green Building Standards Code also requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

In October of 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

[5] The green building standards became mandatory in the 2010 edition of the code.

Water Efficiency Regulations

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

5.6.2.3 REGIONAL

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The San Diego Association of Governments (SANDAG) is the MPO for the County of San Diego.

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology. The updated targets consider the need to further reduce VMT, as identified in the draft 2017 Scoping Plan (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent-per-capita reduction in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies such as statewide road user pricing. The proposed targets call for greater per capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted sustainable communities strategy (SCS). As proposed, CARB staff's proposed targets would result in an additional reduction of over 10 $MMTCO_2e$ in 2035 compared to the current targets.

For the next round of SCS updates, CARB's updated targets for the SANDAG are a 15 percent per capita GHG reduction in 2020 from 2005 levels (compared to the 2010 target of 7 percent) and a 21 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent. The updated targets and methodology will take effect on January 1, 2018, and SCSs adopted in 2018 and later will be subject to these new targets (CARB 2017c).

SANDAG's San Diego Forward: The Regional Plan

SB 375 requires the MPOs to prepare a sustainable communities strategy in their regional transportation plan (RTP). SANDAG adopted the San Diego Forward: The Regional Plan, which combines the regional comprehensive plan (RCP) and the RTP/SCS (SANDAG 2015). SANDAG's SCS shows how the region will meet the Scoping Plan targets for the region by using land in ways that make developments more compact, conserving open space, and investing in a transportation network that gives residents alternatives to driving alone. The proposed land uses pattern in SANDAG's SCS would accommodate 79 percent of all housing and 86 percent of all jobs in the "urban area transit strategy study area" where the greatest investments in public transit would be made. It is estimated that 82 percent of new housing in the region will be attached multifamily dwellings (SANDAG 2015). In addition to land use strategies, SANDAG's SCS relies on improvements to the transportation network (e.g., transit system, bicycle network), expansion of transportation demand measures, transportation system management measures, and pricing strategies. The SCS would result in a 15 percent reduction in emissions by 2020 and a 21 percent reduction by 2035 (SANDAG 2015).

The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers. The five strategies toward sustainability in the SCS include:

- Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.
- Protect the environment by preserving sensitive habitat, open space, and farmland.
- Invest in a transportation network that gives people transportation options and reduces greenhouse gas emissions.
- Address the housing needs of all economic segments of the population.
- Implement the Regional Plan through Incentives and Collaboration.

The Regional Plan's actions applicable for local agencies include:

- Promote the use of both zero-emission vehicles and alternative fuels and ensure that we have the infrastructure to support these innovations.
- Support the efforts of local jurisdictions to implement their Energy Roadmap Programs to save energy in their own operations and in their larger communities.

- Work with partner agencies to implement the transportation projects contained in the Regional Plan. These include:
- Implement state-of-the-art technologies and Transportation Demand and Systems Management Programs to provide more mobility choices and allow the transportation system to function more efficiently.
- Continue to pursue opportunities to expand shared mobility services near Smart Growth Opportunity Areas in the region. Examples of shared mobility services including carsharing, bikesharing, real-time ridesharing, Transportation Network Companies (e.g., Uber, Lyft, Sidecar), neighborhood electric vehicles, scootershare, and on-demand shuttle and jitney services.
- Support the development of policies, programs, and funding for moving goods in the state and nation, as well as for infrastructure in the region that supports moving goods.

5.6.2.4 LOCAL

City of Solana Beach Climate Action Plan

The City adopted its climate action plan (CAP) in July 2017 (Solana Beach 2017). The Solana Beach CAP meets the criteria in CEQA Guidelines Section 15183.5 for streamlining GHG emissions analyses but is not considered a "qualified CAP". The CAP serves as the City's community-wide GHG reduction strategy to achieve the state's GHG reduction targets for year 2020 and 2030 that can be used to mitigate and streamline future project-level GHG impacts. The CAP sets a target of 15 percent reduction below baseline (2010) for 2020 and a target of 50 percent below baseline for year 2035. The interim year 2035 reduction target is used as an indicator to determine the City's progress in meeting the long-term 2050 reduction target of 80 percent below baseline. To achieve these reduction targets, the CAP identifies four strategies:

- Strategy 1: Transportation
- Strategy 2: Renewable Energy and Buildings
- Strategy 3: Waste and Water
- Strategy 4: Carbon Sequestration (Urban Tree Planting)

According to the GHG report prepared for the project (Appendix 5.6-1), the City of Solana Beach recommends using screening thresholds published by the California Air Pollution Control Officers Association (CAPCOA) for determining the need for additional analysis and mitigation for GHG-related impacts under CEQA. The CAPCOA white paper recommends a 900 MT CO_2e/year screening level to determine the size of projects that would be likely to have a less than considerable contribution to the cumulative impact of climate change. Projects exceeding this would require further analysis and possibly mitigation (CAPCOA 2008). When projects exceed this screening threshold, it is assumed that the project would cumulatively impact the City's ability to meet the GHG emission reduction targets of AB 32. Therefore, projects that exceed the 900 MT threshold are required to show an emissions reduction over a business-as-usual calculation from the 2005 baseline year (business-as-usual) by the year 2020.

Solana Beach General Plan

The City of Solana Beach General Plan Land Use Element provides policies on reducing greenhouse gas emissions associated with development.

- **Goal LU 3.0:** To Be a Leader in Efforts to Reduce Greenhouse Gas Emissions.
  - **Policy 3.1:** Concentrate commercial, mixed-use, and medium to high density residential development along transit corridors and near activity centers that can be served efficiently by public transit and alternative transportation modes.
  - **Policy 3.4:** To reduce energy consumption and emissions from new buildings and significant remodels, encourage building placement, design, and construction techniques that minimize energy consumption; require the installation of EnergyStar appliances and/or high efficiency facilities; and promote other green building practices, including obtaining LEED (Leadership in Energy and Environmental Design) certification, where feasible.
  - **Policy 3.5:** Reduce the urban heat island effect through sustainable design and building practices, cool roofs, green roofs, light colored pavement, shade trees, shading, and other means.
  - **Policy 3.6:** Promote the use of solar panels, solar hot water heaters, and other green energy sources in conjunction with new development and retrofits to existing structures.
  - **Policy 3.7:** Consistent with the California Public Utilities Commission's California Long Term Energy Efficiency Strategic Plan, strive to achieve zero net energy use for new residential development by 2020 and zero net energy use for new commercial development by 2030.

City of Solana Beach Municipal Code

The City of Solana Beach Municipal Code (SBMC) has adopted the Green Building Code, which is designed to provide sustainable practices in building standards.

SBMC 15.23.10 Adoption of the California Green Building Standards Code, Part 11, Title 24 of the California Code of Regulations

The California Green Building Standards Code has been adopted and incorporated as the City green building code for the purpose of improving public health, safety, and general welfare by enhanced design and construction of buildings, through the use of building concepts having a reduced negative impact or a positive environmental impact and encourage sustainable construction practices.

Local Coastal Program

The Local Coastal Program provides recommendations for development pertaining to green infrastructure.

- **Policy 7.27:** Promote the development of green infrastructure in the City, when new facilities are needed, or older existing facilities are in need maintenance, repair, or replacement.

5.6.3 Methodology

This GHG evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG impacts are likely to occur in conjunction with the proposed project. Modeling of GHG was conducted using CalEEMod, version 2016.3.1. Life cycle emissions are not included in this analysis because not enough information is available for the proposed project, and therefore life cycle GHG emissions would be speculative.[6] Black carbon emissions are not included in the GHG analysis because CARB does not include this short-lived climate pollutant in the state's AB 32 inventory but treats it separately.[7] GHG modeling is included in Appendix 5.6-1 of this Draft EIR.

The analysis in this section is based on buildout of the proposed project, modeled primarily using CalEEMod, version 2016.3.1, for the following sectors:

- **Transportation.** Based on the average trip generation data provided by Ldn (see Appendix 5.6-1 of this DEIR). Because the project site is undeveloped, the Greenhouse Gas Emissions study used zero average daily trips (ADT) as the baseline. According to the report, the project's annual mobile-source emissions are based on approximately 271.26 weekday ADT and 217.80 weekend ADT.

- **Energy Use.** Energy use from the project is associated with natural gas used for heating and cooking as well as electricity use. Based on the land use proposed, it is assumed that calculated emissions would primarily be from electricity use. The primary electricity demand would come from interior lighting and electrical appliances of the care facility. Electricity use is based on the rates identified in CalEEMod.

- **Water/Wastewater.** GHG emissions from this sector are associated with the embodied energy used to supply water, treat water, distribute water, and then treat wastewater and fugitive GHG emissions from wastewater treatment. Indirect emissions from water use and wastewater generation are based on the generation rates identified in Section 5.14, *Utilities and Service Systems*.

- **Solid Waste Disposal.** Indirect emissions from waste generation are based on the CalEEMod default solid waste generation rate for a congregate care facility.

- **Area Sources.** GHG emissions from this sector are from use of landscaping equipment for property maintenance and consumer products (e.g., cleaning supplies, etc.).

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[6] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses were not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

[7] Particulate matter emissions, which include black carbon, are analyzed in Section 5.2, *Air Quality*. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017b).

- **Construction.** For purposes of this analysis, it is assumed that development of the proposed project would occur in one phase, commencing at the beginning of 2018 with an assumed overall duration of approximately one year. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates. Construction assumptions are generally based on CalEEMod defaults, such as construction equipment mix and worker, vendor, and haul trips. Haul trips are based on the anticipated volumes of roadway demolition debris and import and export earthwork. See Section 5.2, *Air Quality*, and Appendix 5.6-1 of the DEIR for further details regarding the construction assumptions for this project.

The project would export approximately 26,800 cubic yards of soil and all demolition debris from removal of the onsite structures. Table 5.6-5, *Construction Equipment*, identifies the construction equipment and time frames for their use for the duration of project construction.

Table 5.6-5 Construction Equipment

Equipment	Proposed Start	Proposed End	Quantity
Demolition	1/1/2018	1/7/2018	
Concrete/Industrial Saws			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			1
Site Preparation	1/8/2018	1/12/2018	
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			1
Grading	1/16/2018	2/20/2018	
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2
Paving	2/21/2018	2/28/2018	
Cement and Mortar Mixers			1
Pavers			1
Paving Equipment			1
Rollers			2
Tractors/Loaders/Backhoes			1
Building Construction	3/1/2018	12/31/2018	
Forklifts			2
Generator Sets			1
Tractors/Loaders/Backhoes			1
Welders			3
Building Construction Crane	6/1/2018	6/21/2018	
Forklifts			2
Architectural Coating	5/1/2018	12/31/2018	

Note: This equipment list is based upon equipment inventory with CalEEMod. The quantity and types are based upon assumptions provided by the project applicant.

5.6.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

5.6.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.6-1: Would development of the proposed project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? [Threshold GHG-1] [Less than significant]

Impact Analysis: Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact.

The proposed project would generate GHG emissions from vehicle trips generated by the project, energy use (indirectly from purchased electricity use and directly through fuel consumed for building heating), area sources (e.g., equipment used on-site, consumer products, coatings), water/wastewater generation, and waste disposal. Annual GHG emissions were calculated for construction and operation of the project. Total construction emissions were amortized over 20 years and included in the emissions inventory to account for the short-term GHG emissions from the construction phase of the project. Table 5.6-6, *Project-Related Construction GHG Emissions*, shows that construction of the project would produce 474.86 $MTCO_2e$ over the construction of the project—approximately 23.74 MT per year.

Table 5.6-6 Project-Related Construction-Phase GHG Emissions

Year	BIO-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2e
2018	0.00	473.29	473.29	0.06	0.00	474.86
Total	0.00	473.29	473.29	0.06	0.00	474.86
Yearly Average Construction Emissions (MT per year over 20 years)						23.74

Note: Expected construction emissions are based on CalEEMod modeling assumptions for equipment and durations listed in Table 5.6-5.

Emissions generated from area, energy, mobile, solid waste, and water use were also calculated using CalEEMod. Statewide averages for utility emissions were used for the calculations throughout the model. Table

5.6-7, *Unmitigated Operational Emissions Summary,* shows the emissions generated by the area, energy, mobile, waste, and water usage associated with the proposed project.

Table 5.6-7 Unmitigated Operational Emissions Summary

Year	BIO-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2e
Area	0.00	1.20	1.20	0.00	0.00	1.23
Energy	0.00	184.85	184.85	0.01	0.00	185.61
Mobile	0.00	308.80	308.80	0.02	0.00	309.22
Waste	58.66	0.00	58.66	3.47	0.00	145.34
Water	0.81	13.89	14.69	0.08	0.00	17.39
Total (MT/Year)						658.80
Amortized Construction Emissions (Table 5.6-6, above)						23.74
Total Operations (MT per year)						682.54
CAPCOA Emissions Threshold						900
Exceeds Threshold?						NO

Source: Ldn Consulting 2017.
Note: Data is presented in decimal format and may have rounding errors.

Operational emissions would be 658.80 $MTCO_2e$. Adding both annual construction emissions and the expected operational emissions, the project would generate yearly emissions of 682.54 $MTCO_2e$. Therefore, the project would not exceed the CAPCOA brightline threshold of 900 MT. Furthermore, the proposed building would be energy efficient and would be designed to achieve the current Building and Energy Efficiency Standards. The project would also incorporate bicycle parking, parking for energy-efficient vehicles, and electric vehicle parking in accordance with the California Green Building Standards Code (CALGreen). Impacts are less than significant.

Impact 5.6-2: Would the proposed project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? [Threshold GHG-2] [Less than significant]

Impact Analysis: As identified above. the proposed building would be constructed to achieve the latest sustainability and building and energy-efficiency standards in CALGreen and the Building Energy Efficiency Standards. The project would incorporate bicycle parking, parking for energy efficient vehicles, and electric vehicle parking in accordance with CALGreen.

City of Solana Beach CAP

The Solana Beach CAP does not have a consistency checklist or thresholds for determining if a proposed project would comply with its goals and policies. However, the CAP provides four strategies and implementation measures for execution of the CAP: Transportation, Renewable Energy and Buildings, Waste and Water, and Carbon Sequestration (Urban Tree Planting). The project would comply with the CAP by meeting the goals and objectives of the CAP strategies.

The Transportation strategy identifies measures that would increase use of electric vehicles (EVs), carpooling, vanpooling, telecommuting, preferred parking for EVs, walking and biking by labor force, reduce average commuter distance and VMT, and promote alternative work schedules. The project would improve pedestrian facilities at the site and would encourage walking and biking by providing secured bicycle parking onsite in accordance with CALGreen. According to the Global Climate Change Analysis (Appendix 5.6-1), the project would result in an annual increase of 740,609 VMT (2,029 daily VMT). Therefore, the project would support the measures identified in the Transportation strategy of the CAP.

The Renewable Energy and Buildings strategy identifies measures aimed at providing 100 percent renewable energy by 2035, installing residential and commercial rooftop solar and solar heating, and energy retrofits to achieve 15 percent reduce in electricity and natural gas consumption. The project does not include photovoltaic cells or solar water heating. However, the facility would incorporate sustainable design that would reduce energy consumption, including adherence to the minimum Tier 1 standards of the CALGreen Code, use of natural ventilation and day lighting, sustainable building materials, and potential future installation of solar photovoltaic arrays. Also, while the impact analysis does not result in a significant impact that would lead to a mitigation measure, the City will include the following as a condition of approval for the project that reads "Prior to the issuance of building permits, the project Applicant shall demonstrate to the City Manager that the project has an agreement in place to purchase 100 percent green power (electricity) from the City's Community Choice Aggregation (CCA) program, Solana Energy Alliance (SEA) "SEA Green" product, or, if this program is not in place, any successor CCA program or the San Diego Gas & Electric EcoChoice program. All house meter electricity accounts shall opt in to either the City's SEA Green program (100 percent renewable power) or, if this program is not in place, any equivalent SEA successor program, or the San Diego Gas & Electric EcoChoice program. If the EcoChoice program is the only option, proof of enrollment in the EcoChoice program shall be provided to the City prior to obtaining building permits." Therefore, the project would support the measures identified in the Renewable Energy and Buildings strategy of the CAP.

The Waste and Water strategy identifies measures to divert waste from landfills, expand recycled water and reduce potable water, capture 100 percent of emissions from wastewater treatment, and water conservation. As detailed in Section 5.14, *Utilities and Service Systems,* the project would result in a less than significant impact to water, wastewater, and waste facilities. Although the project would not directly improve efficiency of these facilities, it would not result in a significant impact. Therefore, the project would not oppose the measures of the Waste and Water strategy of the CAP.

The Carbon Sequestration strategy identifies measures that aim to cover 30 percent of the developed areas with urban tree canopy. The site is currently unused and would be improved with the residential senior care facility and landscaping, and the proposed improvements would result in approximately 41 percent of the site consisting of landscaping. Therefore, the project would support the Carbon Sequestration strategy of the CAP.

CARB Scoping Plan

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 and outlined in the Scoping

Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from 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 standard and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars programs).

The proposed project is required to adhere to the applicable programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies. The proposed project would comply with these state GHG emissions reduction measures, since they are statewide strategies. For example, any new ancillary structures under the proposed project would meet the applicable CALGreen and Building Energy Efficiency Standards. Furthermore, the Advanced Clean Cars program would be applicable to new vehicles introduced in the state and contribute to reducing mobile-source GHG emissions which would be a benefit for the proposed project. Therefore, the proposed project would not obstruct implementation of the CARB Scoping Plan.

SANDAG's San Diego Forward: The Regional Plan

In addition to AB 32, the California legislature passed SB 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy in their regional transportation plans to achieve the per capita GHG reduction targets. SANDAG adopted San Diego Forward: The Regional Plan, which is the region's SCS, on October 8, 2015. The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers.

Although the Regional Plan does not regulate land use or supersede the exercise of land use authority by SANDAG's member jurisdictions (i.e., the County and cities therein) (SANDAG 2015), the Regional Plan remains a relevant regional reference document for evaluating the intersection of land use and transportation patterns, and the corresponding GHG emissions.

The underlying purpose of the Regional Plan is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the County, as stipulated under SB 375. The proposed project would result in improvements to a currently unused site in a residential neighborhood, demolishing older structures and constructing a new residential senior care facility for the elderly. The improvements would be approved through adoption of the Solana Beach Senior Care Specific Plan, which would make the proposed improvements consistent with the General Plan. The project is consistent with some of the key goals of SANDAG's Regional Plan that promote compact urban form and infill development (e.g., smart growth); therefore, the proposed project would support the goals and policies of the Regional Plan and would not conflict with SANDAG's ability to implement the regional strategies outlined in the Regional Plan.

5.6.6 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact 5.6-1 and 5.6-2 are not project-specific impacts, but the proposed project's contribution to the cumulative impact of global warming. Implementation of the proposed project would be

consistent with the City's CAP, CARB's Scoping Plan, and SANDAG's RTP/SCS. Thus, the proposed project's GHG emissions and contribution to global climate change impacts are not considered cumulatively considerable.

5.6.7 References

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5.7 HAZARDS AND HAZARDOUS MATERIALS

This section of the DEIR evaluates the potential impacts of the proposed project on human health and the environment due to exposure to hazardous materials or conditions associated with the project site, project construction, and project operations. Potential project impacts and appropriate mitigation measures or standard conditions are included as necessary. The analysis in this section is based, in part, upon the following source:

- *Phase I Environmental Site Assessment Proposed Solana Beach Senior 959 Genevieve Street Solana Beach, California,* Dominion Due Diligence Group (D3G), January 29, 2016

A complete copy of this study is included in the Technical Appendices to this Draft EIR (Appendix 5.7-1).

5.7.1 Environmental Setting

Hazardous materials refer generally to hazardous substances that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment. Hazardous materials are used in products (household cleaners, industrial solvents, paint, pesticides, etc.) and in the manufacturing of products (e.g., electronics, newspapers, plastic products). Hazardous materials can include petroleum, natural gas, synthetic gas, acutely toxic chemicals, and other toxic chemicals that are used in agriculture, commercial, and industrial uses; schools and hospitals; businesses; and households. Accidental releases of hazardous materials can have a variety of causes, including highway incidents, warehouse fires, train derailments, shipping accidents, and industrial incidents.

5.7.1.1 CURRENT AND HISTORICAL USES OF THE SITE

This historical use of the site was determined by aerial photography and review of reasonably ascertainable information about the property. The project site consisted of a residential structure and silvicultural land (crops and nursery activity) from at least 1957 until approximately 2009, at which time any remaining nursery trees were removed from the property. The residential structure on the eastern portion of the subject property along Marine View Avenue was demolished between 1994 and 2003. The use of pesticides and fertilizers are often associated with silvicultural activities.

5.7.1.2 SITE CONDITIONS

The project site contains a dilapidated single-story residential structure—constructed prior to 1953—on 2.91 acres of mostly undeveloped land. A small shed and a greenhouse are next to the existing remaining primary structure. The property is bounded to the north by Genevieve Street, an office building, and a plant nursery; to the east by Marine View Avenue and single-family residential properties; to the south by single-family residential properties; and to the west by Interstate 5 (I-5). Public utilities are available in the vicinity of the project site.

Field Observations

Table 5.7-1, *Exterior Observations*, lists the hazardous materials and conditions observed at the site during a site visit on April 18, 2015 by D3G.

Table 5.7-1 Exterior Observations

Exterior Observations	Observed	Not Observed
Hazardous Materials and Petroleum Products		X
Polychlorinated Biphenyls (PCB)	X	
Subject Property Dumped Materials/Landfills	X	
Solid Waste Disposal		X
Spills/Stained Pavement/Stressed Vegetation		X
Storage Tanks not Previously Listed		X
Wells not Previously Listed		X
Hazardous Runoff		X
Pits, Ponds, or Lagoons*		X
Odors		X

Source: D3G 2016 (Appendix 5.7-1).
*Excludes stormwater drainage features.

A pole-mounted electrical transformer on-site is owned and maintained by San Diego Electric and Gas. It was not affixed with a "Non-PCB" sticker and is therefore assumed to contain regulated levels of PCBs. However, leakage was not observed on or around the transformer, and it is not believed to present environmental concerns to the subject property in its current physical condition.

Various debris (tires, construction debris, cut trees, household trash, etc.) was observed throughout the project site during the site inspection. The dumped debris was in small amounts and is considered nonhazardous. Based on its nonhazardous nature and volume, the on-site dumped debris is not expected to present a recognized environmental concern. However, the debris should be properly disposed of in accordance with local, state, and federal regulations prior to site development.

No evidence of landfills or septic systems was identified at the property.

Interior Observations of the Existing Structure

Table 5.7-2, *Interior Observations*, lists the hazardous materials and conditions observed at the site during a site visit by D3G on April 18, 2015. The inside of the structure and shed were walked and documented with photos by D3G (see Appendix 5.7-1).

Table 5.7-2 Interior Observations

Exterior Observations	Observed	Not Observed
Hazardous Materials and Petroleum Products	X	
PCBs		X
Storage Tanks not Previously Listed		X
Drains and/or Sumps		X
Pools of Liquid		X
Odors		X

Source: D3G 2016 (Appendix 5.7-1).

No bulk storage of hazardous materials or petroleum products was observed on-site. However, paints and cleaning products are stored in the garage and shed. None of the stored materials were observed to be leaking or to have had a major spillage. No floor drains or other potential receptors for the release of hazardous materials were observed within the areas of material storage. The on-site chemicals are commercially available, stored in limited quantities, and are not believed to present a recognized environmental concern.

5.7.1.3 SUMMARY OF POTENTIAL ENVIRONMENTAL CONCERNS

Table 5.7-3, *Summary of Potential Environmental Concerns*, provides a summary of the potentially hazardous conditions at the project site, whether they meet an acceptable level for site use, and whether a response action is recommended to ensure impacts would be less than significant.

Table 5.7-3 Summary of Environmental Concerns

Observed Conditions	Acceptable	Response Action Recommended?
Standard Environmental Records Review	X	
Unregulated Underground Storage Tank(s)	X	
Past Industrial/Detrimental Operations	X	
Vapor Encroachment Condition	X	
Stored Hazardous Materials	X	
PCB	X	
Above Ground Storage Tank(s)	X	
Dumping/Landfills	X	
Hazardous Runoff	X	
Asbestos-Containing Materials		X
Lead Based Paint		X
Flood Zone	X	
Other: Construction Considerations		X

Source: D3G 2016 (Appendix 5.7-1).

5.7.2 Regulatory Setting

5.7.2.1 FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 is the principal federal law enacted by the Environmental Protection Agency (EPA) that regulates the generation, management, and transportation of waste. The EPA is the primary federal agency that regulates hazardous materials and waste. In general, the EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. The agency is responsible for researching and setting national standards for a variety of environmental programs; it delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing

compliance. EPA programs promote handling hazardous wastes safely, cleaning up contaminated land, and reducing trash. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste. The RCRA gave the EPA the authority to control hazardous waste from "cradle to grave," that is, from generation to transportation, treatment, storage, and disposal. The RCRA also created a framework for the management of nonhazardous wastes. The 1986 amendments to RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. It should be noted that RCRA focuses only on active and future facilities and does not address abandoned or historical sites.

Emergency Planning and Community Right to Know Act

The Emergency Planning and Community Right to Know Act (EPCRA) was enacted by Congress as the national legislation on community safety. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. The primary purpose of EPCRA is to inform communities and citizens about chemical hazards in their areas by requiring businesses to report the locations and quantities of chemicals stored on-site to state and local agencies. These reports help communities prepare to respond to chemical spills and similar emergencies. Section 3131 of EPCRA requires manufacturers to report releases to the environment (air, soil, and water) of more than 600 designated toxic chemicals; report offsite transfers of waste for treatment or disposal at separate facilities; create pollution prevention measures and activities; and participate in chemical recycling. The annual reports are submitted to the EPA and state agencies. The EPA maintains and publishes a database of information on toxic chemical releases and other waste management activities by certain industry groups and federal facilities. This online, publicly available, national digital database is called the Toxics Release Inventory and was expanded by the Pollution Prevention Act of 1990.

Occupational Health Regulations for Lead Exposure

The Code of Federal Regulations (CFR), Title 29, Part 1926, establishes standards for occupational health and environmental controls for lead exposure. It includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation or monitoring.

Lead-Based Paint Program

EPA's 2008 Lead-Based Paint Renovation, Repair and Painting Rule (as amended in 2010 and 2011) aims to protect the public from lead-based paint (LBP) hazards associated with renovation, repair, and painting, which can create hazardous lead dust when surfaces with lead paint, even from decades ago, are disturbed. The rule requires workers to be certified and trained in the use of lead-safe work practices and requires renovation, repair, and painting firms to be EPA certified. These requirements became fully effective April 22, 2010.

Lead was formerly used as an ingredient in paint (before 1978) and as a gasoline additive; both of these uses have been banned. Lead is listed as a reproductive toxin and a cancer-causing substance; it also impairs the development of the nervous system and blood cells in children (DTSC 2017). LBP is defined in 40 CFR Part

745 as paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter or 0.5 percent by weight.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 was enacted by Congress to give the EPA the ability to track over 75,000 industrial chemicals currently produced or imported into the United States. The EPA repeatedly screens these chemicals and can require reporting or testing of any that may pose an environmental or human health hazard. It can ban the manufacture and import of those chemicals that pose an unreasonable risk. Also, the EPA has mechanisms in place to track the thousands of new chemicals that industry develops each year with either unknown or dangerous characteristics. It then controls these chemicals as necessary to protect human health and the environment. The act supplements other federal statutes, including the Clean Air Act and the Toxics Release Inventory under the EPCRA.

5.7.2.2 STATE

Hazardous Materials Transportation

Section 31303 of the California Vehicle Code and U.S. Department of Transportation regulations state that hazardous materials being directly transported from one location to another ("through-transport") must use routes with the least overall travel time (e.g., major roadways/highways instead of local streets). The California Highway Patrol and California Department of Transportation are the enforcement agencies for hazardous materials transportation regulations. Transporters of hazardous materials and waste are responsible for complying with all applicable packaging, labeling, and shipping regulations.

Toxic Air Contaminant Identification and Control Program

The California Health and Safety Code, Sections 39650 et seq., addresses the effects of toxic air contaminants that are determined to be carcinogenic or toxic to public health, safety, and welfare. This code establishes a statewide program to provide both scientific and technical assistance to control toxic air contaminants to a level that is safe for human health. This program also promotes development of new technologies and use of alternative processes and materials to screen and identify toxic air contaminants and minimize their presence.

Worker and Workplace Hazardous Materials Safety

Occupational safety standards in federal and state laws minimize workers' safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers must appropriately label containers, Material Safety Data Sheets must be available in the workplace, and employers must properly train workers.

Hazardous Materials in Structures

Asbestos is regulated as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of the Occupational Safety and Health Administration. Cal/OSHA considers asbestos-containing building material a hazardous substance when a bulk sample contains more than 0.1 percent asbestos by weight. Cal/OSHA requires a qualified, licensed contractor to handle any material containing more than 0.1 percent asbestos by weight. Any activity that involves cutting, grinding, or drilling during building renovation or demolition or relocation of underground utilities, could release friable asbestos fibers unless proper precautions are taken. Lead is also regulated as a hazardous material, and inorganic lead is regulated as a toxic air contaminant.

Several regulations and guidelines pertain to abatement of and protection from exposure to asbestos-containing materials (ACM) and (LBP). These include Construction Safety Orders 1529 (pertaining to ACM) and 1532.1 (pertaining to LBP) from Title 8 of the California Code of Regulations and Part 61, Subpart M, of the CFR (pertaining to ACM). These rules and regulations provide exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead and ACMs. In California, ACM and LBP abatement must be performed and monitored by contractors with appropriate certification from the California Department of Health Services. California Health and Safety Code Sections 17920.10 and 105255 require lead to be contained during demolition activities.

5.7.2.3 REGIONAL

County of San Diego Multi-jurisdictional Hazard Mitigation Plan (2018 Update)

The Multi-jurisdictional Hazard Mitigation Plan (MJHMP) was prepared and updated in 2018 with input from county and city officials, residents, water and wastewater treatment agencies, and the Federal Emergency Management Agency to provide member agencies with disaster protection and resiliency. The MJHMP provides a comprehensive analysis of each jurisdiction in the county and an estimate of its assets, capacity for resilience, hazardous conditions, administrative technical capacity, and fiscal capability to handle an array of hazardous situations. The MJHMP also establishes goals, objectives, and actions to improve upon disaster protection and resiliency deficiencies.

5.7.2.4 LOCAL

Solana Beach General Plan

The General Plan Safety Element includes goals and policies related to hazardous material transportation and protection of coastal resources from hazardous materials and conditions. The Solana Beach Fire Department is responsible for reviewing development proposals and establishing an inventory of hazardous materials produced, stored, and used in the city.

Goal 3.1: To Minimize Hazards to Public Health, Safety, and Welfare Resulting from Natural and Man-Made Phenomena.

- **Objective 1.0:** Ensure that geologic hazards in all areas for human use or habitation are mitigated properly or avoided prior to or during development.
  - **Policy 1.a:** The City shall require geotechnical investigations by a certified engineering geologist for all grading and construction proposed within any area of significant erosion, slope instability, and/or areas subject to severe seismic hazards, including inland and coastal bluffs.
  - **Policy 1.b:** The City shall provide qualified expertise for the review of geotechnical reports and sufficient personnel for the field inspection of grading operations and construction.
  - **Policy 1.c:** The City shall require construction to be in conformance with the Uniform Building Code, specifically Chapter 23 as it provides for earthquake resistant design, Chapter 70 as it provides for excavation and grading, and with the City's adopted hillside development ordinance.
  - **Policy 1.e:** The City shall encourage programs to abate or modify structures deemed hazardous to human habitation.
- **Objective 2.0:** Establish siting and development standards to reduce risk and damage from flood hazards.
  - **Policy 2.d:** The City shall require the submittal of information by a prepared by a qualified civil or hydrological engineer which certifies compliance with development standards established 100-year flood zones.
- **Objective 3.0:** Minimize the adverse effects of urbanization upon drainage and flood control facilities.
  - **Policy 3.a:** The City shall require the implementation of adequate erosion control measures for development projects to minimize sedimentation damage to drainage facilities.
  - **Policy 3.b:** The City shall maintain its open space preserves and shall require developers to provide adequate open space pursuant to the standards established in the Conservation and Open Space Element of the General Plan and the City's Zoning Ordinance as a measure to minimize impermeable surfaces throughout the City.
- **Objective 4.0:** Establish fire prevention regulations and standards to minimize potential fire hazards and fire losses.
  - **Policy 4.a:** The City shall enact an ordinance which establishes criteria for land development in hillside areas with emphasis on fire-retardant construction materials, access for fire-fighting personnel and equipment, removal of combustible vegetation, and minimizing the overall exposure to risks associated with wildfires and adjacent structure fires.

- **Policy 4.b:** The City shall enact an ordinance which establishes structural design standards to ensure adequate fire safety.
- **Policy 4.c:** The City shall ensure that development is phased properly in relation to the City's ability to provide an adequate level of fire protection.
- **Policy 4.e:** The City Fire Department shall review propose site plans to ensure that adequate fire safety measures are provided.

Goal 3.2: To Provide a Safe and Secure Environment for the City's Residents, Workers, and Visitors.

- **Objective 1.0:** Provide an adequate level of police protection through the City.
  - **Policy 1.b:** The City shall enact an ordinance which specifies site design standards for ensuring adequate emergency access.
  - **Policy 1.c:** The City shall require new developments and improvements to employ defensible space concepts into site design and building specifications (e.g. appropriate setbacks, adequate lighting of walkways and parking lots, and the use of burglary-resistant hardware and fixtures in buildings).
  - **Policy 1.d:** The City shall encourage the use of state-of-the art design concepts and technological improvements for the prevention of crime.

City of Solana Beach Municipal Code

Title 6 of the SBMC provides regulations for health and safety within the City, including regulating hazardous materials.

SBMC 6.28 Regulation of Underground Storage of Hazardous Substances, Hazardous Materials and Medical Waste.

The City of Solana Beach has adopted the County code, by reference, relating to the Certified Unified Program Agency (CUPA) for the regulation of underground storage of hazardous substances, hazardous materials, and medical waste.

SBMC 6.32, Grease and Waste Discharges

This chapter establishes that the City's Department of Health Services must be notified in the event of a hazardous waste or material spill that may result in pollutants or non-stormwater discharges to enter the City sewer system.

SBMC 13.10 Storm Water Management

This chapter, which is the City's Public Services and Utilities Ordinance, includes regulations and prohibitions for discharges of household hazardous materials and storage of hazardous materials, such as those that would be used in operation of the project site.

Local Coastal Program

The Local Coastal Program (LCP) Land Use Plan (LUP) contains policies related to protection of the City's coastal resources and mitigation of potential hazards in the City including fire hazards, geologic hazards, flood hazards. The LCP LUP also contains measures related to protection from high fire hazard severity zones. The project site is not in a wildfire hazard severity zone, flood zone, or geologic hazard zone.

- **Policy 4.1:** The City of Solana Beach contains areas subject to natural hazards that present risks to life and property. These areas require additional development controls to minimize risks. Potential hazards in the City include, but are not be limited to, the following:

  1. Coastal Bluffs
  2. Slopes with low stability & and high landslide potential: Hillside areas that have the potential to slide, fail, or collapse.
  3. Seismic ground shaking: Shaking induced by seismic waves traveling through an area as a result of an earthquake on a regional geologic fault.
  4. Liquefaction: Areas where water-saturated artificial fill or sediment can potentially lose strength and fail during strong ground shaking.
  5. Flood prone areas most likely to flood during major storms.
  6. Wave action: The entire shoreline is subject to direct wave attack and damage from wave activity due to a lack of protective beach.
  7. Tsunami: Low lying shoreline areas subject to inundation by a sea wave generated by local or distant earthquake, submarine landslide, subsidence, or volcanic eruption.
  8. Fire hazard: Areas subject to major wildfires located in the City's WUI.

- **Policy 4.9:** Information should be provided to the public concerning hazards and appropriate means of minimizing the harmful effects of natural disasters upon persons and property relative to siting, design, and construction.

- **Policy 4.72:** All discretionary permit applications for projects shall be reviewed by the City's Fire Marshal to determine if any thinning or clearing of native vegetation is required. The Fire Marshal may reduce the 100' fuel management requirement for existing development, when equivalent methods of wildfire risk abatement are included in project design.

- **Policy 4.73:** Equivalent methods of fire risk reduction shall be determined on a case-by-case basis by the Fire Marshal and may include the following, or a combination of the following, but are not limited to:

  1. Compliance with Building Code and Fire Code requirements for projects located in the WUI (State Fire Code Chapter 7A);

2. Installation of a masonry or other non-combustible fire-resistant wall up to six feet in height;
3. Exterior sprinklers to be used in an emergency for fire suppression;
4. Boxed eaves;
5. Reduced landscaping that is complaint with County of San Diego fire hazard risk reduction plant list and planting guidelines;
6. Other alternative construction to avoid the need for vegetation thinning, pruning or vegetation removal.

- **Policy 4.84:** The City Manager or his/her designee may grant an emergency permit, which shall include an expiration date of no more than one year and the necessity for a subsequent regular CDP application, if the City Manager or his/her designee finds that:

  1. An emergency exists that requires action more quickly than permitted by the procedures for a CDP and the work can and will be completed within thirty (30) days unless otherwise specified by the terms of the permit.
  2. Public comment on the proposed emergency action has been reviewed, if time allows.
  3. The work proposed would be consistent with the requirements of the certified LCP.
  4. The emergency action is the minimum needed to address the emergency and shall, to the maximum extent feasible, be the least environmentally damaging temporary alternative.

- **Policy 4.85:** An emergency permit shall be valid for 60 days from the date of issuance unless otherwise specified by the City Manager or his/her designee, but in no case more than one year. Prior to expiration of the emergency permit, if required, the permittee must submit a regular, CDP application for the development even if only to remove the development undertaken pursuant to the emergency permit and restore the site to its previous condition.

- **Policy 4.86:** All emergency permits shall be conditioned and monitored to ensure that all authorized development is approved under a regular coastal development permit in a timely manner, unless no follow up permit is required.

- **Policy 4.87:** Maintain the permit tracking and monitoring system to identify and prevent the illegal and unpermitted construction of bluff retention devices as a component of the code enforcement program.

5.7.3 Methodology

The project site was inspected April 18, 2015, and a Phase I Environmental Site Assessment (ESA) was prepared on January 29, 2016 (see Appendix 5.7-1). The Phase I ESA was conducted to provide appropriate inquiry into the previous ownership and uses of the subject property and to identify recognized environmental conditions, which are the presence of any hazardous substances or petroleum products at the subject property under

conditions that indicate an existing release, a past release, or a material threat of a release into structures, the ground, groundwater, or surface water of the project site. The investigation was conducted in accordance with American Society for Testing and Materials (ASTM) E 1527-13 published guidelines, 40 CFR Part 312, Standards and Practices for All Appropriate Inquiries: Final Rule, and accepted Phase I ESA industry standards.

The ASTM E 1527-13 scope of work for the Phase I ESA consisted of:

- Site reconnaissance of the subject property and a visual survey of the adjacent properties to evaluate the potential for RECs.
- Review of applicable and reasonably ascertainable information about the subject property, including aerial photography, United States Geographic Survey topographic map, state and federal databases, Sanborn maps, property assessment information, and other governmental sources that are publicly available, practically reviewable, and obtainable within reasonable time and cost constraints.
- Interviews with selected individuals knowledgeable about the subject property and vicinity properties.
- If provided, a review of existing environmental reports documenting previous assessment and remediation efforts completed at the subject property.

Additional screening included a Tier 1 Vapor Encroachment Screening—in general compliance with the ASTM Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions Designation (E 2600-10)—and screenings for ACM, LBP, radon gas, floodplain hazards, and wetlands. The Phase I ESA did not include the collection or analysis of soil or groundwater samples.

5.7.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

H-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.

H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

H-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard for people residing or working in the project area.

H-6 For a project in the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

H-7 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

H-8 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to the urbanized areas or where residences are intermixed with wildlands.

The Initial Study, included as Appendix 2-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold H-1
- Threshold H-3
- Threshold H-4
- Threshold H-5
- Threshold H-6
- Threshold H-8

Therefore, these impacts are not addressed in the following DEIR analysis.

5.7.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

IMPACT 5.7.1: Would the proposed project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? [Threshold H-2] [Less than significant]

Impact Analysis: Based on the Phase I ESA, the project site consisted of a residential structure and silvicultural land (crops and nursery activity) from at least 1957 until approximately 2009, at which time the remaining nursery trees were removed from the property. In addition, a pedestrian access path around the property is visible in aerial photos from 1972 to 2005. The residential structure on the eastern side of the subject property along Marine View Avenue was demolished between 1994 and 2003.

The use of pesticides and fertilizers are often associated with silvicultural activities. The former silvicultural land use may also have produced surface runoff containing high nitrates and other polluting nutrients. However, review of reasonably ascertainable data in conjunction with the site visit for the Phase I ESA determined that no known or potential contaminated sources (petroleum hydrocarbons or nonpetroleum hydrocarbons) are associated with the subject property. As shown in Table 5.7-3, above, the Phase I ESA identified ACM, LBP, and other construction considerations as potentially hazardous at the project site.

Asbestos-Containing Materials

The existing residential structure was constructed prior to 1957 when ACMs were still used. A pre-demolition asbestos inspection was conducted on October 10, 2011, of the main residence, shed, greenhouse, former boat, and former recreational vehicles on the property to provide documentation to the developer of the findings and approximate quantities of ACMs that may impact future demolition activities.

ACMs were identified on the roof penetration mastic (sealant used for roofing) at a concentration of 10 percent and the exterior stucco at a concentration of 0.5 to 0.7 percent. The roof penetration mastic is a Category I nonfriable material, and the exterior stucco was identified as an asbestos-containing construction material. However, the exterior stucco was found to contain less than 1 percent asbestos and would be disposed of as nonhazardous waste.

California state regulations require notifications prior to the removal of ACM (40 CFR, Subpart M, § 61.145). In accordance with notification, a California certified supervisor would be required to be on-site during all asbestos-removal activities, and all asbestos removal work would be conducted by California-certified asbestos workers. Additionally, Cal/OSHA rules still apply, and the contractor performing removal or demolition would be required to comply with the worker protection, training, and medical surveillance portions of the asbestos standard, which would ensure that ACM hazards would be reduced to a less than significant level (California Code of Regulations [CCR], Title 8 § 1529). Therefore, compliance with applicable local, state, and federal regulations would result in a less than significant impact from ACM.

Lead-Based Paint

An LBP inspection of the main residence, shed, greenhouse, former boat, and former recreational vehicles on the property was conducted on October 10, 2011, to provide documentation of the findings of lead-bearing components that might affect demolition activities.

Federal and California Department of Health Services regulations define LBP as any surface coating that contains lead at or above 1.0 milligrams per square centimeter (mg/cm^2) or 0.5 percent by weight. The only substrate identified to contain lead at a concentration at or above 1.0 mg/cm^2 was the ceramic tile in the bathroom of the residence. The tile was observed to be intact at the time of the inspection. Painted surfaces were not identified on the remaining structures; therefore, these structures were not tested.

Removal or disturbance of material with any detectable amount of lead would be handled in accordance with Cal/OSHA (8 CCR § 1532.1). Therefore, readings below 1.0 mg/cm^2 or 0.5 percent would not relieve contractors from performing exposure assessments (personal air monitoring) on their employees per the OSHA

Lead Standard (29 CFR 1926.62) and should not be interpreted as lead is not present. Building materials with intact LBP must be characterized for lead and other potentially hazardous materials before transportation off-site. Paint chips and debris would be disposed of as lead-containing hazardous waste. Therefore, compliance with applicable state and federal regulations during removal of LBP would result in a less than significant impact.

Construction Considerations

No soil staining was observed during the site visit on April 28, 2015. However, the Phase I ESA recommends that if stained soils are subsequently discovered during construction operations, they should be tested and, if necessary, removed according to federal, state, and local guidelines.

None of the accessed data depicts underground storage tanks (USTs) at the former structure; however, the possibility exists that the former structure used UST or above-ground storage tanks (ASTs). No visual evidence of USTs (fill ports/vent pipes) or ASTs was observed during the site inspection. If ASTs or USTs were formerly located at the subject property, they should have been removed during the demolition of the structure. If USTs or ASTs are discovered during site construction operations at the project site, they should be tested and, if necessary, removed according to federal, state, and local guidelines.

No evidence of septic systems was identified at the subject property. None of the accessed data depicts a septic system at the former structures; however, possibility exists that the former structures used septic systems. If septic systems were formerly located at the subject property, they should have been removed during the demolition of the structure. Therefore, compliance with federal, state, and local guidelines would result in a less than significant impact.

5.7.6 Cumulative Impacts

The area considered for cumulative impacts from hazards and hazardous materials is the adjacent properties in Solana Beach. Past, existing, and planned developments in the City could pose risks to public health and safety as they relate to the use, storage, handling, generation, transport, and disposal of hazardous materials and wastes. The proposed project and other development in the project vicinity could increase these risks if they are not remediated and/or managed properly in accordance with applicable regulations. Compliance with applicable regulations related to public health and safety and hazardous materials would ensure that impacts are reduced to a less than significant level, individually and cumulatively.

Other projects in Solana Beach would require assessments for hazardous materials, such as assessments of structures onsite (over certain ages) for LBP, ACM, and other contamination from past uses and/or releases. Cleanup of hazardous materials in soil, soil vapor, and/or groundwater to regulatory levels for the relevant types of land uses would be required in compliance with applicable federal, state, and regional regulations, as listed in Section 5.7.2. Therefore, the use, storage, transport, and disposal of hazardous materials by construction and operation of other projects would result in site-specific impacts. Combined with the proposed project, impacts would not be cumulatively considerable.

5.7.7 References

Dominion Due Diligence Group. 2016, January 29. Phase I Environmental Site Assessment Proposed Solana Beach Senior 959 Genevieve Street Solana Beach, California. (Appendix 5.7-1)

San Diego County. 2017, October. Multi-jurisdictional Hazard Mitigation Plan. https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/HazMit/2017/County-HazMit-Plan-2017-Sections-1-7-with-Appendixes-BOS-Approved.pdf.

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5.8 HYDROLOGY AND WATER QUALITY

This section of the DEIR evaluates the potential impacts of the proposed Solana Beach Senior Care Specific Plan to hydrology and water quality conditions in the City of Solana Beach. Hydrology deals with the distribution and circulation of water, both on land and underground. Water quality deals with the quality of surface- and groundwater. Surface water includes lakes, rivers, streams, and creeks; groundwater is under the earth's surface. The analysis in this chapter of the DEIR was based in part of the following technical study that was prepared for the proposed project:

- *Preliminary Hydrology Study for Residential Care Facility, 959 Genevieve Street*, Pasco Laret Suiter & Associates, October 2, 2017.
- *Priority Development Project (PDP) Water Quality Technical Report (WQTR) for Residential Care Facility,* Pasco Laret Suiter & Associates, October 3, 2017.

Complete copies of these studies are included in the Technical Appendices to this Draft EIR (Appendices 5.8-1 and 5.8-2).

Groundwater impacts and flood hazard impacts were identified as less than significant in the Initial Study (Appendix 2-1) and are not further analyzed in this DEIR This section focuses on impacts to drainage, surface water, and surface water quality.

5.8.1 Environmental Setting

5.8.1.1 REGIONAL DRAINAGE

The project site is in the San Dieguito River Watershed Management Area (WMA), which spans nearly 346 square miles in west-central San Diego County (SDRWQCB 2015) (see Figure 5.8-1, *San Dieguito River Watershed Management Area*). The primary stream in the WMA, the San Dieguito River, extends about 24 miles from near San Pascual in the east to San Dieguito Lagoon in the west, about one mile south of the project site.

Local Surface Waters and Drainage

The onsite drainage is divided by a ridgeline that runs across the north end of the site parallel to Genevieve Street. The part of the site north of the ridgeline comprises about one-quarter of the total site area and is in the downstream end of a much larger drainage basin, labeled "Basin A" on Figure 5.8-2, *Predevelopment Hydrology Map*.

Basin A encompasses 64 acres, of which approximately 1 acre is on-site. Basin A drains to a storm drain inlet within the Caltrans I-5 right-of-way between the Genevieve Street cul-de-sac and I-5. Drainage from the part of the project site in Basin A sheet flows to Genevieve Street. It appears that all Basin A runoff is contained in Genevieve Street, and no offsite runoff from Basin A enters the project site.

The part of the site south of the ridgeline is in the downstream end of a larger drainage basin, labeled "Basin B" on Figure 5.8-2. Basin B spans about 29.3 acres, approximately 1.9 acres of which are onsite—that is, nearly

two thirds of the project site. Offsite runoff in Basin B has a concentrated flowline that runs east to west through the southern part of the project site via an unimproved earth swale south of the existing house. Runoff from Basin B, including from the southern part of the project site, flows to the west into the Caltrans I-5 right-of-way where it is collected by a concrete drainage channel before it enters the public storm drain system. Local storm drains convey water south to the San Dieguito River and lagoon. Peak stormwater flow rates in Basins A and B from a 100-year storm are shown in Table 5.8-1. Approximately 98 percent of the project site is pervious surfaces in the existing condition.

Table 5.8-1 Existing Site Hydrology

Basin	Node	Total Basin Area, acres	Peak Runoff Rate, 100-Year Storm, cubic feet per second
A (Offsite)	202	64.0	85.7
A (Onsite)	199	0.8	1.64
B (Offsite)	104	29.3	30.9
B (Onsite)	155	2.1	4.20
Total		96.2	122.44

Source: Pasco Laret Suiter & Associates 2017 (Appendix 5.8-1).

5.8.1.2 SURFACE WATER QUALITY

Regional Surface Water Quality

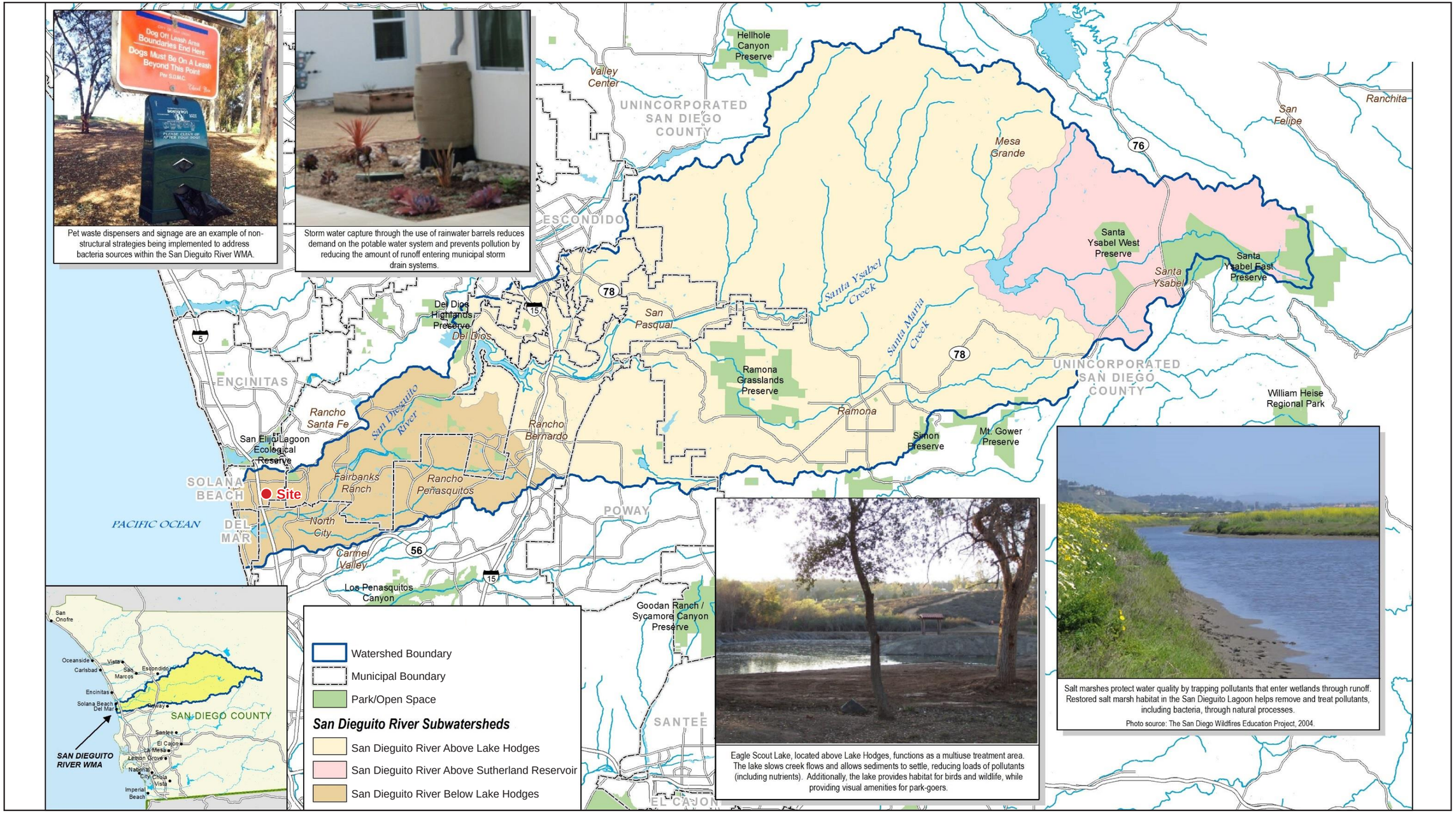
The pollutants in the San Dieguito WMA with the highest priority for water quality improvement efforts are:

- Bacteria accumulations along the Pacific Ocean at the San Dieguito Lagoon mouth from areas above Lake Hodges when rainfall causes the Lake Hodges dam to overflow.
- Bacteria accumulations along the Pacific Ocean at the San Dieguito Lagoon measured during both wet and dry weather (Amec Foster Wheeler 2015).

San Dieguito Lagoon

San Dieguito Lagoon is listed on the Clean Water Act Section 303(d) List of Water-Quality Limited Segments for enterococcus, fecal coliform bacteria, nitrogen, phosphorus, total dissolved solids, and toxicity.

Figure 5.8-1 - San Dieguito River Watershed Management Area
5. Environmental Analysis



Source: Amec Foster Wheeler, 2015

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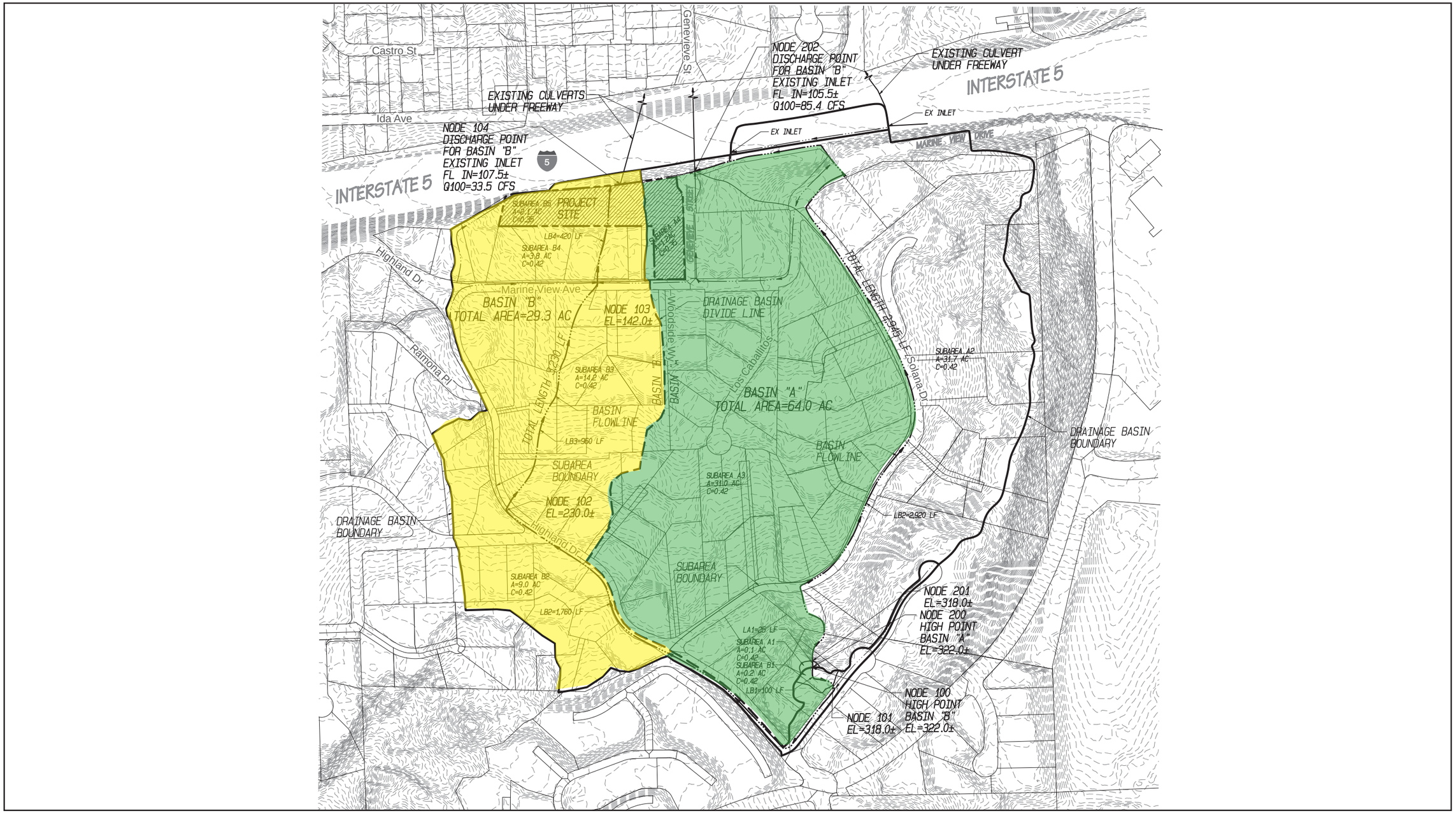
Figure 5.8-2 - Predevelopment Hydrology Map
5. Environmental Analysis



Project Site
Basin A
Basin B

0 400
Scale (Feet)

Source: Pasco Laret Suiter, 2011

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5.8.2 Regulatory Setting

5.8.2.1 FEDERAL

Clean Water Act

The federal Water Pollution Control Act (or Clean Water Act [CWA]) is the principal statute governing water quality. It establishes the basic structure for regulating discharges of pollutants into the waters of the United States and gives the US Environmental Protection Agency (EPA) authority to implement pollution control programs, such as setting wastewater standards for industry. The statute's goal is to completely end all discharges and to restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates direct and indirect discharge of pollutants; sets water quality standards for all contaminants in surface waters; and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards for navigable bodies of water; and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution. Section 402 of the CWA requires a permit for all point source (a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel) discharges of any pollutant (except dredge or fill material) into waters of the United States.

National Pollutant Discharge Elimination System

Under the National Pollutant Discharge Elimination System (NPDES) program (under Section 402 of the CWA), all facilities that discharge pollutants from any point source into waters of the United States must have a NPDES permit. The term "pollutant" broadly applies to any type of industrial, municipal, and agricultural waste discharged into water. Point sources can be publicly owned treatment works (POTWs), industrial facilities, and urban runoff. (The NPDES program addresses certain agricultural activities, but the majority are considered nonpoint sources and are exempt from NPDES regulation.) Direct sources discharge directly to receiving waters, and indirect sources discharge to POTWs, which in turn discharge to receiving waters. Under the national program, NPDES permits are issued only for direct, point-source discharges. The National Pretreatment Program addresses industrial and commercial indirect dischargers. Municipal sources are POTWs that receive primarily domestic sewage from residential and commercial customers. Specific NPDES program areas applicable to municipal sources are the National Pretreatment Program, the Municipal Sewage Sludge Program, Combined Sewer Overflows, and the Municipal Storm Water Program. Nonmunicipal sources include industrial and commercial facilities. Specific NPDES program areas applicable to these industrial/commercial sources are: Process Wastewater Discharges, Non-process Wastewater Discharges, and the Industrial Storm Water Program. NPDES issues two basic permit types: individual and general. Also, the EPA has recently focused on integrating the NPDES program further into watershed planning and permitting (USEPA 2012).

The NPDES has a variety of measures designed to minimize and reduce pollutant discharges. All counties with storm drain systems that serve a population of 100,000 or more, as well construction sites one acre or more in size, must file for and obtain an NPDES permit. Another measure for minimizing and reducing pollutant discharges to a publicly owned conveyance or system of conveyances (including roadways, catch basins, curbs,

gutters, ditches, man-made channels and storm drains, designed or used for collecting and conveying stormwater) is the EPA's Storm Water Phase I Final Rule. The Phase I Final Rule requires an operator (such as a city) of a regulated municipal separate storm sewer system (MS4) to develop, implement, and enforce a program (e.g., best management practices [BMPs], ordinances, or other regulatory mechanisms) to reduce pollutants in postconstruction runoff to the city's storm drain system from new development and redevelopment projects that result in the land disturbance of greater than or equal to one acre. The City of Solana Beach Public Works Department enforces conditions of the MS4 NPDES permit on development and redevelopment projects in Solana Beach.

5.8.2.2 STATE

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. Under this Act, the State Water Resources Control Board (SWRCB) has ultimate control over state water rights and water quality policy. In California, the EPA has delegated authority to issue NPDES permits to the SWRCB. The state is divided into nine regions related to water quality and quantity characteristics. The SWRCB, through its nine Regional Water Quality Control Boards (RWQCBs), carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a water quality control plan or basin plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems. Solana Beach is in the San Diego Basin, Region 9, in the Upper Santa Ana Watershed. The water quality control plan for the San Diego Basin was updated in 2016. This Basin Plan gives direction on the beneficial uses of the state waters in Region 9; describes the water quality that must be maintained to support such uses; and provides programs, projects, and other actions necessary to achieve the standards in the Basin Plan.

Applicable Plans and Programs

Storm Water Pollution Prevention Plans

Pursuant to the CWA, in 2001, the SWRCB issued a statewide general NPDES Permit for stormwater discharges from construction sites (NPDES No. CAS000002). Under this statewide permit, construction sites with a disturbed area of one or more acres are required to obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage by the general permit is accomplished by completing and filing a notice of intent with the SWRCB and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). Each applicant under the Construction General Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must estimate sediment risk from construction activities to receiving waters; list BMPs to be implemented on the construction site to protect stormwater runoff; and contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters.

5.8.2.3 REGIONAL

Water Quality Improvement Plan

The MS4 Permit for the part of San Diego County in the San Diego RWQCB region, Order No. R9-2013-0001, provides a pathway for the co-permittees on the MS4 Permit to select and address the highest priority water quality issues. This process is incorporated in watershed-specific water quality improvement plans (WQIPs). RWQCB Region 9 is divided into nine WMAs. The WQIPs are developed through a collaborative effort between the co-permittees in each WMA and other key stakeholders, including the RWQCB. The WQIPs include descriptions of the highest-priority pollutants or conditions in a specific watershed, goals and strategies to address those pollutants or conditions, and schedules for those goals and strategies.

Solana Beach is in the San Dieguito WMA, which spans nearly 346 square miles—about 43 miles eastward from the cities of Solana Beach and Del Mar to north of Julian in unincorporated San Diego County (SDRWQCB 2015; see Figure 5.8-1, *San Dieguito River Watershed Management Area*).

5.8.2.4 LOCAL

City of Solana Beach Jurisdictional Runoff Management Program

The Jurisdictional Runoff Management Program sets forth strategies, standards, and protocols to address the priorities and goals established in the WQIP. The highest-priority water quality conditions in the WMA are indicator bacteria (Solana Beach 2017).

City of Solana Beach Standard Urban Storm Water Mitigation Plan

The City of Solana Beach Standard Urban Storm Water Mitigation Plan (SUSMP) is a guidance tool for preparation of stormwater development plans for development projects. All new developments and significant redevelopment projects as defined in the City's SUSMP must comply with regulations contained in the City's adopted "Best Management Practices (BMP) Design Manual" (described below). In accordance with the SUSMP, all development projects must incorporate control measures to reduce discharge of stormwater pollutants to the maximum extent practicable, including: (1) low impact development features that retain and slow runoff, minimize imperviousness, and maximize infiltration; (2) implementation of source control BMPs; and (3) compliance with requirements for construction-phase controls of sediment and other pollutants, including the preparation of an erosion control plan and installation of construction BMPs.

City of Solana Beach Best Management Practices Design Manual

The City of Solana Beach Best Management Practices Design Manual (BMP Manual) addresses updated onsite post-construction stormwater requirements and provides updated procedures for planning, preliminary design, selection, and design of permanent stormwater BMPs based on the performance standards in the MS4 Permit. The BMP Manual classifies BMPs into three categories: source control, site design, and stormwater pollutant control.

Source Control BMPs

Source control BMPs avoid and reduce pollutants in stormwater runoff. Everyday activities, such as recycling, trash disposal, and irrigation, generate pollutants that can drain to the stormwater conveyance system. Source control BMPs are defined as activities that reduce the potential for stormwater runoff to contact pollutants. Activities include administrative action; facility design; use of alternative materials; and operation, maintenance, and inspection of an area. Examples include protecting trash storage areas and materials stored outdoors and signage for storm drain systems.

Site Design BMPs

Site design BMPs (also called low impact development BMPs) are intended to reduce the rate and volume of stormwater runoff and associated pollutant loads. Site design BMPs minimize surface soil compaction, reduce impervious surfaces, and/or provide flow pathways not connected to the storm drain system, such as routing flow over pervious surfaces. Site design BMPs may incorporate interception, storage, evaporation, evapotranspiration, infiltration, and/or filtration processes to retain and/or treat pollutants in stormwater before it is discharged from a site.

Stormwater Pollutant Control BMPs

Stormwater pollutant control BMPs are engineered facilities designed to retain (i.e., intercept, store, infiltrate, evaporate, and evapotranspire), biofilter, and/or provide flow-through treatment of stormwater runoff generated on the project site. Examples include cisterns, infiltration basins, bioretention, permeable pavement, biofiltration basins, vegetated swales, and filters (Solana Beach 2016).

Solana Beach General Plan

The Conservation and Open Space Element of the Solana Beach General Plan describes existing conditions and issues related to water resources. The goals and policies established in this element ensure that water resources in Solana Beach are managed wisely.

Goal 3.1: To Protect and Conserve the City's Natural and Cultural Resources.

- **Policy 1.a:** The City shall cooperate with District 15 of the Regional Water Quality Control Board and other agencies within San Diego County in the implementation of the 2018 water quality program.

- **Policy 1.b:** The City shall require the incorporation of adequate erosion control measures into development projects that may otherwise impact water resources adversely. Such measure shall be reviewed by the Planning and Engineering Departments and shall include sandbagging of newly graded slopes, prompt planting of disturbed areas, phasing of grading and construction activities to minimize exposed areas susceptible to any watercourse.

- **Policy 2.a:** The City shall require all new developments to incorporate water conservation measures into project design to the greatest extent possible. Such measures may include, but are not limited to, the use of plumbing fixtures which reduce water usage (in accordance with Title 24 of the California Administrative

Code) and xeriscape landscaping which maximizes the use of drought-tolerant plant species and drip irrigation systems.

The Safety Element of the City of Solana Beach General Plan identifies existing conditions and issues pertaining to potential hazards and public safety considerations in the City. The goals and policies of the Safety Element provide for public health, safety, and welfare.

Goal 3.1: To Minimize Hazards to Public Health, Safety, and Welfare Resulting for Natural and Man-Made Phenomena.

- **Policy 3.a:** The City shall require the implementation of adequate erosion control measures for development projects to minimize sedimentation damage to drainage facilities.

City of Solana Beach Municipal Code

SMBC 13.10 Stormwater Management

The purposes of this chapter are to ensure health, safety, and general welfare of City citizens by controlling non-stormwater discharges to the stormwater conveyance system; eliminating discharges to the stormwater conveyance system from spills, dumping, or disposal of materials other than stormwater; and reducing pollutants in urban stormwater discharges to the maximum extent practicable. Chapter 13.10 promotes these purposes by:

A. Prohibiting polluted non-storm water discharges to the storm water conveyance system;

B. Establishing minimum requirements for storm water management, including source control requirements, to prevent and reduce pollution;

C. Establishing requirements for low impact development for land development projects, to reduce water pollution and erosion;

D. Establishing requirements for the management of storm water flows from development projects, both to prevent erosion and to protect and enhance existing water-dependent habitats;

E. Establishing standards for the use of off-site facilities for storm water management to supplement on-site practices at new development sites; and

F. Establishing notice procedures and standards for adjusting storm water and non-storm water management requirements where necessary.

SBMC 15.40.150 Drainage Requirements

This section of the SBMC provides an outline for drainage requirements during excavation and grading activities in the City. The requirements relate to disposal, site drainage, drainage terraces, and overflow protection.

Local Coastal Plan

The LCP provides policies pertaining to water quality in watershed planning and new development, and water conservation in new development.

- **Policy 3.71:** Minimize, avoid, or eliminate non-point source pollution impact to marine, coastal lagoon and wildland resources by controlling storm water runoff, other polluted dry weather runoff, and pollution. The City has been issued an NPDES Permit by the RWQCB, Permit No. 2007-0001. This Permit requires the City to control non-point source pollution to the maximum extent practicable under the Porter-Cologne Act and the Federal Clean Water Act. The City shall adhere to the Permit and follow the legal requirements of the Permit as required by law.

- **Policy 3.76:** All new development, public and private, shall meet or exceed the storm water standards of the State of California, and the most recent standards of the RWQCB with regard to storm water runoff and other polluted runoff.

- **Policy 3.77:** All new development shall be designed to avoid or minimize the creation of impervious surfaces, reduce the extent of existing unused impervious surfaces, and to reduce directly connected impervious area to the maximum extent practicable on the site. No new development shall result in an increase in storm water flow discharge or redirected/diverted storm water flow in a manner that results in a negative impact to downstream properties. The permittee shall put into effect and maintain all precautionary measures necessary to ensure that pollutant discharges from the discharges from the site will be reduced to the maximum extent practicable and will not cause exceedances of water quality objectives or adversely impact water quality.

- **Policy 3.78:** Plans for new development and redevelopment projects shall incorporate BMPs during construction, as well as, post-construction BMPs that will reduce to the maximum extent practicable the amount of pollutants and/or discharged into the City's storm drain system and surrounding coastal waters. BMPs should be selected based on their efficacy at mitigating Constituents of Concern (COC) associated with respective development types/uses and the surrounding watershed (see the San Diego RWQCB Permit No. 2007-0001 or the current municipal stormwater permit applicable to Solana Beach for guidance on BMP selection). For design purposes, post-construction structural BMPs (or suites of BMPs) should be designed to treat, infiltrate or filter storm water runoff from each storm up to and including the 85th percentile storm event. Volume-based BMPs shall be designed to treat, infiltrate, or filter storm water runoff volume from a 24-hour 85th percentile storm event. Flow-based BMPs shall be designed to treat, infiltrate or filter storm water runoff produced by an 85th percentile hourly rainfall intensity with an appropriate safety factor (i.e., 2 or greater). All new developments and significant redevelopment projects as defined in the City's SUSMP must comply with regulations contained in the City's adopted SUSMP, as approved by the RWQCB.

  For construction taking place on the beach, the permittee shall not store any construction materials or waste where it will be, or could potentially be subject to wave erosion and dispersion. In addition, no

machinery shall be placed, stored, or otherwise located in the intertidal zone at any time except for the minimum necessary to construct the development.

- **Policy 3.79:** If a new development, substantial rehabilitation, redevelopment, or related activity poses a threat to the biological productivity and the quality of coastal waters, or wetlands; and if compliance with all other applicable legal requirements does not alleviate that threat, the City shall require the applicant to take additional feasible actions, and provide necessary mitigation to minimize the threat, and if the preceding measures fail, then deny the project.

- **Policy 3.80:** In planning, siting, designing, constructing, and maintaining grounds, landscapes, and structures owned and managed by the City, site objectives should include management and maintenance practices that protect and enhance natural ecosystems. City grounds designers, planners, managers, crews, and their contractors should give priority to:

  a. Practicing the principles of Integrated Pest Management including the reduced use of pesticides and rodenticides;

  b. Selecting and using fertilizers that minimize negative impacts on soil organisms and aquatic environments;

  c. Designing new and renovating existing landscaped areas to suit the site conditions, protect water quality, and support sustainable maintenance.

  d. Using drought-tolerant native and non-invasive plant species.

  e. Incorporating low impact development design techniques.

- **Policy 3.81:** Design and manage development to avoid or minimize increases in stormwater runoff volume and peak runoff rate, and to avoid detrimental water quality impacts caused by excessive erosion or sedimentation.

- **Policy 3.82:** Design and manage new development to eliminate dry weather flow where it will be discharged in a manner that may adversely impact the biological productivity or diversity of intertidal or marine organisms; especially where the dry weather flow discharges to water bodies with poor circulation or tide pools.

- **Policy 3.83:** New development shall be sited and designed to protect water quality and minimize impacts to coastal waters by incorporating measures designed to ensure the following:

  a. Protecting areas that provide important water quality benefits, areas necessary to maintain riparian and aquatic biota and/or that are susceptible to erosion and sediment loss.

  b. Limiting increases of impervious surfaces.

c. Limiting land disturbance activities such as clearing and grading, and cut-and-fill to reduce erosion and sediment loss.

d. Limiting disturbance of natural drainage features and vegetation.

- **Policy 3.84:** New development shall not result in the degradation of the water quality of groundwater basins or coastal surface waters including the ocean, coastal streams, or wetlands. Urban runoff pollutants shall not be discharged or deposited such that they adversely impact groundwater, the ocean, coastal streams, or wetlands, consistent with the requirements of the RWQCB's municipal stormwater permit and the California Ocean Plan.

- **Policy 3.85:** Development must be designed to avoid or minimize to the maximum extent feasible, the introduction of pollutants of concern into coastal waters. To meet the requirement to minimize "pollutants of concern," new development shall incorporate a BMP or a combination of BMPs best suited to reduce pollutant loading to the maximum extent feasible.

- **Policy 3.86:** Post-development peak stormwater runoff discharge rates shall not exceed the estimated pre-development rate. Dry weather runoff from new development must not exceed the pre-development baseline flow rate to receiving water bodies and may only consist of non-storm runoff explicitly allowed by Stormwater Permit 2007-0001 or updates of that permit.

- **Policy 3.87:** New development shall be sited and designed to minimize impacts to water quality from increased runoff volumes and nonpoint source pollution. All new development shall meet the requirements of the San Diego RWQCB in its SUSMP for San Diego County.

- **Policy 3.88:** If the State Water Resources Control Board (State Board) or the RWQCB revise the California Water Quality Control Plan, San Diego Region (Basin Plan), the Water Quality Control Plan for Ocean Waters of California (California Ocean Plan), or other applicable regulatory requirements, the City of Solana Beach should consult with the State Board, RWQCB and the CCC to determine if an LCP amendment is appropriate.

- **Policy 3.89:** Land divisions that would result in building pads, access roads, or driveways located on slopes over 30%, or result in grading on slopes over 30% shall be prohibited. The maximum grade allowed for fire apparatus access road is 20%. All land divisions shall be designed such that the location of building pads and access roads minimizes erosion and sedimentation.

- **Policy 3.90:** New roads, bridges, culverts, and outfalls shall not cause or contribute to stream bank or hillside erosion or creek or wetland siltation and shall include BMPs to minimize impacts to water quality including construction phase erosion control and polluted runoff control plans, and soil stabilization practices. Where space is available, dispersal of sheet flow from roads into vegetated areas or other on-site infiltration practices shall be incorporated into road and bridge design.

- **Policy 3.96:** New development shall include construction phase erosion control and polluted runoff control plans. These plans shall specify BMPs that will be implemented to minimize erosion and

sedimentation provide adequate sanitary and waste disposal facilities and prevent contamination of runoff by sediment, construction chemicals and materials.

- **Policy 3.97:** New development shall include post-development phase drainage and polluted runoff control plans. These plans shall specify site design, source control and treatment control BMPs that will be implemented to minimize post-construction polluted runoff, and shall include the monitoring and maintenance plans for these BMPs.

- **Policy 3.98:** Storm drain stenciling and signage shall be provided for new storm drain construction in order to discourage dumping into drains. Signs shall be provided at creek public access points to similarly discourage creek dumping.

- **Policy 3.99:** Outdoor material storage areas shall be designed using BMPs to prevent stormwater contamination from stored materials.

- **Policy 3.100:** Trash storage areas shall be designed using BMPs to prevent stormwater contamination by loose trash and debris.

- **Policy 3.101:** Permits for new development shall be conditioned to require ongoing maintenance where maintenance is necessary for effective operation of required BMPs. Verification of maintenance shall include the permittees signed statement accepting responsibility for all structural and treatment control BMP maintenance until such time as the property is transferred and another party takes responsibility, at which time the new permittee will be obligated to comply with all permit conditions, including on-going maintenance.

- **Policy 3.102:** The City, property owners, or homeowners associations, as applicable, shall be required to maintain any drainage device to insure it functions as designed and intended. All structural BMPs shall be inspected, cleaned, and if necessary, repaired prior to September 30th of each year. Owners of these devices will be responsible for insuring that they continue to function properly and additional inspections should occur after storms as needed throughout the rainy season. Repairs, modifications, or installation of additional BMPs, as needed, should be carried out prior to the next rainy season.

- **Policy 3.103:** Public streets and parking lots shall be swept frequently to remove debris and contaminant residue. For private streets and parking lots, the property owner shall be responsible for frequent sweeping to remove debris and contaminant residue.

- **Policy 3.104:** Some BMPs for reducing the impacts of non-point source pollution may not be appropriate for development on steep slopes, on sites with low permeability soil conditions, or areas where saturated soils can lead to geologic instability. New development in these areas should incorporate BMPs that do not increase the degree of geologic instability.

- **Policy 3.105:** New development that requires a grading permit or local Storm Water Pollution Prevention Plan (SWPPP) shall include landscaping and re-vegetation of graded or disturbed areas. Any landscaping that is required to control erosion shall use native or drought-tolerant noninvasive plants to minimize the

need for fertilizer, pesticides, herbicides, and excessive irrigation. Where irrigation is necessary, efficient irrigation practices shall be required. Landscaping maintenance and irrigation shall be designed and built to avoid or minimize dry weather runoff.

- **Policy 3.106:** New development shall protect the absorption, purifying, and retentive functions of natural systems that exist on the site. Where feasible, drainage plans shall be designed to complement and utilize existing drainage patterns and systems, conveying drainage from the developed area of the site in a non-erosive manner. Disturbed or degraded natural drainage systems shall be restored, where feasible, except where there are geologic or public safety concerns.

- **Policy 3.107:** Use of treatment control BMPs with a high or medium removal efficiency rating is needed in order to meet the maximum extent practicable (MEP) standard, unless it can be exhibited that implementation of such treatment control BMPs is infeasible.

- **Policy 3.108:** Priority Development Projects, as defined on page 18 of the Stormwater Permit 2007-0001, shall be required to implement Low Impact Development (LID) BMPs. Priority Development Project Categories include:

  a. Housing subdivisions of ten or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments.

  b. Commercial developments greater than one acre. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than one acre. The category includes, but is not limited to hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, municipal facilities, commercial nurseries, multi-apartment buildings, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses, automotive dealerships, airfields, and other light industrial facilities.

  c. Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).

  d. Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

  e. 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), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement D.1.d.(6)(c) and hydro modification requirement D.1.g.

f. All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.

- **Policy 3.110:** To the extent required by law, the City shall apply regulations approved by the RWQCB intended to preserve the natural drainage and the hydrologic cycle. The City shall impose conditions on development that will minimize land disturbance, encourage infiltration and minimize the introduction of pollutants into coastal waters.

- **Policy 3.111:** The City's water quality protection measures are primarily based on requirements of the Stormwater Permit 2007-0001 approved by the RWQCB. The City will make amendments to its Ordinances, Policies and Regulations so that they comply with the Stormwater Permit 2007-0001 and other applicable water quality regulations as required by law. Changes to those ordinances, policies and regulations that apply to development in the Coastal Zone, will require amendments to the Solana Beach Land Use Plan or LCP Implementation Plan. All permits issued by the City, or the Commission on appeal, must meet all requirements of the LCP, even if those requirements are more protective than those required by Stormwater Permit 2001-0001 or its successor permits.

- **Policy 3.112:** Development involving onsite wastewater discharges shall be consistent with the LCP as well as the rules and regulations of the San Diego RWQCB, including Waste Discharge Requirements, revised waivers and other regulations that apply.

- **Policy 5.42:** All new development shall comply with the City's water conservation and wastewater regulations.

5.8.3 Methodology

Pasco Laret Suiter & Associates prepared the Preliminary Hydrology Study for Residential Care Facility, 959 Genevieve Street, and a Water Quality Technical Report for the proposed improvements on October 2, 2017, and October 3, 2017, respectively. The results of the studies are included as Appendix 5.8-1 and Appendix 5.8-2 to this DEIR, respectively.

5.8.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant effect on the environment if the project would:

HYD-1 Violate any water quality standards or waste discharge requirements.

HYD-2 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted.

HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

HYD-4 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

HYD-5 Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

HYD-6 Otherwise substantially degrade water quality.

HYD-7 Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

HYD-8 Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

HYD-9 Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

HYD-10 Be subject to inundation by seiche, tsunami, or mudflow.

The Initial Study, included as Appendix 2-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold HYD-2
- Threshold HYD-7
- Threshold HYD-8
- Threshold HYD-9
- Threshold HYD-10

Therefore, these impacts are not addressed in the following DEIR analysis.

5.8.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.8-1: Would the proposed 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? Or would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? [Thresholds HYD-4 and HYD-5] [Less than significant]

Impact Analysis: The site currently contains 98 percent pervious surfaces. Project development would construct about 66,206 square feet of impervious surfaces onsite, or 51.94 percent of the project site, and 48.06 of the site would be pervious. The proposed project is a "Priority Development Project," as defined by the RWQCB and as noted in the City's BMP Manual. Two categories of Priority Development Projects cover projects that would create 10,000 square feet or more of impervious surfaces or projects that would result in the disturbance of one or more acres of land and are expected to generate pollutants post-construction.

Proposed Drainage

Runoff from the northern portion of the site would discharge to Genevieve Street via a sidewalk underdrain and remain within Basin A, the same as existing conditions. Runoff from the southern portion of the site would be collected by a new onsite storm drain system and would discharge on the west side of the site where it would sheet flow to the existing concrete drainage channel west of the site. Runoff from this portion of the site would remain within Basin B, as it does currently.

The offsite runoff from Basin B that currently surface flows through the site would be collected by a new storm drain inlet adjacent to the eastern property line and in line with the existing basin flowline. Runoff collected by this inlet would be conveyed across the site by a new 1.5-feet by 4-feet box culvert, which would run westward under the breezeway of the new building and under the cul-de-sac of the onsite access road (see Figure 5.8-3, *Project Drainage Plan*). The new box culvert would discharge at the western edge of the site via a new concrete headwall and rip-rap energy dissipater into the existing concrete drainage channel in the Caltrans I-5 right-of-way.

Stormwater Retention System

An underground pipe storage stormwater retention system is proposed to mitigate for any increase in peak runoff. This system would be underneath the access road along the western site boundary. It has been sized to contain the net increase in runoff volume from the site from a 100-year, 6-hour storm event. Onsite runoff from the new onsite access road and part of the roof would be collected by the pipes used to store the stormwater. Once the peak flow has passed, the stormwater would be pumped to the surface along the west side of the site where it would sheet flow to the existing concrete drainage channel and into the existing public storm drain system. The system is intended to mimic existing site runoff to ensure that the proposed development does not result in additional drainage impacts to downstream properties or to the existing drainage improvements that receive runoff from the site.

Low Impact Development

Permanent stormwater treatment areas, including swales, landscaping, and retention areas, have been incorporated into the site design (see Figure 5.8-3) and sized to meet the minimum low impact development requirements for priority stormwater projects, as defined by the San Diego County's current BMP Manual.

Peak runoff rates from a 100-year storm in post project conditions are shown in Table 5.8-2.

Table 5.8-2 Post-Project Site Hydrology

Basin	Node	Total Basin Area, acres	Peak Runoff Rate, 100-Year Storm, cubic feet per second
A (Offiste)	202	64	85.7
A (Onsite)	199	0.9	1.86
B (Offsite)	104	29.8	32.9
B (Onsite)	155	2.1	4.32
Total	Not applicable	96.8	124.8

Source: Pasco Laret Suiter & Associates 2017 (see Appendix 5.8-1).

Although onsite flows would increase compared to existing pre-developed conditions, according to the hydrology study included as Appendix 5.8-1 to this DEIR, the combination of storm drainage improvements, stormwater retention pipes, and surface low-impact-development improvements would not result in an increase in peak runoff leaving the site due to a 100-year, 6-hour storm. Project development would not generate an increase in runoff that would adversely affect existing drainage systems. Therefore, flooding and storm drain impacts would be less than significant.

Impact 5.8-2: Would the project violate any water quality standards or waste discharge requirements, alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site, or otherwise substantially degrade water quality? [Thresholds HYD-1, HYD-3, and HYD-6] [Less than significant]

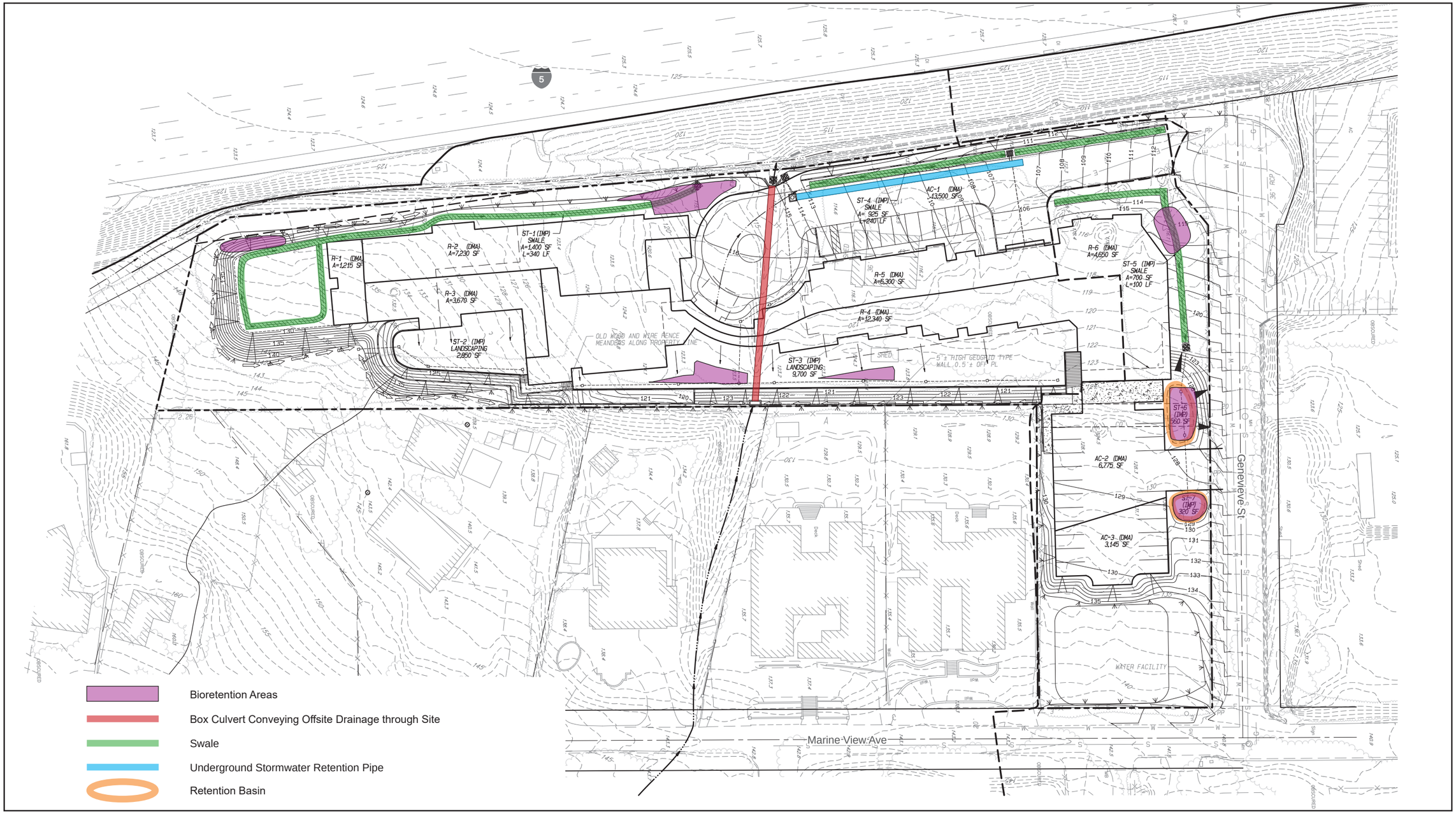
Impact Analysis:

Construction

Expected Pollutants

Project construction is expected to generate sediment, nutrients, metals, trash and debris, oxygen-demanding substances, and oil and grease. Oxygen-demanding substances are mostly biodegradable organic compounds that consume dissolved oxygen in water and reduce the oxygen available to aquatic animals. Nutrients include nitrogen and phosphorus.

Figure 5.8-3 - Project Drainage Plan



Source: Pasco Laret Suiter, 2011

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Pollutants of Concern

Pollutants of concern are those which could be generated by project construction and/or operation and for which receiving waters are also listed on the CWA Section 303(d) List. Pollutants of concern for the project site are sediment and nutrients (nitrogen and phosphorus).

Storm Water Pollution Prevention Plan

A SWPPP would be prepared for the proposed project specifying BMPs to be implemented to minimize construction stormwater pollution impacts in accordance with SBMC Section 13.10.070. Categories of BMPs included in SWPPP are described in Table 5.8-3. Impacts would be less than significant after preparation and implementation of the SWPPP.

Table 5.8-3 Construction Best Management Practices

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	Cover and/or bind soil surface, to prevent soil particles from being detached and transported by water or wind	Mulch, geotextiles, mats, hydroseeding, earth dikes, swales
Sediment Controls	Filter out soil particles that have been detached and transported in water.	Barriers such as straw bales, sandbags, fiber rolls, and gravel bag berms; desilting basin; cleaning measures such as street sweeping
Tracking Controls	Minimize the tracking of soil offsite by vehicles	Stabilized construction roadways and construction entrances/exits; entrance/outlet tire wash.
Non-Storm Water Management Controls	Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges.	BMPs specifying methods for: paving and grinding operations; cleaning, fueling, and maintenance of vehicles and equipment; concrete curing; concrete finishing.
Waste Management and Controls (i.e., good housekeeping practices)	Management of materials and wastes to avoid contamination of stormwater.	Spill prevention and control, stockpile management, and management of solid wastes and hazardous wastes.

Source: CASQA 2003.

Erosion Controls

Erosion control BMPs are described in Table 5.8-3. The project SWPPP would specify erosion control BMPs that the project construction contractor would use. Erosion impacts from project construction would be less than significant.

Post-Construction

Expected Pollutants and Pollutants of Concern

Expected categories of pollutants and pollutants of concern from project operation are the same as those for construction.

Stormwater Quality Management Plan

The project applicant has prepared a stormwater quality management plan (SWQMP) for the project specifying BMPs to minimize stormwater pollution from project operation. BMPs are grouped in three categories: source control, site design (or low-impact development), and stormwater pollutant control.

Source Control Requirements

- **Protect trash storage areas from rainfall, run-on, runoff, and wind dispersal.** The trash storage area would be bermed so that stormwater would not run onto the area, and walled to prevent off-site transport of trash.

- **Identify the storm drain system using stenciling or signage.** Storm drain inlets would be identified using signs and/or stencils.

Site Design Requirements

- **Minimize Impervious Area.** At project completion, about 52.6 percent of the site would be pervious surfaces, including landscaping areas, drainage swales, and onsite retention basins.

- **Disperse Impervious Areas.** For example, the western driveway and adjacent parking stalls would be separated from the building by landscaped areas.

- **Landscape with Native or Drought-Tolerant Species.** Drought-tolerant, native, and ornamental trees and shrubs would be used in project landscaping.

Storm Water Pollutant Control Requirements

- **Flow-through Treatment Control.** The site plan incorporates swales, landscaping, and retention basins. The plan includes three swales: one about 100 feet long in the north end of the site; one about 240 feet long along the north half of the western site boundary; and one about 340 feet long mostly along the southern half of the western site boundary. Two retention basins would be built at the north end of the site.

Erosion

At project completion, the entire site would be developed with the buildings, paved areas, parking lots, driveways, and landscaping. No substantial amount of bare soil susceptible to erosion by water and/or wind would be left. Erosion impacts from project operation would be less than significant.

5.8.6 Cumulative Impacts

The area considered for cumulative hydrology and water quality impacts is the San Dieguito River WMA, about 346 square miles and extending about 43 miles inland from the Pacific Ocean. Much of the western half of the WMA is hills and valleys and urbanized; most of the eastern half of the WMA is mountainous undeveloped land. The WMA includes parts of the cities of Solana Beach, Del Mar, San Diego, Escondido, and Poway and unincorporated areas of San Diego County (Amec Foster Wheeler 2015).

Other projects in the WMA would increase the amount of impervious area and could generate increased runoff from the affected project sites. Construction and operation of other projects could generate pollutants—including sediment due to erosion—that could impair water quality in the WMA.

Other projects would be required to implement BMPs pursuant to the BMP manuals issued by the relevant jurisdictions. Such BMPs would involve interception, storage, evaporation, evapotranspiration, bioretention, biofiltration, infiltration, and/or filtration. Certain categories of projects would be required to limit postproject runoff rates to no greater than preproject rates. In consideration of the preceding factors, the project's contribution to cumulative water quality and drainage impacts is less than significant, and therefore, project impacts would not be cumulatively considerable.

5.8.7 References

Amec Foster Wheeler Environment & Infrastructure. 2015, September. San Dieguito River Watershed Management Area Water Quality Improvement Plan. http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/docs/wqip/san_dieguito_river/REVISED_SanDieguitoWMA_WQIP.pdf.

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Solana Beach, City of. 2016, February. City of Solana Beach Best Management Practices Design Manual. http://www.ci.solana-beach.ca.us/vertical/sites/%7B840804C2-F869-4904-9AE3-720581350CE7%7D/uploads/COSB_BMP_Manual_Feb_2016.pdf.

———. 2017, January 30. City of Solana Beach Jurisdictional Runoff Management Program. http://www.ci.solana-beach.ca.us/vertical/sites/%7B840804C2-F869-4904-9AE3-720581350CE7%7D/uploads/ENG_JURMP.pdf.

State Water Resources Control Board (SWRCB). 2017, October 11. Final 2012 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report). http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml.

US Environmental Protection Agency (USEPA). 2012, September 26. Water Permitting 101. http://www.epa.gov/npdes/pubs/101pape.pdf.

5.9 LAND USE AND PLANNING

This section of the DEIR evaluates the project's consistency with applicable land use plans and policies including coastal resource plans and policies in the City of Solana Beach. Land use impacts can be either direct or indirect. Direct impacts result from conflicts with an applicable land use plan, policy, or regulation adopted to reduce an environmental effect; division of neighborhoods or communities; or conflict with other applicable land use plans, including habitat and wildlife conservation plans. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services or increased traffic on roadways. Indirect impacts are addressed in other sections of this DEIR. This section focuses on the potential for direct land use impacts and evaluates the proposed project's consistency with applicable plans and policies including the City's Certified LCP LUP.

5.9.1 Environmental Setting

5.9.1.1 SITE CONDITIONS

The project site encompasses 2.91 acres (126,875 square feet). It contains existing, deteriorated structures, including a former residence, greenhouse, and shed. Approximately 124,000 square feet or 98 percent of the site is vacant, and is covered with grasses, small shrubs, and ornamental palm trees. The project site also contains debris and a few old/conceptual story poles. Figure 3-4, *Site Photographs*, illustrates the existing condition of the project site.

The property gently slopes down from the south and east to the northwest. Site elevations range from approximately 140 feet above mean sea level (amsl) in the southern and northeastern areas to approximately 110 feet amsl in the northwest corner. The site is slightly lower than the developed grades of Marine View Avenue and Genevieve Street, and the commercial and residential developments north and east of the site are at much higher elevations, averaging 125 amsl. The I-5 freeway is also developed at about 125 amsl; therefore, the site is higher than I-5 in the southwest end and gradually declines to lower than I-5 at the northwest end.

Due to the elevated topography of the surrounding areas, stormwater drains toward the site and discharges into the drainage swale along the western boundary, adjacent to the I-5 embankment. A second drainage swale—perpendicular to I-5—crosses the site approximately 300 feet south of Genevieve Street. A north-south private sewer easement crosses the site from the rear property lines of the residences west of Marine View Avenue to an existing sewer line in Genevieve Street. Currently. the only vehicular access into the site is via a driveway at the end of the Genevieve Street cul-de-sac.

5.9.1.2 LAND USE AND ZONING

The project site has an existing General Plan land use designation of Estate Residential and corresponding zoning of Estate Residential 2 (ER-2). The proposed project would result in a residential care facility with 13 or more persons and would therefore require a Conditional Use Permit. The maximum floor area allowed on the project site is 23,531 square feet. The project site is also within a Dark Sky Overlay Zone, which regulates and restricts the use of outside lighting (Solana Beach 2014).

5.9.1.3 SURROUNDING LAND USES

I-5 adjoins the site to the west. Commercial uses (i.e., The Timbers, [a three-story office building] and a plant nursery) are north of the site. Six single-family properties, ranging from one to two stories in height, adjoin the site to the east and south. Figure 3-5, *Surrounding Land Uses*, shows photos of the surrounding land uses.

5.9.2 Regulatory Setting

5.9.2.1 STATE

California Coastal Act of 1976

The California Coastal Act, codified in Public Resources Code, Division 20, Sections 30000 et seq., is the primary law that governs the decisions of the California Coastal Commission (CCC) and outlines standards for development within the coastal zone. Section 30251 of the Public Resources Code states:

> The scenic and visual qualities of coastal areas be considered and protected as resources of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas; to minimize the alteration of natural land forms; to be visually compatible with the character of surrounding areas; and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas—such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government—shall be subordinate to the character of its setting.

The CCC will review the project for consistency with the City's LCP LUP and Chapter 3 of the Coastal Act. and will need to issue a Coastal Development Permit for the proposed project.

5.9.2.2 REGIONAL

North County Multiple Habitat Conservation Program

The North County Multiple Habitat Conservation program (NCMHCP) is a comprehensive conservation planning process developed by the San Diego Association of Governments that addresses the needs of multiple plant and animal species in North Western San Diego County. Its goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46 percent) are in public ownership, and protect over 80 rare, threatened, or endangered species. The City of Solana Beach is not in a subarea or subregional plan, and follows goals and policies of the NCMHCP.

5.9.2.3 LOCAL

Solana Beach General Plan

The General Plan Land Use section defines the distribution of land uses, the intensity of development, and the provision of public facilities and promotes the quality and character of the City. The Land Use section provides goals, policies, and programs that are used to guide implementation of land use objectives that provide for

community needs while preserving the environment. Goals and policies from the City's General Plan that would apply to the proposed project are provided, below:

Goal LU-1.0: A well-balanced and functional mix of residential, commercial, industrial, agricultural, open space, recreational and institutional land uses.

- **Policy LU-1.1:** Encourage the development and protection of healthy residential neighborhoods by ensuring sensitive transitions between those neighborhoods and adjoining areas and preventing deterioration through rehabilitation and maintenance efforts.
- **Policy LU-1.2:** The City's land use plan shall include residential land uses comprising a range of housing types, locations, and densities.
- **Policy LU-1.4:** Pursue opportunities to improve and protect existing residential neighborhoods by enhancing the pedestrian and bicycle experience, implementing traffic calming measures where appropriate, and providing convenient access to schools, parks, beaches, and other amenities and services.
- **Goal LU-2.0:** Regional coordination and collaboration in the development of land use plans and projects.
- **Policy LU-2.1:** Consider local development plans within the context of regional land use and transportation patterns and utilize SANDAG's Regional Transportation Plan, Regional Comprehensive Plan, and Sustainable Communities Strategy to inform land use and transportation planning and policy development.

Goal LU-3.0: To be a leader in efforts to reduce greenhouse gas emissions.

- **Policy LU-3.1:** Concentrate commercial, mixed-use, and medium to high density residential development along transit corridors and near activity centers that can be served efficiently by public transit and alternative transportation modes.
- **Policy LU-3.3:** Identify and prioritize infrastructure improvements needed to support increased use of alternatives to private vehicle travel, including transit, bicycle, and pedestrian modes.
- **Policy LU-3.4:** To reduce energy consumption and emissions from new buildings and significant remodels, encourage building placement, design, and construction techniques that minimize energy consumption; require the installation of EnergyStar® appliances and/or other high efficiency facilities; and promote other green building practices, including obtaining LEED (Leadership in Energy and Environmental Design) certification, where feasible.
- **Policy LU-3.5:** Reduce the urban heat island effect through sustainable design and building practices, cool roofs, green roofs, light colored pavement, shade trees, shading, and other means.
- **Policy LU-3.6:** Promote the use of solar panels, solar hot water heaters, and other green energy sources in conjunction with new development and retrofits to existing structures.

Goal LU-5.0: To ensure that long-term protection of the environment is given the highest priority in the consideration of development proposals and in the implementation of this General Plan.

- **Policy LU-5.1:** To ensure that development does not create adverse environmental, geographic, or geologic impacts, the City Council shall maintain ordinances for the preservation of hillsides, floodplains, sensitive biological areas, canyons, wetlands, coastal lands, scenic public views and, where feasible, private views. The Council shall also continue to regulate development of property within special hazard areas, including floodplains, coastal bluffs, and steep hillside areas.

- **Policy LU-5.4:** Ensure that potential impacts to biological resources are carefully evaluated prior to approval of development projects.

- **Policy LU-5.5:** Encourage the use of "green" storm water management and low impact development practices, including green roofs, landscape-based treatment measures, bioswales, tree wells, pervious materials for hardscape, and other techniques that allow for filtering, infiltration, storage and reuse or evaporation of storm water runoff on site.

- **Policy LU-5.9:** Encourage the use of native, drought tolerant plants and discourage the use of vegetative turf, unless recreation needs or other area functions specifically require turf.

- **Policy LU-5.11:** Encourage and promote methods to conserve water.

- **Policy LU-5.12:** Require all projects with a valuation of $100,000 or more to salvage, recycle, or reuse at least 75% of demolition debris.

- **Policy LU-5.13:** Promote the use of recycled materials as part of new construction or renovations, including the reuse of existing building shells/elements.

- **Policy LU-5.14:** Encourage recycling by all sectors of the community including residents, businesses, and schools and inform residents and businesses about composting and "green purchasing."

Goal LU-6.0: Development that is consistent with the overall community character and contributes positively towards the City's image.

- **Policy LU-6.3:** Maintain ordinances to encourage the preservation of private views.

- **Policy LU-6.4:** Preserve, protect, and enhance established residential neighborhoods by providing sensitive transitions and buffers between those neighborhoods and adjacent commercial or mixed use-areas to safeguard residences from the negative effects of increased traffic, noise, lighting, parking overflow, and other potential impacts.

- **Policy LU-6.5:** Require new development and additions to existing structures to respect and respond to those existing physical characteristics, buildings, streetscapes, open spaces, and urban form that contribute to the overall character and livability of the neighborhood or commercial district in which it is proposed.

- **Policy LU-6.6:** Promote infill development, redevelopment, rehabilitation, and reuse efforts that protect and contribute positively to existing neighborhoods and surrounding areas.
- **Policy LU-6.7:** Promote appropriate transitions in building height and bulk which are sensitive to the visual and physical character of adjacent neighborhoods.
- **Policy LU-7.3:** Implement the Local Coastal Program Land Use Plan and Local Implementation Plan.

Goal 3.3: To meet the needs of the entire community by providing an adequate level of parks and recreational opportunities.

- **Policy 3.b:** The city shall require developers of residential land to dedicate land or fees for parks to ensure the continued provision of at least 3 acres of park land for every 1,000 residents.

City of Solana Beach Municipal Code

The City of Solana Beach Zoning Ordinance is designed to operate in conjunction with the City's land use plan to serve the public health, safety, and general welfare and to enhance social and economic opportunities in the City. Chapter 17.20, Residential Zones, states that the ER-2 zone is intended for residential development in areas characterized by single-family homes on semirural estate lots of one-half acre or larger. The ER-2 zone allows up to two dwelling units per net acre, and only permits a residential care facility with greater than 13 residents after issuance of a conditional use permit. However, the proposed Solana Beach Senior Care Specific Plan would override the existing zoning and its development standards.

Local Coastal Program

The City Council adopted the Local Coastal Program (LCP) Land Use Plan (LUP) under Solana Beach City Council Resolution 2013-018. The LCP is a planning document prepared by cities and counties in coastal areas to further address environmental planning concerns with shorelines, bluffs, and coastal conditions as required by the California Coastal Act of 1976. The Solana Beach LCP LUP contains key strategies and policies to provide a comprehensive citywide land use planning and sustainable development of shoreline and bluff protection focused on local conditions, goals, and interests. Although Solana Beach has an adopted LCP and LUP, it does not have a certified local implementation plan and cannot issue coastal development permits. Therefore, the California Coastal Commission has purview over the proposed project and would be the responsible agency that would issue the coastal development permit for the proposed project.

5.9.3 Methodology

This section describes the CEQA impact analysis relating to the land use consistency for the proposed project. Although the proposed Solana Beach Senior Care Specific Plan project would specify local zoning requirements for the project site, the land use and planning analysis contained in this document compares the existing land use and development standards at the project site to the proposed improvements. Other potential land use topics were also analyzed including the project's consistency with the City of Solana Beach's Dark Sky Overlay zone and onsite easements.

5.9.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

LU-1 Physically divide an established community.

LU-2 Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

LU-3 Conflict with any applicable habitat conservation plan or natural community conservation plan.

The Initial Study, included as Appendix 2-1, substantiates that there would be no impacts associated with the following threshold would be less than significant:

- Threshold LU-1

Therefore, this impact is not addressed in the following DEIR analysis.

5.9.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.9-1:	**Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? [Threshold LU-2] [Less than significant]**

Impact Analysis:

General Plan and Zoning

The project site has a General Plan land use designation of Estate Residential and corresponding zoning of Estate Residential 2 (ER-2). The Estate Residential land use allows for up to two dwelling units per acre and is intended for residential development in areas characterized by single-family homes on semirural estate lots of one-half acre or larger. According to SBMC Section 17.60.100, residential care facilities are allowed within residential zones with the approval of a conditional use permit. The City council imposes conditions on facilities with more than 13 persons require specific conditions providing for the development, operation, and design. This ER-2 zone allows for up to two dwelling units per acre or a maximum of one dwelling unit per parcel. The ER-2 zone also permits a maximum FAR based on a tiered formula: 0.60 for the first 5,000 square feet of lot area, 0.30 for each additional square foot of lot area between 5,000 and 20,000 square feet, and 0.15 for

each additional square foot of lot area above 20,000 square feet. Accordingly, the current/existing maximum allowed floor area at the project site is 23,531 square feet (0.19 FAR).

Specific Plan

The project proposes a single structure with a total floor area of 69,778 square feet (first floor: 34,672 SF; second floor: 35,106 SF), which would exceed the existing maximum allowable floor area by 46,247 square feet (0.55 FAR). Ordinance No.266 of the SBMC prohibits the development of a project that would exceed maximums of general plan residential land use categories or result in the intensification of a residential parcel (from 0.19 to 0.55 FAR) unless the action—via a general plan amendment, including a specific plan—is approved by a majority of voters in the City. Thus, implementation of the proposed project cannot occur unless the specific plan for the project is approved by a majority of the voters in the City of Solana Beach. The proposed Specific Plan would not change the existing land use designation of Estate Residential or the zoning of ER-2, but would legislatively establish an overlay for the property that would apply to the Residential Care Facility and Neighborhood Open Space uses, and would allow for a 0.55 FAR.

The Specific Plan has been designed to be consistent with the General Plan and other ordinances of the City adopted for the purpose of avoiding or mitigating environmental impacts. Nonetheless, the adoption of the Specific Plan, and consequently the consistency of the remainder of the project, must be determined through a majority vote of the electorate. If the voters approve the project, the General Plan would be amended to include the Specific Plan, and the proposed project would be consistent with the General Plan. If the voters reject the project, the project cannot be built as proposed. Therefore, adoption of the proposed Solana Beach Senior Care Specific Plan project would result in a less than significant impact to applicable land use and zoning of the site.

Dark Sky Overlay

The project site is within a Dark Sky Overlay zone, which includes specific exterior lighting regulations. According to Section 4.2, Site Planning, of the Specific Plan, the proposed improvements—including exterior lighting, building, parking area, and landscape lighting—would be required to comply with Solana Beach Zoning Code Section 17.60.060c, Dark Sky Overlay. In addition, a lighting plan demonstrating compliance with the Dark Sky Overlay standards will be provided by the project applicant in conjunction with the development review and Specific Plan approval process. The proposed improvements would comply with the requirements of the Dark Sky Overlay zone and would result a less than significant impact.

Local Coastal Program

The Solana Beach LCP LUP is consistent with the City's General Plan, but may be more restrictive in specific areas to ensure the protection of coastal resources and long-term protection of the environment. As provided above, the proposed Specific Plan would be consistent with the City's General Plan. In addition, an LCP Consistency Analysis table has been included as Appendix 5.9-1 to this DEIR. As provided in Appendix 5.9-1, the project would be consistent with the applicable policies of the Solana Beach LCP.

The project site is within the coastal zone and subject to the California Coastal Act (Public Resources Code Sections 30000 et seq.). Solana Beach has an adopted local coastal program and land use plan; however, it does not have a certified local implementation plan and cannot issue coastal development permits. Therefore, the California Coastal Commission has purview over the proposed project and would be the responsible agency that would issue the coastal development permit for the proposed project. Table 5.9-1, *Project Consistency with Coastal Resources Planning and Management Policies*, lists the policies included in Chapter 3 of the Coastal Act that are applicable to the proposed project and explains how the proposed project conforms with them. As documented, the project is consistent, and impacts would be less than significant, and no mitigation measures are required.

Table 5.9-1 Project Consistency with Coastal Resources Planning and Management Policies

• Public Access (Sections 30210–30214) concerns maintaining public access to recreational facilities within the coastal zone.	The project is east of I-5, over one mile east of the coast, and provides no direct access to the beach or coastal zone.
• Recreation (Sections 30220–30224) concerns the protection of lands that are suitable for coastal recreational activities.	While the site includes a privately maintained open space, its location east of I-5 makes it unlikely to be used by any beach goers.
• Marine Environment (Sections 30230–30237) concerns the protection of marine resources, including those of special biological or economic significance.	There are no marine biological resources on the project site.
• Land Resources (Sections 30240–30244) concerns the compatibility of development and land resources, including environmentally sensitive habitat, prime agriculture, timberlands, and subsurface cultural resources.	Mitigation Measure CUL-1 and TCR-1 address the potential for subsurface discovery of archaeological or cultural resources. The project is currently a vacant home site and is not sensitive habitat, prime agriculture or timberland.
• Development (Sections 30250–30255) concerns environmental impacts caused by physical development, including aesthetics, beach access, geologic, flood, fire hazard, air quality, and energy consumption.	There is no access to the beach because the land is 1 mile east of the coast, and on the east side of I-5 which forms a barrier to pedestrian access. All other environmental impacts are addressed in this EIR and have been found to be less than significant.
• Industrial Development (Sections 30260–30265.5) concerns coastal-dependent industrial facilities.	The project is a senior residential facility and is not industrial.

Source: Public Resources Code Section 30000 et seq.

The adoption of the Specific Plan, and consequently the consistency of the remainder of the project, must be determined through a majority vote of the electorate due to the identified zoning differences which include primarily allowable floor area ratio. Until this occurs, the proposed project is inconsistent with the existing General Plan and Solana Beach Local Coastal Program. Therefore, approval of the project (which can only occur if the Specific Plan is approved by a majority vote of the residents of Solana Beach) would result in a less than significant impact.

Easements

Additionally, there are two easements on the property: a Caltrans easement along the western perimeter and a sewer easement operated by the San Elijo Joint Powers Authority. The proposed structural improvements would not be constructed over the easements; however, plans have been approved by Caltrans to widen the segment of I-5 adjacent to the project site. The applicant and the project civil engineer previously worked with Caltrans to verify the maximum limits to accommodate the I-5 widening, including comparison of design drawings between the project and Caltrans files. In May 2017, it was confirmed with the I-5 design team that the

maximum limits shown by the Caltrans files were still valid, and the proposed project design would not conflict with the freeway widening as designed. Therefore, the project would not impact easements designed to mitigate regional traffic impacts. The existing SELJPA easement would not be affected by the project, and therefore the proposed project would not result in a conflict with the sewer easement.

Impact 5.9-2: Would the project conflict with any applicable habitat conservation plan or natural community conservation plan? [Threshold LU-3] [Less than Significant with Mitigation Incorporated]

Impact Analysis: The City of Solana Beach and project site are within the jurisdiction of the SANDAG-approved North County Multiple Habitat Conservation Program (NCMHCP) for the region. The City of Solana Beach does not have its own approved Habitat Conservation/Subarea Plan and is not within a Focused Planning Area per the NCMHCP; therefore, the project site would be subject to the NCMHCP's policies and regulations for the region.

Construction of the facility and associated landscaping and roadway improvements would result in the loss of the 0.6 acre of existing nonnative grassland on the project site, as shown in Table 5.3-1 (see Section 5.3 of this DEIR). According to the NCMHCP, any loss of nonnative grassland is required to be mitigated with provision of replacement non-native grassland at a 0.5:1 ratio. Therefore, approximately 0.3 acre of nonnative grassland mitigation would be required as per the requirements of the NCMHCP.

As the entire site will be occupied by the project, it is unlikely that mitigation of the nonnative grassland will occur onsite. However, as provided in Section 5.3, *Biological Resources*, mitigation measure BIO-1 allows for the onsite mitigation of the nonnative grasslands. It is more likely that offsite mitigation will be required in the form of the purchase of mitigation fee credits in a local or regional mitigation bank. Mitigation measure BIO-1 requires that purchase of the credits be verified by the City prior to issuance of a grading permit for the project. As shown in Table 5.3-2 in Section 5.3 of the DEIR, there are currently adequate credits available to meet the 0.3-acre mitigation need of the project.

Level of Significance After Mitigation

With implementation of mitigation measure BIO-1, impacts associated with the loss of nonnative grassland would be less than significant.

5.9.6 Cumulative Impacts

Development of the proposed project, in conjunction with the related cumulative project list contained in Table 3-1, *Related Cumulative Projects*, in Chapter 3 of this DEIR, would not result in cumulative citywide land use and/or planning impacts. In the event the voters approve the Solana Beach Senior Care Specific Plan, the proposed project would be consistent with applicable local land use plans. Related projects would be reviewed by the City of Solana Beach and CCC; if a coastal development permit is required, development would be required to be consistent with adopted state and city development standards, regulations, plans, and policies. Therefore, the proposed project combined with related projects would not result in significant cumulative impacts to land use and planning.

5.9.7 References

Solana Beach, City of. 1993. City of Solana Beach Municipal Code Exterior Lighting Regulations (Dark Sky Overlay). http://www.ci.solana-beach.ca.us/vertical/sites/%7B840804C2-F869-4904-9AE3-720581350CE7%7D/uploads/Misc_darkoverlay.pdf.

_____. 2014, June 11. Local Coastal Program Land Use Plan. http://solana-beach.hdso.net/LCPLUP/LCPLUP-COMPLETE.pdf.

5.10 NOISE

This section of the DEIR discusses the fundamentals of sound; examines federal, state, and local noise guidelines, policies, and standards; reviews noise levels at existing receptor locations; evaluates potential noise impacts associated with the implementation of the proposed project in the City of Solana Beach; and provides mitigation to reduce noise impacts at sensitive residential locations. This evaluation uses procedures and methodologies as specified by Caltrans and the Federal Highway Administration (FHWA).

The analysis in this section is based in part on the following technical report:

- *Noise Assessment, Residential Care Facility, 929 Genevieve Street, Solana Beach, CA*, Ldn Consulting, Inc., July 29, 2017.

A complete copy of this study is included as Appendix 5.10-1 to this Draft EIR.

5.10.1 Environmental Setting

5.10.1.1 SOUND FUNDAMENTALS

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dB are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually imperceptible. A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outdoor environments. A change of 5 dB is readily discernable to most people in an exterior environment whereas a 10 dBA change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are "felt" more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

Sound Measurement

Sound intensity is measured through the A-weighted measure 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 are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dB is 10 times more intense than 1 dB, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. 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. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (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. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dB for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. These "L" values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance, as discussed below. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and the City of Solana Beach require that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 p.m. to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 p.m. and 10:00 p.m. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly more restrictive (i.e., higher).

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling

sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 190 dBA will rupture the eardrum and permanently damage the inner ear.

5.10.1.2 VIBRATION FUNDAMENTALS

Vibration is a trembling, quivering, or oscillating motion of the earth. Like noise, vibration is transmitted in waves, but in this case through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard.

Vibration can be either natural as in the form of earthquakes, volcanic eruptions, sea waves, landslides, or man-made as from explosions, the action of heavy machinery or heavy vehicles such as trains. Both natural and man-made vibration may be continuous such as from operating machinery, or transient as from an explosion.

As with noise, vibration can be described by both its amplitude and frequency. Amplitude may be characterized in three ways—displacement, velocity, and acceleration. Particle displacement is a measure of the distance that a vibrated particle travels from its original position and for the purposes of soil displacement is typically measured in inches or millimeters. Particle velocity is the rate of speed at which soil particles move in inches per second or millimeters per second. Particle acceleration is the rate of change in velocity with respect to time and is measured in inches per second or millimeters per second. Typically, particle velocity (measured in inches or millimeters per second) and/or acceleration (measured in gravities) are used to describe vibration. Table 5.10-1 presents the human reaction to various levels of peak particle velocity.

Table 5.10-1 Human Reaction to Typical Vibration Levels

Vibration Level Peak Particle Velocity (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Source: Caltrans 2002.

Vibrations also vary in frequency and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occur around 15 Hz. Traffic vibrations exhibit a similar range of frequencies; however, due to their suspension systems, buses often generate frequencies around 3 Hz at high vehicle speeds. It is less common, but possible, to measure traffic frequencies above 30 Hz.

The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborne vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression and shear waves. Surface waves, or Raleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation."

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

5.10.1.3 EXISTING NOISE ENVIRONMENT

Ambient noise level measurements were conducted September 14 through September 15, 2016, using a Larson-Davis Model LxT Type 1 precision sound level meter and a Larson Davis Model Spark 706. One 24-hour noise level measurement and three short-term measurements were conducted. The measurements were taken at locations around the site to establish a good baseline of the vehicle noise from adjacent Interstate 5. The noise monitoring locations are shown on Figure 5.10-1, *Noise Monitoring Locations*.

The 24-hour noise level measurement is summarized in Table 5.10-2; based on this measurement, existing ambient noise levels range from 54 to 64 dBA Leq. The 24-hour noise level is calculated to be 60 dBA Leq; after applying evening and nighttime noise level penalties, the CNEL is calculated to be 66 CNEL. Thus, the CNEL is approximately 2 dBA higher than the peak hour noise level. The short-term noise measurements are summarized in Table 5.10-3. The statistical indicators Lmax, Lmin, L10, L50 and L90 are also given for each short-term monitoring location.

Table 5.10-2 Existing 24-Hour Ambient Noise Levels

Time	dBA Leq	Time	dBA Leq
6:00 PM	57.8	6:00 AM	62.8
7:00 PM	60.9	7:00 AM	63.7
8:00 PM	60.4	8:00 AM	62.9
9:00 PM	58.9	9:00 AM	62.4
10:00 PM	59.3	10:00 AM	62.4
11:00 PM	56.5	11:00 AM	63.1
12:00 AM	55.5	12:00 PM	63.6
1:00 AM	54.4	1:00 PM	63.3
2:00 AM	55.0	2:00 PM	62.0
3:00 AM	56.3	3:00 PM	58.4
4:00 AM	58.4	4:00 PM	57.6
5:00 AM	61.9	5:00 PM	57.4

Source: Ldn Consulting 2017.
Noise level measurements were conducted September 14 through 15, 2016.

Table 5.10-3 Existing Short-Term Ambient Noise Levels

Measurement Location and Portion of Site	TIme	Noise Levels (dBL Leq)					
		Leq	Lmax	Lmin	L10	L50	L90
ML1 Southwest	2:46–2:56 p.m.	72.2	77.6	66.5	74.2	72.4	68.6
ML2 Northeast	3:01–3:11 p.m.	61.1	71.7	57.7	62.9	60.2	58.7
ML3 South	3:15–3:23 p.m.	63.8	68.5	59.0	65.6	63.4	61.5

Source: Ldn Consulting 2017.

Based on the 24-hour measurement summarized in Table 5.10-2, the loudest traffic hour occurs during the 7:00 a.m. hour. The short-term noise level measurements were taken during the 2:00 p.m. and 3:00 p.m. hours, which are 1.7 and 5.2 dBA lower than the loudest hour, respectively. Based on the differences, the short-term noise levels were adjusted upward and are summarized in Table 5.10-4.

Table 5.10-4 Existing Adjusted Short-Term Noise Level

Location	Measured Noise Level (dBA Leq)	Difference to Loudest Hour	Adjusted Noise Level (dBA Leq)
ML1 Southwest	72.2	1.7	73.9
ML2 Northeast	61.1	5.2	66.3
ML3 South	63.8	5.2	69.0

Source: Ldn Consulting 2017.

Interstate 5

Based on the existing and future freeway configurations as discussed in the Interstate 5 North Coast Corridor Project Final Environmental Impact Report (I-5 EIR), I-5 is currently a 10-lane freeway in the vicinity of the project that includes 3 general purpose lanes, a high occupancy vehicle (HOV) lane, and an auxiliary lane in

each direction (Caltrans 2013). In the vicinity of the project site, Caltrans will widen the freeway to 14 lanes, with 4 general purpose lanes, 2 HOV lanes, and an auxiliary lane in each direction.

As part of the I-5 EIR evaluation, Caltrans identified a noise impact at the project site (R6.20/ST6.4) as well as at adjacent surrounding properties. To mitigate the future noise impacts, Caltrans required a 16-foot-high sound wall between I-5 stations 595+50 and 604+40—identified as Sound Wall (SW) S602. SW S602 was evaluated as part of the Noise Abatement Decision Report and was recommended to be included in the design for I-5. Additionally, Caltrans would not widen I-5 and increase capacity until SW S602 is built along the eastern side of I-5 extending from south to just north of the project site. Therefore, two future conditions are assessed—a condition where the freeway does not expand and the project must mitigate on-site noise levels, called the "interim condition," and a second condition where Caltrans has expanded I-5 and constructed SW S602. Figure 10 of the Noise Element of the City of Solana Beach General Plan shows that the project site is adjacent to a 70 dBA CNEL contour associated with I-5. The 65 dBA CNEL contour is east of Marine View Drive and encompasses the entire project site. This is consistent with the measured noise levels in Table 5.10-4.

Traffic Noise Along Nearby Local Roadways

Existing traffic noise along roadways near the project site was calculated using the methods in the Highway Noise Model, which is based on traffic volume, vehicle mix, speed, and roadway geometry, and is published by the Federal Highway Administration. Noise levels at 50 feet from roadway centerlines, and 65 dBA CNEL noise contours in feet from roadway centerlines, are listed in Table 5.10-5.

Table 5.10-5 Existing Traffic Noise Along Nearby Local Roadways

Roadway	Segment	ADT[1]	Vehicle Speeds (MPH)[1]	Noise Level @ 50-Feet (dBA CNEL)	65 dBA CNEL Contour Distance (Feet)
Marine View Ave	San Andres Dr to Solana Dr	1,258	25	55.9	12
	Los Caballitos to Genevieve St	221	25	48.3	4
Genevieve St	Marine View Ave to I-5 (cul-de-sac)	37	25	40.6	1
I-5	Adjacent to site	17,050	65	70	750

Sources: Ldn Consulting 2017; City of Solana Beach Noise Element; Caltrans 2013.

Stationary Source Noise

Stationary sources of noises may occur from all types of land uses. Residential uses would generate noise from landscaping, maintenance activities, and air conditioning systems. Noise generated by residential uses are generally short and intermittent. The project site is surrounded by residential uses to the east and south; commercial uses to the north; and the I-5 to the west. Most of the City of Solana Beach is developed with residential land uses. There are two major commercial districts in the City—one centered on the I-5/Lomas Santa Fe Drive interchange, and the other a linear district along Highway 101. There is one light-industrial district in the southwest quadrant of the City.

Figure 5.10-1 - Noise Monitoring Locations
5. Environmental Analysis

0 150
Scale (Feet)

Source: Ldn Consultants, 2017

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5.10.2 Regulatory Setting

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

5.10.2.1 FEDERAL

Federal Highway Administration

The Interstate 5 freeway abuts the west side of the project site.

The FHWA values are the maximum desirable values by land use type and area based on a "trade-off" of what is desirable and what is reasonably feasible. These values recognize that in many cases lower noise exposures would result in greater community benefits. The FHWA design noise levels are included in Table 5.10 6.

Table 5.10-6 FHWA Design Noise Levels

Activity Category	Design Noise Levels [1]		Description of Activity Category
	L_{eq} (dBA)	L_{10} (dBA)	
A	57 (exterior)	60 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	70 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	75 (exterior)	Developed lands, properties, or activities not included in Categories A or B, above
D	–	–	Undeveloped lands.
E	52 (interior)	55 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: FHWA
[1] Either Leq or L10 (but not both) design noise levels may be used on a project.

5.10.2.2 LOCAL

Solana Beach General Plan

Exterior and Interior Noise Standards for Residential Properties

Exterior noise levels up to 65 dBA CNEL are considered acceptable for residential development based upon the assumption that the homes are built with normal conventional construction.

Interior noise levels should be mitigated to a maximum of 45 dBA CNEL in all habitable rooms when the exterior of the residence are exposed to levels of 60 dBA CNEL or more. If windows and doors are required to be closed to meet the interior noise standard, then mechanical ventilation shall be provided per City requirements. Interior noise levels up to 55 dBA CNEL are considered acceptable with open windows used to meet a natural ventilation requirement.

Goal 3.1 To Protect Public Health and Welfare by Eliminating Existing Noise Problems and by Preventing Significant Degradation of the Future Acoustic Environment.

- **Policy 1.a:** The City shall adopt a standard by which identifies interior and exterior noise standards in relation to specific land uses, particularly "noise sensitive" areas such as residential areas, schools, hospitals, open space preserves, and parks. The ordinance shall specify the maximum allowable noise levels for transportation sources, construction activities, and other non-transportation sources such as industrial and commercial land uses.

- **Policy 1.b:** The adopted community noise standards shall be consistent with applicable state noise standards which specify that interior noise levels for residential living spaces shall not exceed 45 Ldn/CNEL. This standard shall be applied to all new single- and multi-family dwellings, hotels, and motels.

- **Policy 2.a:** The City shall require the construction of barriers to mitigate sound emissions where necessary and feasible.

- **Policy 2.b:** The City shall require the inclusion of noise mitigation measures in the design of new roadway projects in Solana Beach, including Interstate 5 projects.

- **Policy 4.a:** The City shall require that potential noise impacts be addressed for all projects as part of the initial study per CEQA to determine if unacceptable noise levels will be created or experienced. Depending on the level of impact, a noise impact evaluation may be required to be undertaken. Should noise abatement be necessary, the City shall require the implementation of mitigation measures be based on a detailed technical study by a qualified acoustical engineer.

- **Policy 4.b:** The City shall not approve projects that do not comply with the standards established in the community noise ordinance concerning noise/land use compatibility unless all practical measures have been taken to mitigate potential noise impacts and the City Council adopts a "Statement of Overriding Considerations" which provides the rationale for approving such a project.

City of Solana Beach Municipal Code

Noise generation on residential properties: Section 7.34.040

A. Unless a permit has been applied for and granted pursuant to this chapter, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced, exceeds the applicable limits set forth below in Table 5.10-7; with specified exceptions provided in the SBMC and identified in the Noise Assessment (see Appendix 10.1).

Table 5.10-7 SBMC Section 7.34.040

Zone	Noise Limit Between 7:00 A.M. and 10:00 P.M.	Noise Limit Between 10:00 P.M. and 7:00 A.M.
Residential: ER1, ER2, LR, LMR, MR	50	45
Residential: MHR, HR	55	45

Source: Ldn 2017.

Construction Hours and Noise Levels: Section 7.34.100

A. The erection, demolition, alteration or repair of any building structure or the grading or excavation of land in such a manner as to create disturbing, excessive or offensive noise during the following hours, except as hereinafter provided, is a violation of this code:

- Before 7:00 a.m. or after 7:00 p.m., Monday through Friday, and before 8:00 a.m. or after 7:00 p.m. on Saturday; and all day on Sunday, New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

Specific Requirements: Section 17.20.040

- M. Equipment Screening. All mechanical equipment, whether on the roof, the side of the building, or the ground shall be screened. Such screening shall be architecturally compatible with the principal structure in terms of material, color, shape, and size. Where several pieces of equipment require screening, a continuous screen is preferable.

Title 24/CalGreen California Building Code

The City has adopted the California Building Code, which requires that interior noise levels due to exterior environmental noise sources in multifamily residential units be limited to 45 dBA Ldn/CNEL in any habitable room. The City has also adopted the California Green Building Standards Code (CALGreen), which has requirements for insulation that affect exterior-interior noise transmission for nonresidential structures. Pursuant to CALGreen Section 5.507.4.1, Exterior Noise Transmission,

> [W]all and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope must meet a composite sound transmission class (STC) rating of at least 50 or a composite outdoor-indoor transmission class (OITC) rating of no less than 40 with exterior windows of a minimum STC of 40 or OITC of 30 within a 65 dBA CNEL or Ldn noise contour of an airport, freeway or expressway, railroad, industrial source or fixed-guideway source. Where noise contours are not readily available, buildings exposed to a noise level of 65 dBA Leq during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum of STC 40 (or OITC 30).

Vibration Standards

The City has not yet adopted vibration criteria. The United States Department of Transportation Federal Transit Administration (FTA) provides criteria for acceptable levels of groundborne vibration for various types of special buildings that are sensitive to vibration. For purposes of identifying potential project-related vibration impacts, the FTA criteria will be used. The human reaction to various levels of vibration is highly subjective. The upper end of the range shown for the threshold of perception, or roughly 65 VdB, may be considered annoying by some people. Vibration below 65 VdB may also cause secondary audible effects, such as a slight rattling of doors, suspended ceilings/fixtures, windows, and dishes, any of which may result in additional annoyance. Table 5.10-8 on the following page shows the FTA groundborne vibration and noise impact criteria for human annoyance.

In addition to the vibration annoyance standards presented above, the FTA also applies the following standards for construction vibration damage. As shown below in Table 5.10-9, structural damage is possible for typical residential construction when the peak particle velocity (PPV) exceeds 0.2 inch per second (in/sec). This criterion is the threshold at which there is a risk of damage to normal dwellings.

Table 5.10-8 Vibration and Noise Impact Criteria (Human Annoyance)

	Groundborne Vibration Impact Levels (VdB re 1 microinch/second)			Groundborne Noise Impact Levels (dB re 20 micropascals)		
Structure Category	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where low ambient vibration is essential for interior operations.	65 VdB[4]	65 VdB[4]	65 VdB[4]	N/A[4]	N/A[4]	N/A[4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

Source: Ldn Consultants 2017.
1 "Frequent Events" are defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.
2 "Occasional Events" are defined as between 30 and 70 vibration events of the same source per day. Most commuter truck lines have this many operations.
3 "Infrequent Events" are defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines
4 This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.
5 Vibration-sensitive equipment is not sensitive to groundborne noise.

Table 5.10-9 Vibration Impact Criteria (Structural Damage)

Building Category	PPV (in/sec)	VdB
I. Reinforced-concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: Ldn Consultants 2017.
Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

Local Coastal Program

The LCP does not contain policies pertaining to noise.

5.10.3 Methodology

5.10.3.1 EXISTING CONDITIONS

Existing Traffic Noise Modeling

Existing traffic noise along local roadways near the project site was calculated using the methods in the Highway Noise Model, which is based on traffic volume, vehicle mix, speed, and roadway geometry, and is published by the Federal Highway Administration. Noise levels at two locations relative to roadway centerlines were calculated: CNELs at 50 feet from the centerline; and the 65 dBA CNEL.

5.10.3.2 IMPACT MODELING

Construction Noise Impacts

Noise levels from proposed construction activities were modeled with SoundPLAN Essential, version 3.0. To determine a representative noise level, the individual sound level of each piece of equipment was individually calculated and then combined and used to calculate a reference sound power level.

Noise levels were modeled at specific receiver locations at adjacent property lines.

Construction Vibration Impacts

Estimated construction vibration levels generated by equipment that would be used onsite were estimated using FTA criteria.

Operational Traffic Noise Impacts

Operational traffic noise was estimated using the Highway Noise Model.

5.10.4 Thresholds of Significance

Significance Thresholds

Exterior noise levels up to 65 dBA CNEL are considered acceptable for residential development based upon the assumption that the homes are built with normal conventional construction.

Interior noise levels should not exceed a maximum of 45 dBA CNEL in all habitable rooms when the exterior of the residence are exposed to levels of 60 dBA CNEL or more. If windows and doors are required to be closed to meet the interior noise standard, then mechanical ventilation shall be provided per City requirements.

In accordance with CEQA, a project should not have a noticeable adverse impact on the surrounding environment. Noise level changes greater than 3 dBA, or a doubling of the acoustic energy, are often identified as audible and considered potentially significant, while changes less than 1 dBA are not discernible. In the range of 1 to 3 dBA, humans who are very sensitive to noise may perceive a slight change. For the purposes for this analysis, a direct and cumulative roadway noise impact would be considered significant if the project increases noise levels at a noise sensitive land use 3 dBA CNEL or higher and if the noise level increases above an unacceptable noise level per the City's Noise Element.

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

N-1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

N-2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

N-3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

N-4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

N-5 For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

N-6 For a project within the vicinity of a private airstrip, expose people residing or working the project area to excessive noise levels.

The Initial Study, included as Appendix 2-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold N-5
- Threshold N-6

Therefore, these impacts are not addressed in the following DEIR analysis.

5.10.5 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.10-1:	Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? [Threshold N-1] [Less Than Significant]

Impact Analysis:

Effects of Traffic Noise from I-5 on Proposed Project

The operational noise analysis in the Noise Assessment focused on the impact of traffic noise from I-5 on the project. Impacts of existing environmental conditions on a project and its future users are generally outside the purview of CEQA pursuant to a 2015 California Supreme Court decision (*California Building Industry Association vs. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369), unless the proposed project would exacerbate the existing conditions.

The City's Noise Element of the General Plan shows that the project site is within the 65 dBA noise contour of I-5, and adjacent to the 70 dBA noise contour. Project design features include a noise wall along the southern and southwest property line adjacent to I-5 (see Figure 5.10-2, *Proposed Sound Wall*) for the portion of the site that is at-grade with I-5. Most of the northern portion of the site is below the I-5 grade and the topography will shield the site from much of the noise. In addition, the areas adjacent to I-5 are parking and access. The building itself will act as noise attenuation for the open space areas behind the building or on the top of the bluff at the corner of Genevieve Street and Marine View Avenue.

As shown in Table 5.10-5, the existing average daily trips on I-5 adjacent to the site are 17,050. The proposed project estimated average daily trips shown in Table 5.12-4 are 263. While unlikely, if every trip associated with the proposed project drove on I-5 adjacent to the site, the ADT would increase to 17,313, resulting in approximately 1.5 percent increase in traffic on this segment of I-5. As transportation noise is directly related to the amount and speed of traffic on a roadway, the increase of 1.5 percent would not significantly increase the amount of traffic and would therefore not increase noise from I-5 that affects the project site.

Method

Operational noise was assessed in two conditions:

- **Interim Condition**, after project opening; in which I-5 is in its current condition.

- **Future Condition**: Caltrans plans widening the I-5 near the project site from the current 10 lanes, consisting of 3 general purpose lanes, one high-occupancy vehicle (HOV) lane, and one auxiliary lane in each direction, to 14 lanes, consisting of four general purpose lanes, two HOV lanes, and one auxiliary lane in each direction.[1] Construction of this portion of the I-5 widening project is expected to begin in 2020 and to be completed by 2021.

Traffic noise was modeled at 12 locations in proposed landscape and walkway areas near the east boundary of the project site and in the south end of the site, and at 10 locations next to the proposed location of the project building façade, on the north, west, and south sides of the building (see Figure 5.10-1, *Noise Monitoring Locations)*.

The City of Solana Beach's exterior noise standard for residential properties is 65 dBA CNEL. As shown in Tables 5.10-3 and 5.10-4, the southwest portion of the site is subject to noise levels that exceed the 65 dBA standard for exterior noise. As a result, the proposed project includes a 12-foot sound attenuation wall between the project site and I-5, as shown in Figure 5.10-2. In addition, the outdoor areas are between the proposed building and bluff, allowing the bulk of the building to attenuate freeway noise.

Interim Condition

In the interim condition, exterior noise levels would exceed the 65-dBA CNEL standard at two locations in a proposed exterior courtyard at the south end of the project site (locations E-11 and E-12; see Figure 5.10-1). The analysis determined that a 12-foot sound attenuation wall curving around the western and southern sides of that proposed exterior courtyard would reduce traffic noise in the courtyard to 65 dBA CNEL, meeting the City's standard (see Figure 4-C in the Noise Assessment). This component of the project is included as a project-design feature (see Chapter 4, *Project Description*).

Future Condition

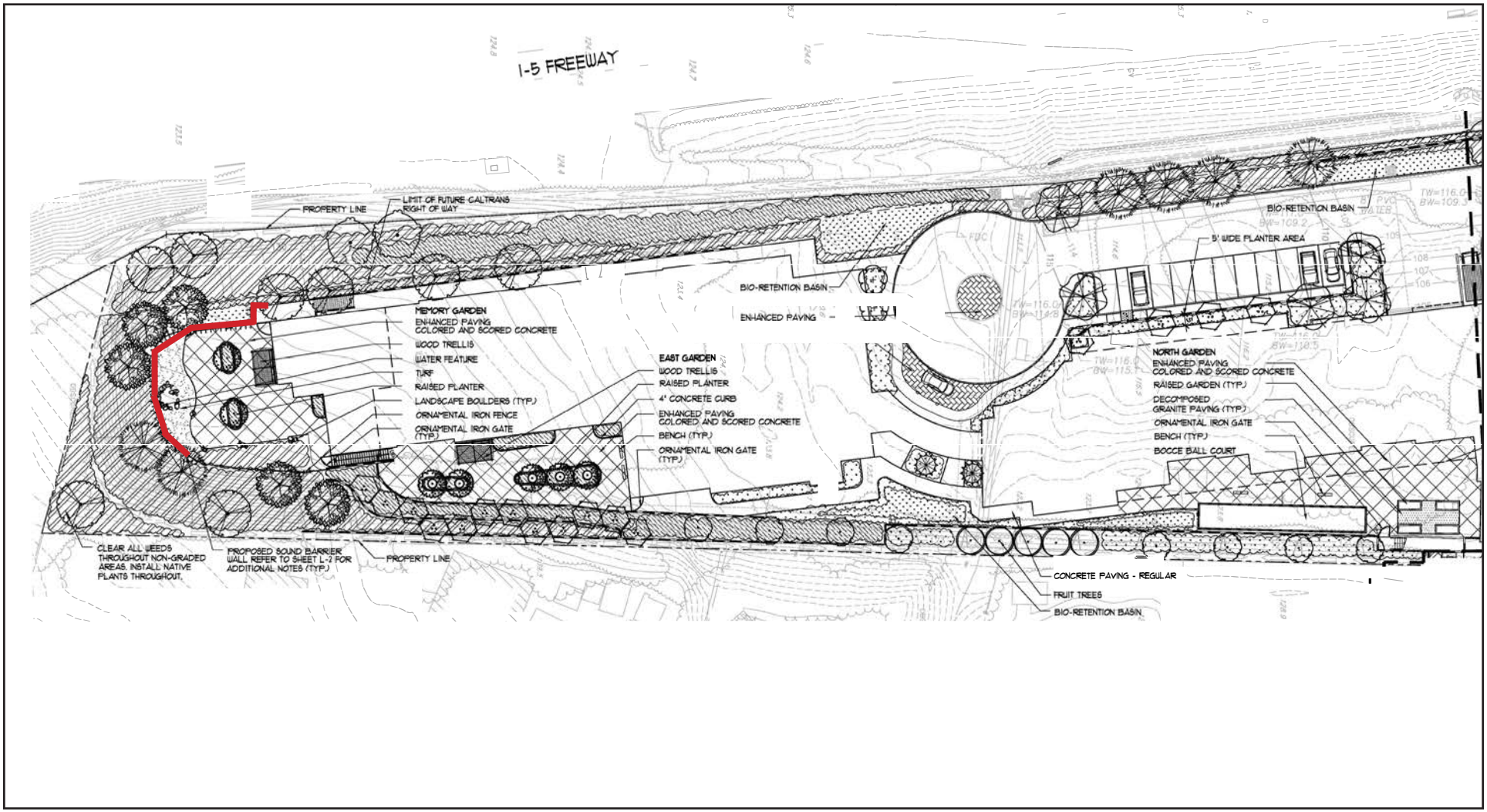
With buildout of the project including the sound attenuation wall shown on Figure 5.10-2, traffic noise levels at all 12 exterior locations would be below the City's noise standard. The proposed project is also subject to the California Building Code that requires that for buildings exposed to a noise level of 65 dBA Leq during any hour of operation, wall and roof-ceiling assemblies exposed to the noise source must meet a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum of STC 40 (or OITC 30). This level of noise reduction will result in interior noise levels below the recommended 45 dBA CNEL in all habitable rooms.

The combination of the 12-foot sound attenuation wall included as part of the project design (see Chapter 4, *Project Description*) and the application of the CBC will ensure that the exterior noise levels are below the General Plan threshold and that interior noise levels are below the recommended 45-dBA CNEL. As both the interior and exterior noise levels will be below the City's 65 dBA threshold with construction of the proposed project as shown, this impact is less than significant.

[1] An auxiliary lane extends from one on-ramp to the next off-ramp, and allows for vehicles to enter and exit the freeway.

Figure 5.10-2 - Proposed Sound Wall

5. Environmental Analysis



Proposed Sound Wall

0 60
Scale (Feet)

Source: The Lightfoot Planning Group, March 19, 2019.

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Impact 5.10-2: Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? [Threshold N-2] [Less Than Significant]

Impact Analysis:

Construction Vibration

The nearest vibration-sensitive uses are the residences located adjacent to the proposed site that are within 10 feet from the eastern area proposed as open space and parking, and approximately 60 feet from the eastern property line near the proposed building. Table 5.10-10 lists the average vibration levels that would be experienced at the nearest vibration sensitive land uses from the temporary construction activities.

The FTA has determined vibration levels that would cause annoyance to a substantial number of people and potential damage to buildings. The FTA criterion for vibration induced structural damage is 0.20 in/sec for the peak particle velocity (PPV). Project construction activities would result in PPV levels below the FTA's criteria for vibration induced structural damage. Therefore, project construction activities would not result in vibration induced structural damage to residential buildings near the demolition and construction areas. The FTA criterion for infrequent vibration induced annoyance is 80 Vibration Velocity (VdB) for residential uses. Construction activities would generate levels of vibration that would not exceed the FTA criteria for nuisance for nearby residential uses; therefore, this impact is less than significant.

Table 5.10-10 Construction Vibration Levels

Equipment	VdB Vibration Level at 25 Feet	PPV in/sec Vibration Level at 25 Feet	VdB Vibration Level at 50 Feet	PPV in/sec Vibration Level at 50 Feet
Small bulldozer	58	0.003	49.0	0.0011
Jackhammer	79	0.035	70.0	0.0124
Loaded trucks	86	0.076	77.0	0.0269
Large bulldozer	87	0.089	78.0	0.0315
FTA Criteria:			80	0.2
Significant Impact?			No	No

Source: Ldn Consulting 2017

Operational Vibration

Long-term, project operation would not involve use of heavy equipment or vehicles, or ground-disturbing activities including pile driving or blasting, that would generate ground vibration causing annoyance or architectural damage. Impacts would be less than significant.

Impact 5.10-3 Would the proposed project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? [Threshold N-3] [Less Than Significant With Mitigation]

Impact Analysis:

Transportation Noise

Table 5.10-11 shows the existing and existing plus project traffic noise impacts of the proposed project. As shown in the table, the change in noise on local roadways ranges from 0.8 to 9.1 dBA. The resulting noise, however, remains below the 65 dBA exterior noise threshold of the City. Noise along I-5 is not affected by the proposed project traffic.

Table 5.10-11 Existing Plus Project Traffic Noise Along Nearby Local Roadways

Roadway	Segment	Existing ADT	+Project ADT	Vehicle Speeds (MPH)	Noise Level @ 50-Feet from Centerline (dBA CNEL)			65 dBA CNEL Contour Distance Feet from Centerline		
					Existing	+Project	Change	*Existing*	+Project	Change
Marine View Ave	San Andres Dr to Solana Dr	1,258	1,521	25	55.9	56.7	0.8	12	14	2
	Los Caballitos to Genevieve St	221	484	25	48.3	51.8	3.5	4	7	3
Genevieve St	Marine View Ave to I-5 (cul-de-sac)	37	300	25	40.6	49.7	9.1	1	5	4
I-5	Adjacent to site	17,050	17,313	65	70	70.0	0	0	0	0

Source: Ldn Consulting 2017.

The overall noise levels would be well below the City's most restrictive 60 dBA CNEL threshold for single family residents. Therefore, the Project's direct contributions to off-site roadway noise increases will not cause any significant impacts to any existing or future noise sensitive land uses. This impact is considered less than significant.

Operational Noise

Heating, Ventilation, and Air Conditioning

According to the project applicant, the heating, ventilation, and air conditioning (HVAC) units for the proposed project will be on the roof of the building; however, this was not modeled as part of the noise analysis. The noise levels generated by this equipment vary, but typically range from approximately 45 dB to 55 dB at a distance of 50 feet. The SBMC Noise Ordinance (Section 7.34.040, Sound Level Limits) specifies a maximum noise level for stationary equipment of 55 dBA from 7 a.m. to 10 p.m. and 45 dBA from 10 p.m. to 7 a.m. when measured at any point on a neighboring property line. The make and model of the HVAC units has not

yet been specified. Because the proposed project will be within 60 feet of the adjacent homes to the east, HVAC equipment could exceed the City's noise standards for stationary source noise. Mitigation Measure NOI-1 requires that the HVAC equipment be on the ground between the building and the interstate unless additional acoustical analysis is prepared that demonstrates noise from the equipment at a different location would meet the City standards for noise.

NOI-1 Heating, ventilation, and air conditioning equipment shall be located on the ground level between the main building and Interstate 5 unless an additional acoustical analysis can demonstrate that the equipment will not exceed 45 dBA when measured at any point on the neighboring property line.

Level of Significance After Mitigation:

By locating the equipment between the building and Interstate 5, it will be far enough away that noise of the interstate will not exceed 45 dBA at the property line. The bulk and height of the building will also act as noise attenuation. As the exact location of the equipment is not known, Mitigation Measure NOI-1 also allows for additional acoustical analysis to demonstrate that the HVAC equipment in another location would meet the requirements of the municipal code. Therefore, with implementation of Mitigation Measure NOI-1, HVAC noise levels would comply with the City of Solana Beach standards and impacts would be less than significant.

Impact 5.10-4: Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? [Threshold N-4] [Less Than Significant with Mitigation]

Impact Analysis: Construction noise is a short-term impact. Grading activities typically generate the most noise. The most effective method of controlling construction noise is through local control of construction hours, limiting construction work to normal weekday working hours. Noise levels generated by heavy construction equipment can range from 60 dBA to in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish rapidly with distance, at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 75 dBA measured at 50 feet from the noise source to the receiver would be reduced to 69 dBA at 100 feet and reduced to 63 dBA at 200 feet.

Noise levels from proposed construction activities were modeled with SoundPLAN Essential, version 3.0. Noise levels vary by the texture of the ground between the source and the receiver: hard surfaces reflect more noise than do more absorptive ground such as vegetation or loose soil. As a conservative measure, the site was modeled as flat and hard surface. To determine a representative noise level, the individual sound level of each piece of equipment was individually calculated and then combined and used to calculate a reference sound power level.

Construction of the proposed project is expected to last approximately 12 to 14 months. The grading and excavation portion of project construction are expected to last approximately 4 to 6 months. The project site would be mass graded with all the internal roadways, parking area, and pad developed at once. Due to the limited project size and slope construction, the equipment needed for the development will consist of up to two tractors/loaders, a dozer, a grader, and a water truck during the preparation and grading. A backhoe and

cement truck are anticipated for the installation of utilities and driveways. These operations will not occur simultaneously. Based on reference data collected by the FHWA, the worst-case noise levels from the construction equipment for site preparation would occur during the grading operations. Reference noise levels for each piece of equipment during the grading operations are provided in Table 5.10-12.

Table 5.10-12 Reference Noise Levels

Construction Phase	Construction Equipment	Quantity	Source Level @ 50-Feet (dBA Lmax)[1]	Source Level @ 50-Feet (dBA Leq)[1]
Grading Operations	Grader	1	85	81
	Loader/Backhoe	2	80	79
	Dozer	1	85	81
	Water Truck	1	84	80

Source: Ldn Consulting 2017.

Noise levels were modeled at specific receiver locations at adjacent property lines. As shown in Figure 5.10-3, *Construction Noise Level Contours—Unmitigated*, and Table 5-10-13, grading activities are anticipated to generate noise levels up to 78 dBA Leq at adjacent property lines, which exceeds with the City of Solana Beach's 75 dBA Leq standard, and mitigation would be required to reduce noise levels at the property lines to the south and east of the project site. Mitigation Measure NOI-2 would ensure that construction equipment would be operated with mandatory noise mufflers or silencers, which would reduce construction equipment engine noise from 5dBA to 10dBA (FHWA 2017). Therefore, NOI-2 would reduce noise generation to below Solana Beach's 75 dBA Leq standard.

In addition, Mitigation Measure NOI-3 would establish a noise complaint response program subject to the approval of the City and shall respond to any noise complaints received for this project by measuring noise levels at the affected receptor site Mitigation Measure NOI-4 requires preparation of a construction noise control plan with best management practices. Each phase of construction results in different equipment usage and therefore different noise types. By requiring consistent contact information with the overall project manager (Mitigation Measure NOI-3) and tailoring the noise control plan to the phase and equipment type, the maximum noise attenuation can be achieved, and the affected residents have an avenue to seek changes to the plan if necessary. Mitigation Measure NOI-5 requires use of a temporary construction noise wall along the eastern property line between the proposed project and the existing residential homes. The wall will be removed following the appropriate phase of construction and, as shown in Figure 5.10-4, will result in construction noise attenuation at the property line.

Table 5.10-13 Construction Noise Levels

Receiver Number	Address	City Noise Standard (dBA $L_{eq(8)}$)	Unmitigated Noise Level (dBA $L_{eq(8)}$)	Mitigation Required	Mitigated Noise Levels $L_{eq(8)}$)
CR-1	609 Marine View Ave	75	77	Yes	69
CR-2	609 Marine View Ave	75	78	Yes	71
CR-3	609 Marine View Ave	75	78	Yes	71
CR-4	621 Marine View Ave	75	78	Yes	69
CR-5	641 Marine View Ave	75	78	Yes	68
CR-6	649 Marine View Ave	75	78	Yes	68
CR-7	667 Marine View Ave	75	76	Yes	67
CR-8	677 Marine View Ave	75	77	Yes	68
CR-9	1024 Genevieve St	75	73	No	73
CR-10	445 Marine View Ave	75	71	No	71

Source: Ldn Consulting 2017.

Mitigation Measure:

NOI-2 The project applicant shall require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections during construction activities by a qualified noise consultant, retained by the project applicant, and approved by the City Engineer.

NOI-3 Prior to issuance of any demolition or grading permit, the applicant shall establish a noise complaint response program subject to the approval of the City and shall respond to any noise complaints received for this project by measuring noise levels at the affected receptor site. The noise complaint response program shall require that all residences and noise-sensitive land uses within 50 feet of construction site shall be notified of the construction. The notification will describe the activities anticipated, provide dates and hours, and provide contact information with a description of a complaint and response procedure. Additionally, as part of the noise complaint response program, the applicant shall designate a "Construction Liaison" who will be responsible for notifying the City and Engineer and responding to any local complaints about construction noise. The liaison will determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures included in the Construction Noise Control Plan (see Mitigation Measure NOI-4, below), approved by the City Engineer, to correct the problem within 48 hours after receiving a complaint.

NOI-4 The project applicant and construction contractor shall prepare a noise control plan which shall include best management practices that may include, but would not be limited to the following:

- Stationary noise-generating equipment shall be located as far as reasonable from sensitive receptors when sensitive receptors adjoin or are within 50 feet of the construction site.

- Limitation of grading and use of noise-generating equipment for less than 8 hours per day.
- Unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes) shall be prohibited.

  If a noise complaint is registered that cannot be resolved by the Construction Liaison, then the applicant shall retain a Qualified Noise Consultant to conduct noise measurements at the location where the complaint was registered. If the noise level exceeds an Leq(8) of 75 A-weighted decibels (dBA; i.e., more than 75 dBA for more than 8 hours during any 24-hour period when measured at or within an adjacent residential property), the applicant shall implement noise reduction measures, such as portable sound attenuation walls, use of quieter equipment, shift of construction schedule to avoid the presence of sensitive receptors, etc., to reduce noise levels, to the satisfaction of the City Engineer. The determination of appropriate resolutions to noise complaints shall be sent to the complainant and City Engineer within 48 hours after receiving a complaint.

NOI-5 A temporary sound wall, eight feet in height, shall be erected on the southern and eastern site boundaries to reduce noise exposure at adjacent residences.

Level of Significance After Mitigation:

The use of mufflers or noise dampeners on construction equipment, noise levels can be expected to be reduced by 5 to 10 dBA, which would reduce noise from construction equipment to below the City of Solana Beach's 75 dBA Leq standard. With daily time limits on construction and installation of an 8-foot-high sound reduction barrier, construction noise levels would be reduced 8 to 10 dBA depending on distance of the equipment or receiver from the barrier. As shown in Table 5-2, with the incorporation of the identified sound reduction barrier, maximum construction noise level would attenuate to 68 dBA L_{eq} or less at adjacent properties. Therefore, with incorporation of an 8-foot-high barrier, as shown in Figure 5.10-4, construction noise levels would comply with the City of Solana Beach standards and impacts would be less than significant. Additionally, with implementation of the noise complaint response program and noise control plan, the maximum noise attenuation can be achieved, and affected residents would be provided opportunity to further mitigate noise impacts.

Figure 5.10-3 - Construction Noise Level Contours - Unmitigated

5. Environmental Analysis

0 100
Scale (Feet)

Source: Ldn Consultants, 2017

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Figure 5.10-4 - Construction Noise Level Contours - Mitigated
5. Environmental Analysis

0 100
Scale (Feet)

Source: Ldn Consultants, 2017

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5.10.6 Cumulative Impacts

Construction Noise and Vibration

Construction noise typically causes short-term significant impacts for relatively short distances beyond the boundaries of a project site (see Figure 5.10-3 and the discussion of Impact 5.10-1). The cities of Solana Beach and Del Mar identified 21 related projects that are considered in analyses of cumulative projects in relevant sections of Chapter 5 of this DEIR.[2] Two of those projects—Santa Fe Christian School Master Plan Update at 838 Academy Drive in Solana Beach and the I-5 North Coast Corridor Program along much of the central San Diego County coast—are within 0.25 mile of the project site. As construction noise and vibration diminish with distance, and the project is at least 0.25 mile from the nearest construction project, separated by a city and interstate, it is unlikely that construction noise or construction vibration impacts from projects farther than 0.25 mile from the project site would combine with impacts of the proposed project to cause significant cumulative impacts.

Construction is underway on a segment of the I-5 North Coast Corridor between Lomas Santa Fe Drive in Solana Beach, about 0.5 mile north of the project site, and the City of Encinitas; construction noise and vibration impacts from that project are not expected to combine with impacts of the proposed project to cause significant cumulative impacts due to the distance between that construction site and the proposed project site. The North Coast Corridor Program consists of 35 projects, some of which are completed; the program is scheduled for completion in 2021; none of those projects are planned for the segment of I-5 along the proposed project frontage (Transnet 2017).

Construction noise and vibration from the Santa Fe Christian School Master Plan Update are not expected to combine with impacts of the proposed project to cause significant cumulative impacts, mainly due to the distance of that project site from the proposed project site; in addition, the local noise environment is dominated by noise from the I-5, and construction noise from either construction site would not be perceptible at the other site over noise and vibration from the I-5.

Operational Noise

Traffic Noise

There is a direct relationship between the number of vehicles and traffic noise. While the proposed project will increase traffic in the area, the amount of increase will not be significant, as shown in Chapter 5.12, *Transportation*, in this Draft EIR. Regional growth will add to traffic and will likely increase noise levels along the I-5 corridor. The proposed project is designed to account for the expected traffic volumes on I-5, including façade improvements and a sound wall. Since the proposed project will build on a vacant parcel surrounded by existing development, there is no potential for traffic growth from the project beyond that discussed in the Draft EIR; therefore, there is no potential for increased noise from the project other than what is analyzed in this chapter.

[2] See Section 3.6, *Assumptions Regarding Cumulative Impacts*, for further discussion on methods of cumulative impacts analysis.

Other operational noise is attributed to lawn care, heating, ventilation and air conditioning (HVAC), recreation, and other outdoor activities. The City requires that all HVAC equipment be shielded, which will reduce the potential for noise impacts. In addition, Mitigation Measure NOI-1 requires placement of the HVAC equipment between the building and the interstate unless an additional acoustical analysis is prepared demonstrating compliance with the City's municipal code. As the land around the project site is already fully developed, there is no potential for additional development to result in increased noise levels.

Public comments regarding the proposed project raised concerns over the increase in the number of emergency response vehicles using sirens. Section 1105 of The California Code of Regulations provides two instances when an ambulance can use a siren and red warning lights:

> (1) When responding to an emergency call or when engaged in emergency services as defined in this article, and
>
> (2) When speed in transporting the patient to an emergency medical care facility appears essential to prevent loss of life, undue suffering, or to reduce or prevent disability.

Further, the decision to use a siren and lights is made by the vehicle driver and is dependent upon traffic conditions and the welfare of the patient. While the proposed project may increase the number of ambulance visits to the property from current conditions, it is not anticipated that emergency response vehicles will engage the siren in every instance (Stein 2018).

Regular trips by project residents to doctors and other health-care providers will be accommodated through the project's own shuttle bus, rideshare/taxi, family members, or other nonemergency medical transport services. None of these vehicles will have sirens or other noise-making equipment. This impact is considered less than significant.

5.10.7 References

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5.11 PUBLIC SERVICES

This section addresses potential impacts of the project on public services—Fire Protection and Emergency Services, and Police Protection. Public and private utilities and service systems, including water, and wastewater services and systems, are addressed in DEIR Section 5.14, *Utilities and Service Systems*. The analysis in this section is based in part on the following technical report:

- *Alternate Methods and Materials Fire Apparatus Access Roads*. Everett Engineering. June 1, 2016.

A complete copy of this study is included in the technical Appendices to this Draft EIR as Appendix 5.11-1. Additionally, public agencies were contacted to obtain information related to the availability of services for the proposed improvements. Correspondence and technical information provided by these agencies are included as Appendix 5.11-2 to this Draft EIR.

The Initial Study, included as Appendix 2-1, substantiates that potential impacts to schools, libraries, and other public facilities would be less than significant; therefore, these topics are not addressed further in the DEIR.

5.11.1 Fire Protection and Emergency Services

5.11.1.1 ENVIRONMENTAL SETTING

The Solana Beach Fire Department (SBFD) provides various programs designed to protect public safety and property in Solana Beach from adverse effects of fires, medical emergencies, or exposure to dangerous conditions. SBFD recognizes and enforces applicable portions of the California Building Code; Life Safety Code, which is a National Fire Protection Association code and provides strategies on minimizing the effects of fire and related hazards; and other fire-safety codes and ordinances. SBFD firefighters are also trained to conduct business inspections, multifamily residential inspections, and preplanned building inspections as well as to oversee the safety portions of new development and redevelopment, and the public safety issues associated with the use, storage, and disposal of hazardous materials.

Fire Station and Apparatus

The City of Solana Beach is serviced by the SBFD from Fire Station 1 located at 500 Lomas Santa Fe Drive, approximately 0.75-mile northwest of the site. The SBFD also facilitates administrative operations at City Hall, at 635 Highway 101. SBFD is staffed with a chief, deputy chief, management analyst, 3 battalion chiefs, 6 fire captains, 6 engineers, 4 firefighter paramedics, and 2 firefighters. The fire station also has 6 paramedics that operate an ambulance owned by American Medical Response (AMR). Fire Station 1 has a Pierce ladder truck with a 95' aerial ladder and a Pierce engine truck. SBFD operates with a three-shift schedule to provide service 24 hour a day, 7 day a week. Each shift consists of 2 fire captains, 2 fire engineers, and 2 firefighter/paramedics working a 24-hour shift.

Emergency response involves a combination of vehicles and equipment from Fire Station 1 and from surrounding agencies through mutual-aid and automatic-aid agreements with Rancho Santa Fe, Del Mar, Encinitas, and San Diego. Additionally, the City contracts with Trauma Intervention Programs of San Diego

County, a nonprofit organization of specially trained citizen volunteers, to provide immediate emotional and practical support to victims and their families within the first few hours following a tragedy.

Response Times and Service Standards

SBFD uses the National Fire Protection Association (NFPA) and Insurance Services Office (ISO) standards to determine adequate response time and staffing to serve the population. The NFPA response time goal is five minutes. In the 2016–2017 budget, the SBFD set a goal of responding to 90 percent of all emergencies in less than 8 minutes from dispatch to arrival on scene. For the year 2015–2016 the average emergency call response time for SBFD was 4 minutes and 27 seconds (Pupping 2016). Nonemergency call times are not reflected in current reports because these calls are not time critical, there are no standards.

Emergency Preparedness

SBFD works with the City of Solana Beach to train and support the Community Emergency Response Team (CERT) program, which educates people about disaster preparedness for hazards that may impact their area. The CERT program also trains residents in basic response skills such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT members can assist their local community after an event when professional responders are not immediately available, and they are encouraged to support emergency response agencies by taking an active role in their community.

5.11.1.2 REGULATORY BACKGROUND

State

California Fire Code

Title 24 of the California Code of Regulations (CCR) governs the construction of buildings in California. The 2016 California Fire Code (CFC) is based on the 2015 International Fire Code, with amendments for California fully integrated into the code. The purpose of the CFC is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises and to provide safety and assistance to fire fighters and emergency responders during emergency operations.

California Building Code

The 2016 California Building Code (CBC) contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. The proposed project is required to be constructed in compliance with the CBC.

California Health and Safety Code

The California Health and Safety Code includes regulations (HSC Division 12. Fires and Fire Protection, Part 2 Fire Protection) for building standards; interior and exterior fire protection and notification systems; and protection devices, including extinguishers and smoke alarms; and fire suppression training.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services in accordance with 8 CCR Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Fighting Equipment. The standards include guidelines on a range of fire suppression and safety measures, including handling of highly combustible materials, restrictions on use of compressed air, access roads, and maintenance and use of all firefighting and emergency equipment.

Local

Solana Beach General Plan

The General Plan Safety Element sets goals, objectives, and policies to provide for public health, safety, and welfare, some of which address potential fire hazards and support for the SBFD. The Safety Element establishes that the SBFD works with the San Diego County Hazardous Materials unit on the documentation of businesses that produce, use, or store hazardous materials. In the Safety Element, the SBFD designates appropriate evacuation routes and emergency shelters as part of the emergency response program. General Plan policies that are applicable to the proposed project are:

- **Policy 4.b:** The city shall enact an ordinance which establishes structural design standards to ensure adequate fire safety.
- **Policy 4.c:** The city shall ensure that development is phased properly in relation to the city's ability to provide an adequate level of fire protection.
- **Policy 4.e:** The city Fire Department shall review proposed site plans to ensure that adequate fire safety measures are provided.
- **Policy 1.b:** The city shall enact an ordinance which specifies site design standards for ensuring adequate emergency access.
- **Policy 1.c:** The city shall require new developments and improvements to employ defensible space concepts into site design and building specifications (e.g., appropriate setbacks, adequate lighting of walkways and parking lots, and the use of burglary-resistant hardware and fixtures in buildings).

City of Solana Beach Municipal Code

The SBMC, Chapter 15.32, Fire Code, adopts the 2016 CFC by reference, and establishes provisions and regulations for compliance with the CFC and International Fire Code to enhance building safety and reduce fire hazards risk.

Chapter 3.20, Fire Mitigation Fee, of the SBMC establishes a fire services mitigation fee that applies to any new or additional building or structure requiring a building permit or other permit for development.

Local Coastal Program

The Hazards and Shoreline/Bluff Development chapter of the LCP provides policies regarding the Fire Department's role in protecting the City from fire hazards.

- **Policy 4.72:** All discretionary permit applications for projects shall be reviewed by the City's Fire Marshal to determine if any thinning or clearing of native vegetation is required. The Fire Marshal may reduce the 100' fuel management requirement for existing development, when equivalent methods of wildfire risk abatement are included in project design.

- **Policy 4.73:** Equivalent methods of fire risk reduction shall be determined on a case-by-case basis by the Fire Marshal and may include the following, or a combination of the following, but are not limited to:

  1. Compliance with Building Code and Fire Code requirements for projects located in the WUI (State Fire Code Chapter 7A);
  2. Installation of a masonry or other non-combustible fire-resistant wall up to six feet in height;
  3. Exterior sprinklers to be used in an emergency for fire suppression;
  4. Boxed eaves;
  5. Reduced landscaping that is complaint with County of San Diego fire hazard risk reduction plant list and planting guidelines;
  6. Other alternative construction to avoid the need for vegetation thinning, pruning or vegetation removal.

5.11.1.3 METHODOLOGY

The following analysis is based, in part, upon the findings and recommendations of the technical report, "Alternate Methods and Materials, Fire Apparatus Access Roads," prepared for the proposed project and included as Appendix 5.11-1. Additionally, the project applicant coordinated extensively with the City of Solana Beach and SBFD to ensure the proposed improvements would comply with applicable fire, building, and city codes. Comments and recommendations from SBFD are included in Appendix 5.11-2 and have been incorporated into the project design.

5.11.1.4 THRESHOLDS OF SIGNIFICANCE

A project would normally have a significant effect on the environment if the project would:

FP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

5.11.1.5 POTENTIAL ENVIRONMENTAL IMPACTS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.11-1:	Would the proposed project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services? [Threshold FP-1] [Less than significant]

Impact Analysis: The following analysis reviews the existing levels of staffing and fire apparatus and assesses the SBFD's capacity to serve the proposed improvements.

Construction

The site contains abandoned structures, including a residence, greenhouse, and shed. The remainder of the site, approximately 124,000 square feet or 98 percent of the site, is vacant with grasses, small shrubs, and ornamental palm trees.

Project-related construction activities would require the use of hazardous materials such as fuels, lubricants, and greases in construction equipment that would be temporarily stored onsite. Onsite construction equipment would require routine or emergency maintenance that would result in the release of oil, diesel fuel, transmission fluids, and other materials. However, the amount used would not be present in such quantities or stored in such a manner as to pose a significant safety hazard or environmental threat, such that an increase in fire protection or emergency services would be required.

Construction of the proposed project would last between 12 and 14 months. Demolition of structures and construction of the improvements would be required to comply with the requirements of the 2016 CFC, including CFC Chapter 33, Fire Safety During Construction and Demolition. Chapter 33 prescribes minimum safeguards to prevent fires and provide reasonable safety to life and property during construction and demolition.

Additionally, construction staging is proposed to be located on the project site, with construction and delivery vehicles entering the staging area from the driveway at the western end of Genevieve Street. As required by Chapter 11.20 of the SBMC, any street or lane closure required for construction would be coordinated with the City. Moreover, short-term construction-related traffic volumes would not result in significant traffic impacts, as discussed in Section 5.12 of this EIR, *Transportation and Traffic*. Therefore, implementation of the proposed project would not obstruct or impede response times for the fire department or result in traffic pattern changes to the area circulation system.

Operation

The City of Solana Beach, project applicant, and SBFD consulted extensively during site plan development to establish an effective layout within the property that would ensure sufficient roadway widths for fire access lanes and turnaround area. During site plan development, the SBFD also determined appropriate locations for fire service amenities (i.e., sprinklers, hydrants, etc.).

The project applicant worked with the SBFD to ensure the proposed improvements would comply with the 2016 CFC and CBC standards as well as the SBMC requirements. Recommendations for the proposed improvements were incorporated into the final design for the proposed residential senior care facility for the elderly.

Fire Protection Improvements

The building is segmented into five sections, which are separated by 2-hour-rated fire protection walls. Three new fire hydrants would be installed—one north of the proposed turnaround near the center of the building, one at the northwest corner of the site, and one on the sidewalk near the northeast corner of the building on Genevieve Street. The existing fire hydrant on Marine View Avenue would remain in place. In addition, five ground-level standpipes would be installed around the building; these effectively act as smaller-volume fire hydrants and are not directly connected to the municipal water system. Interior improvements include a total-coverage smoke-detection system, automatic fire sprinklers, and interior standpipes. The locations of the fire protection improvements are shown in Figure 5.11-1, *Fire Access Site Plan*.

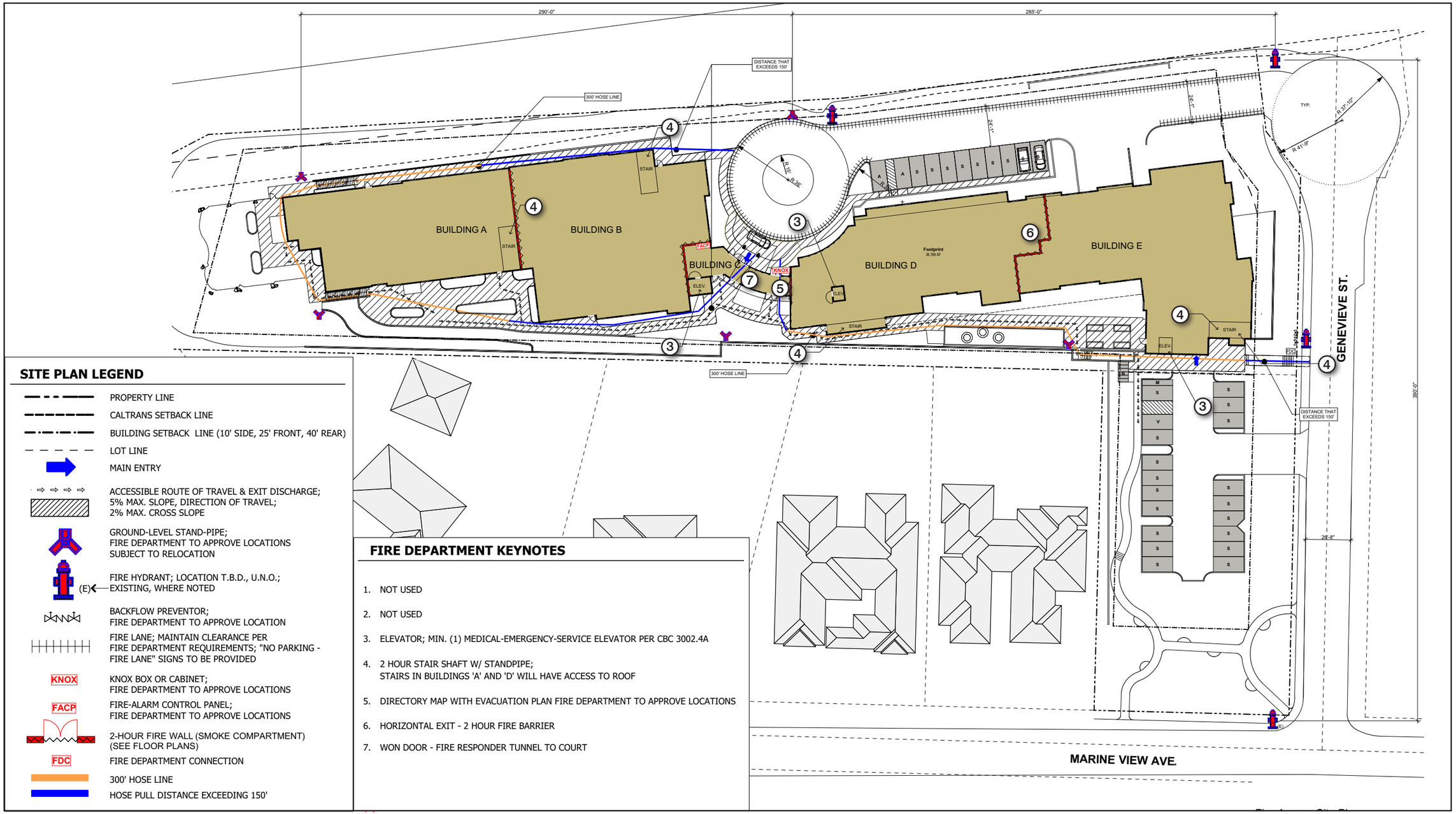
Code Compliance

CFC Section 503.1.1 requires that fire apparatus access roads extend to within 150 feet of all portions of new buildings and the exterior walls of the first story of new buildings. This distance is based on the standard, pre-connected hose lengths carried on fire apparatus. Due to the length of the building, the improvements would not comply with prescriptive code requirements to provide access within 150 feet of all portions of the building exterior. However, the code provisions of CFC 503.1.1, Exception 1 and 2, include an "Alternative Means" that would allow the site to meet CFC requirements.

Exception 1 allows the Fire Marshal to authorize an increase in the dimension of 150 feet if the building is equipped throughout with an approved automatic sprinkler system. Exception 2 allows an increase in the 150-feet hose pull dimension, where fire apparatus access roads cannot be installed because topography and location on property prevents compliance. In this instance, an "Alternative Means" of fire protection is provided. Some of the building features provided as an "Alternative Means" engineering design (in lieu of 150-foot access) include automatic sprinkler protection throughout the building; standpipes at roof level, in staircase enclosures, and the building exterior; fire walls; total coverage smoke detection system; and the design that facilitates uninhibited access through the building.

Figure 5.11-1 - Fire Access Site Plan

5. Environmental Analysis



Source: Pacific Sounds Investors, 2017

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According to the "Alternate Methods and Materials, Fire Apparatus Access Roads" report approved by the SBFD Fire Marshal, the project design meets the intent of the code and provides a suitable, effective, and safe "Alternative Means", and utilizes Exceptions 1 and 2 that would allow an increase in the dimension of 150 feet (Appendix 5.11-1). Therefore, the proposed improvements would have adequate fire protection design that would comply with the CFC. In addition, the project would not result in an increase trips or require increase in fire protection service members such that new facilities would be required as a result of project implementation.

Demand for Fire Protection Service

The closest fire station to the site is SBFD Fire Station 1 at 500 Lomas Santa Fe Drive, approximately 0.75 mile northwest of the site. Conservatively, the project could result in an increase of approximately 164 people in the City assuming that all project residents are not current City residents.

Accordingly, based on the California Department of Finance 2016 population estimates, the proposed residential senior care facility for the elderly would increase the City's population of 13,487 by 1.2 percent, assuming that all residents and employees are new to the City (DOF 2017). This increase is negligible and would therefore result in a negligible increase in fire protection service calls. In addition, because of the nature of the facility, nurses and other medical staff would be on-site to handle the majority of medical service calls that would typically be handled by SBFD for other residential land use types. Therefore, the proposed project would not result in a significant increase in demand for SBFD services, would not need to be served by other fire departments, and would not require the construction of a new fire facility.

Emergency Response

The SBFD currently provides adequate fire protection service by arriving at incident locations in an average response time of 4 minutes and 27 seconds (Pupping 2016), although the actual travel times are affected by traffic, topography, road width, public events, etc. Considering that the project site is in an urbanized area with easy access to fire hydrants and streets and is a short distance (0.75 mile) from the nearest fire station with manageable traffic conditions, emergency response times would not be affected. In addition, according to an analysis of emergency call statistics for service to La Vida Del Mar Assisted Living Facility in Solana Beach, which has a bedroom capacity of 110 beds, the estimates indicated a frequency of 1.5 to 2 calls per week, or 78 to 104 calls a year (see Appendix 5.12-2, *Emergency Calls Statistics*). Assuming an average of 2 calls per week, and that all residents in the proposed project are new to the service area, the 104 emergency medical service calls per year represents approximately 10.3 percent of the 1,073 emergency medical services/rescue calls in 2017.

Construction and operation of the residential senior care facility for the elderly would not significantly increase the demand for emergency response or fire protection services at the project site. The project was designed in accordance with applicable laws and regulations, and operation of the site would not include activities that would increase calls for fire protection such that new or altered fire protection facilities would be required. Although the project would result in an increase in emergency services calls to the site, the increase would not be significant and onsite medical staff would assist in offsetting increases in calls for emergency medical services. The proposed project would not require additional fire service personnel or a new or expanded facility to accommodate them; therefore, this impact is less than significant.

5.11.2 Police Protection

5.11.2.1 ENVIRONMENTAL SETTING

Department Staffing and Divisions

The City of Solana Beach contracts its police protection services through the San Diego County Sheriff's Department (SDCSD). The SDCSD has a service area of approximately 4,200 square miles and is organized into six service areas: office of the sheriff, law enforcement services, detention facility services, court services, human resource services, and management services (SDCSD 2015a). The SDCSD station that would serve the project site is the North Coastal Sheriff's Station, 4.15 miles north of the project site at 175 North El Camino Real in Encinitas. Solana Beach contracts for 7 patrol deputies, 1 motorcycle unit, 2 traffic deputies, 1 detective, and 5 community service officers to provide 24-hour coverage.

The SDCSD also provides a variety of programs for the community, including: residential and commercial security consultations, neighborhood/ranch watch, operation identification, personal safety, operation lifesaver, disaster and emergency preparedness, and senior crime alert.

Response Times

The SDCSD has different response times for different types of calls and prioritizes response based on importance. According to SBCSD, drive time from the North Coastal Station to the project site is approximately 11 minutes with no traffic. However, an assigned Solana Beach unit is normally within the City limits at all times and would shorten response times to between 5 and 10 minutes (SBCSD 2015b). According to calls for service for the Solana Highlands apartments (2.4 miles west of the site [approximately 8-minute drive]) from November 2015 to November 2016, response times varied from approximately 6 minutes for emergency calls to 41.5 minutes for nonemergency calls (SDCSD 2016).

5.11.2.2 REGULATORY BACKGROUND

Local

Solana Beach General Plan

The General Plan Safety Element sets goals, objectives, and policies for public health, safety, and welfare, including police protection and services. Safety Element policies ensure adequate police protection in the City. General Plan policies that are applicable to the proposed project are:

- **Policy 1.b:** The city shall enact an ordinance which specifies site design standards for ensuring adequate emergency access.
- **Policy 1.c:** The city shall require new developments and improvements to employ defensible space concepts into site design and building specifications (e.g., appropriate setbacks, adequate lighting of walkways and parking lots, and the use of burglary-resistant hardware and fixtures in buildings).

- **Policy 1.d:** The city shall encourage the use of state-of-the-art design concepts and technological improvements for the prevention of crime.

City of Solana Beach Municipal Code

The SBMC Chapter 1.16, General Penalty, establishes violations, enforcement, and recovery of administrative fees associated with failure to comply with provisions of the SBMC. Title 6, Health and Safety, includes regulations that safeguard the public health, safety, and welfare by mandating that property or premises be maintained in good and appropriate conditions to promote a sound and attractive community appearance and enhance the economic value of the community. Title 7, Public Peace, Morals, and Welfare, establishes regulations on disturbances, community violence, and crimes.

SBMC Section 17.72.020 establishes public facilities fees associated with all City services for new development:

A. A public facilities fee is hereby established to pay for improvements related to new development within the city and are not otherwise financed by any fee, charge or tax on development, or are not installed by a developer as a condition of a building permit, land use permit (pursuant to SBMC Chapter 17.68), or subdivision or zoning approval.

B. The amount of the fee shall be set by city council resolution.

C. As a condition of project approval the applicant shall be required to pay the public facilities fee. The fee shall be paid before issuance of building permits for the project (Ordinance 185 Section 2).

Local Coastal Program

The LCP does not contain policies pertaining to police services within the City.

5.11.2.3 METHODOLOGY

The City of Solana Beach contacted the SDCSD to determine if it would have adequate facilities and staff to support construction and operation of the proposed project. According to SDCSD, the project would result in no issues related to service levels upon completion of the project (SDCSD 2015b). SDCSD's response is in Appendix 5.11-2, *Agency Responses*.

5.11.2.4 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

PP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

5.11.2.5 POTENTIAL ENVIRONMENTAL IMPACTS

Impact 5.11-2:	Would the proposed project result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services? [Threshold PP-1] [Less than significant]

Impact Analysis: The following analysis is based in part on information received through communication with the San Diego County Sheriff's Department North Coastal Station on September 28, 2015 (SDCSD 2015b). According to SDCSD, the project would result in no issues related to service levels upon completion of the project (SDCSD 2015b).

Construction Impacts

The site contains abandoned structures, including a residence, greenhouse, and shed. The remainder of the site is vacant with grasses, small shrubs, and ornamental palm trees.

Law enforcement would be required during project construction to address potential crimes—such as trespassing, theft, burglary, and vandalism—and public complaints about noise, dust, traffic, construction hours, etc. Law enforcement may also respond to serious injuries to workers, spills, fires, and traffic control.

The project applicant and construction contractor for the project would be required to comply with all applicable laws and regulations. The construction site would have temporary construction fencing which decreases the likelihood of theft, burglary, trespass, and vandalism. The applicant would comply with air quality and water quality regulations—implementing measures such as watering areas of exposed soil to reduce fugitive dust and installing soil erosion controls to reduce stormwater runoff and the potential for spills. A construction worksite traffic control plan would be prepared, and a designated construction access point would be used to limit the effects of construction traffic. All construction activities would comply with California Occupational Safety and Health Administration requirements, which protect worker safety and minimize work injuries.

Operational Impacts

Potential law enforcement needs during operation of the project would include calls concerning medical aid, vandalism, assaults, thefts, custody issues, and traffic-related matters. According to a fiscal impact analysis prepared by Connery Associates for a 107-unit assisted living/memory care facility, because residents of the care facility are anticipated to be elderly and some may be in declining physical and mental health, they are less likely to commit crimes, drive a car, or require a police response that the average population would demand; it can be assumed that the project would result in a negligible increase in the number of calls for police services as existing conditions (Connery Associates 2016). Additionally, according to the SDCSD, the North Coastal Sheriff's Station would be able to provide adequate police services and support to the proposed facility and its operation.

Visitors and Special Events

The residential senior care facility for the elderly would set daily visiting hours during which more people would be at the facility, potentially creating more need for police services. However, the applicant has stated that based on experience at other facilities the number of visitors are likely to be staggered throughout the day as the needs of each resident vary. Further, all visitors are required to check in with the supervisor on-site, and the staff can provide assistance to visitors to the facility reducing the need for police services.

In addition, the residential senior care facility may hold special events throughout the year—holidays, fundraising events, games such as bingo, performances, or other forms of entertainment that would result in more people at the facility than during standard operating hours. Similar to the increase in people during visiting hours, the increase in people during events would be short in duration and managed by on-site staff reducing the need for police services. Therefore, daily visiting hours and special events would not result in a significant impact. Construction and operation of the care facility would slightly increase the demand for police protection services. The project would comply with applicable laws and regulations, and would implement project design features, such as exterior lighting for safety, and best management practices that would limit potential public safety complaints and crimes. Because the project will be staffed at all times with personnel trained to recognize and address both medical and security issues and can coordinate with the SDCSD regarding calls for service, the proposed project would not create a need for additional police officers or for a new or an expanded facility to accommodate them.

5.11.3 Cumulative Impacts

The geographic area for analysis of cumulative impacts to fire and police protection and emergency services is the service area for the SDCSD because it covers a larger area than the SBFD's service area and includes unincorporated San Diego County and the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach, and Vista. The project site is currently surrounded by land developed with residential and professional offices that already receive police, fire, and emergency services. The project will have 24-hour staff trained to recognize and address medical and safety issues, and coordinate calls with emergency personnel. Similar to the proposed project, related projects in the geographic area of cumulative impact analysis would be constructed to meet CBC and CFC requirements, and each project would be responsible for mitigating its impacts to fire, emergency and police protection services. The proposed project would not significantly contribute to cumulative impacts that would result in the need for new or expanded fire and police facilities.

5.11.4 References

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5.12 TRANSPORTATION AND TRAFFIC

This section of the DEIR evaluates the potential for implementation of the proposed project to result in transportation and traffic impacts in the City of Solana Beach. The analysis in this section is based in part on the following technical report and memorandum:

- *959 Genevieve Street Senior Care Housing Project: Traffic Assessment Letter,* LOS Engineering, Inc., March 14, 2016
- *Traffic Analysis: Emergency Calls and Nearby Schools*, The Lightfoot Planning Group, August 31, 2018
- *Community Enhancement and Mobility Concept Options*, City of Solana Beach, January 2018.

Complete copies of these technical studies are included as Appendix 5.12-1, Appendix 5.12-2, and Appendix 5.12-3 of this EIR, respectively.

5.12.1 Environmental Setting

5.12.1.1 ROADWAYS

Traffic counts for the surrounding roadway network were collected on multiple days during 2014 and 2015. The traffic counts were scheduled to account for traffic during the Del Mar Fair season, racing season, and typical weekdays while school is in session. The streets and their respective average daily traffic (ADT) volumes are identified in Table 5.12-1, *Existing Roadway Network and Volumes*, below.

Study area roadways—Marine View Avenue, Genevieve Street, Las Banderas Drive, Highland Drive, Solana Drive, Los Caballitos—are two-lane local streets except for Lomas Santa Fe Drive, which is four lanes with a raised median west of its intersection with Las Banderas Drive and a painted median east of Las Banderas Drive. There are no traffic controls at the intersections of Marine View Drive with Genevieve Street and with Highland Drive. Marine View Drive (north-south) progresses through an elbow eastward and turns into San Andres Drive. The intersection of Las Banderas Drive and Lomas Santa Fe Drive is signalized. The intersection of San Andres Drive and Las Banderas Drive is controlled by all-way stop signs. The intersection of Los Caballitos and Marine View Drive is controlled by a cross-street stop on Los Caballitos. Other intersections in the study area are not controlled.

Table 5.12-1 Existing Roadway Network and Volumes

Roadway Segments	Low ADT	High ADT	Average ADT
Marine View Avenue (from San Andres Drive to Solana Drive)	527	1,330	1,078
Genevieve Street (from Marine View Avenue to cul-de-sac adjacent to I-5)	31	37	34
Las Banderas Drive (from Lomas Santa Fe Drive to San Andres Drive)	3,936	4,095	4,016
Marine View Avenue (Los Caballitos to Genevieve Street)	123	304	232
Highland Drive (Solana Drive to San Andres Drive)	875	2,015	1,495

Access to the site is proposed from Genevieve Street. According to the traffic report (LOS Engineering, 2016), travel to and from the project site is anticipated from Lomas Santa Fe Drive and Las Banderas, via San Andres Drive and Marine View Avenue. The roads further south and east of the project site would generate less traffic due to their narrow and curvilinear nature.

5.12.1.2 PEDESTRIAN AND BICYCLE FACILITIES

There are no paved sidewalks on the project-site side of Genevieve Street or Marine View Avenue. There is an approximately 30-foot segment of sidewalk on the north side of Marine View Avenue that is connected to the west side of the Timbers office complex driveway. Although there is no paved sidewalk on Marine View Avenue within approximately 675 feet of the site (north at the intersection of Marine View Avenue and Solana Drive), in the vicinity of the project site homes and structures are set back from the road and there is available walking space on the east and west sides of Marine View Avenue.

Striped (Class II) bicycle lanes are present on both sides of Lomas Santa Fe Drive.

5.12.1.3 PUBLIC TRANSIT

Public transit for the City of Solana Beach is provided by the North County Transit District (NCTD) via bus (Breeze) and rail (Coaster and Amtrak). The closest bus stop to the project site is at the Flower Hill Promenade, approximately 0.5 mile south of the project site, and is serviced by Breeze line 308 that extends northeast-southwest between Solana Beach and Escondido. The nearest Coaster station is at the Solana Beach Station, at 105 North Cedros Avenue, approximately 1 mile west of the project site.

NCTD offers paratransit service—that is, on-demand shared-ride service (FLEX) within 0.75 mile of an NCTD bus route or Sprinter rail station—to persons with disabilities; the project site is in the FLEX service area.

5.12.1.4 PARKING

There is no public parking available at the project site at present and no parking is allowed at any time on Marine View Avenue. Parking is allowed on the southern portion of Genevieve Street; assuming 20 feet per vehicle, there is room for approximately 16 vehicles to park on the southern side of Genevieve Street.

5.12.2 Regulatory Setting

5.12.2.1 FEDERAL

Federal rules and regulations govern many facets of the City of Solana Beach traffic and circulation system including: transportation planning and programming; funding; design, construction and operation of facilities; and others. The City complies with all applicable rules and regulations of the Federal Highway Administration, the Urban Mass Transit Administration, the Federal Railroad Administration, the Federal Aviation Administration, and other federal agencies. In addition, the City coordinates with federal resource agencies where needed in the environmental clearance process for transportation facilities.

5.12.2.2 STATE

Senate Bill 375

The legislature found that with the adoption of Senate Bill (SB) 375, signed by California Governor Schwarzenegger on September 30, 2008, the state had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32).

SB 375 provides a planning process that coordinates land use planning, regional transportation plans, and funding priorities in order to help California meet GHG reduction goals established in AB 32 (discussed in detail in Section 5.6, *Greenhouse Gas Emissions*). SB 375 requires regional transportation plans, developed by metropolitan planning organizations (MPOs) to incorporate a "sustainable communities strategy" (SCS) in its regional transportation plan (RTP). The SCS is intended to demonstrate how the coordination of land use and transportation planning efforts may achieve GHG emissions reduction targets set by AB 32. If an SCS cannot achieve the GHG emissions target, the MPO is required to adopt an "alternative planning scenario" that will demonstrate what would need to be done to achieve the GHG emissions reduction target and to define the barriers to accomplishing the reduction.

Assembly Bill 1358

AB 1358 (Complete Streets Act) commenced on January 1, 2011, and requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, including motorists, pedestrians, bicyclists, children, seniors, persons with disabilities, and users of public transportation. This bill imposes a state-mandated local program.

Senate Bill 743

On September 27, 2013, SB 743 was signed into law. SB 743 started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes will include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). As part of the new CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code Section 21099(b)(1)).

CEQA Guidelines Section 15064.3

On January 20, 2016, the Governor's Office of Planning and Research (OPR) released revisions to its proposed CEQA guidelines for the implementation of SB 743. Once the guidelines are prepared and certified, "automobile delay, as described solely by level of service of similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment" (Public Resources Code Section 21099(b)(2)). As of January 1, 2019, OPR has amended and adopted revisions to the CEQA Guidelines, which must be implemented by the City of Solana Beach by April 2019. The City may elect to comply with the amended section 15064.3 now, but it must comply no later than July 1, 2020.

5.12.2.3 REGIONAL

SANDAG Forward: The Regional Plan

The San Diego Association of Governments (SANDAG) is the transportation management agency (TMA) for the San Diego region. In conformance with the Federal Highway Administration 23 C.F.R 450.320, the TMA must address congestion management through a variety of multimodal metropolitan-wide strategies that strengthen regional connectivity and encourage integrated management of new and existing transportation facilities. SANDAG prepared "San Diego Forward: The Regional Plan," the region's long-range transportation plan and Sustainable Communities Strategy prepared by SANDAG in accordance with SB 375, which incorporates performance monitoring and measurement of the regional transportation system, multimodal alternatives, land use impact analysis, provision of congestion management tools, and integration with the Regional Transportation Improvement Program process.

SANDAG Congestion Management Program

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the State CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the state CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by the Federal Highway Administration requirements to ensure the region's continued compliance with the federal congestion management process.

County of San Diego 2017 Consolidated Fire Code

The 2017 County of San Diego Consolidated Fire Code includes requirements for fire apparatus access roads, turnaround radii, lane and curb markings, and roadway surface load design. The Consolidated Fire Code also includes regulations to prevent obstruction of fire apparatus access roads and recommendations for traffic calming devices. Section 503.2.1, Dimensions, of the 2017 Consolidated Fire Code for San Diego County requires that fire apparatus access roads have an unobstructed improved width of not less than 24 feet. In addition, according to Section 503.2.5, Dead Ends, the minimum unobstructed radius width for a cul-de-sac in a residential area is 36 feet paved, or as approved by the fire official.

5.12.2.4 LOCAL

Solana Beach General Plan

The Circulation Element of the General Plan establishes the level of service, scale, and location of streets, highways, and roadways as they relate to land use compatibility and how they provide access throughout the planning area. General Plan policies related to transportation and traffic are:

- **Goal C-1.0:** Correlated land use and circulation planning.
  - **Policy C-1.2:** Require new development to provide and enhance connectivity to existing transportation facilities via the provision of key roadway connections, sidewalks (where appropriate or desired in residential neighborhoods), and bicycle facilities.
  - **Policy C-1.3:** Require new development and redevelopment to provide good internal circulation facilities that meet the needs of pedestrians, bicyclists, children, seniors, and persons with disabilities.
- **Goal C-2.0:** A comprehensive circulation network to move people and goods safely and efficiently for all modes of travel.
  - **Policy C-2.3:** Require new developments to be served by roads of adequate capacity and design standards to provide reasonable access by cars, trucks, transit, pedestrians, and/or bicycles.
- **Goal C-3.0:** Adequate measures to ensure traffic safety.
  - **Policy C-3.1:** Ensure that the development of new private driveways does not pose significant traffic hazards for major arterials and residential collector roads.
  - **Policy C-3.4:** Implement traffic calming techniques, where appropriate, as a means to improve safety, increase efficiency of pick-up and drop-off operations at schools, and provide greater separation between pedestrians and vehicles.
  - **Policy C-3.8:** Maintain safety throughout the circulation system by taking opportunities to introduce a safe design speed to any new roadways or during improvements to existing roads or intersections.
  - **Policy C-3.9:** Reduce accident risk on arterial streets by consolidating and minimizing driveways wherever possible.

- **Goal C-8.0:** Safe alternatives to motorized transportation that meet the needs of all city residents, reduce vehicle trips, save energy, and improve air quality.
  - **Policy C-8.3:** Require new or expanded uses to provide adequate bicycle parking and support facilities.

- **Goal C-9.0:** A comprehensive and integrated bikeway system, which provides for the safe and efficient movement of cyclists.
  - **Policy C-9.6:** Require new development and redevelopment to provide safe, secure bicycle parking facilities.

- **Goal C-10.0:** A universally accessible, safe, and convenient system of sidewalks or pathways throughout the city that encourages walking and is harmonious with the surrounding neighborhood.
  - **Policy C-10.4:** Require new development and redevelopment to provide adequate pedestrian access and, where appropriate, incorporate pedestrian-oriented street designs that provide a pleasant environment for walking.
  - **Policy C-10.7:** Improve pedestrian safety at intersections and mid-block crossings.
  - **Policy C-10.8:** Reduce architectural barriers that restrict full movement and access by less mobile segments of the population consistent with the Americans with Disabilities Act.

- **Goal C-11.0:** An adequate supply of private off-street and public parking to meet the needs of residents and visitors to the city in a way that balances economic development, livable neighborhoods, environmental health, and public safety.
  - **Policy C-11.2:** Ensure balance among visitor, business, and residential parking needs.
  - **Policy C-11.4:** Require parking lots to provide shade through the use of landscaping (i.e., a tree canopy) and encourage the use of solar photovoltaic shading to reduce the heat island effect, where feasible.
  - **Policy C-11.6:** Require the use of universal design standards in parking design and compliance with the Americans with Disabilities Act accessibility guidelines.
  - **Policy C-11.7:** Provide clearly marked pedestrian paths between on-street parking, off-street parking facilities, and the buildings they serve, where feasible.

- **Goal C-12.0:** Efficient, high quality public infrastructure, facilities, and services and assurance that new, upgraded, or expanded facilities and services are phased in conjunction with the development they are intended to service.
  - **Policy C-12.4:** Require new development and redevelopment to provide fair share contributions toward the costs of the public facilities, services, and infrastructure necessary to serve the development, including, but not limited to, transportation, water, sewer and wastewater treatment, solid waste, flood control and drainage, schools, fire and law enforcement protection, and parks and recreation.

City of Solana Beach Municipal Code

The Solana Beach Municipal Code (SBMC) includes regulations and standards that govern traffic, parking and loading, encroachments on the public right-of-way, and development in the City of Solana Beach. Any modifications to the roadway network, which includes driveways, curbs, and sidewalks, would be subject to approval by the City of Solana Beach and any construction work within the right-of-way of any public roadway would require the issuance of an encroachment permit by the City of Solana Beach.

Local Coastal Program

The City of Solana Beach Local Coastal Program (LCP) Land Use Plan (LUP) contains policies that address local parking conditions, public roadways, pedestrian and bicycle facilities, and beach access road improvements. LCP LUP policies pertaining to transportation and traffic are:

- **Policy 2.23:** The extension of public transit facilities and services, including shuttle programs, to maximize public access and recreation opportunities, shall be encouraged.
- **Policy 2.25:** Adequate parking should be provided to serve coastal access and recreation uses. Existing parking areas serving recreational uses may not be displaced unless a comparable replacement area is provided.
- **Policy 2.28:** Parking facilities for new development of general office or commercial use, which may cumulatively impact public access and recreation, should be designed where feasible to serve not only the development during ordinary working hours, but also public beach parking during weekends and holidays, in conjunction with public transit or shuttle buses serving beach recreational areas.
- **Policy 2.38:** Apply City parking regulations to new projects and redevelopment projects to ensure that the parking demands generated by new development are provided on-site as follows:
    - Residential care facilities: 1 parking space per employee and one parking space for every 7 beds, unless the director of community development determines that additional parking spaces are required.
- **Policy 2.50:** The City shall encourage proposals to install bike racks, lockers, or other devices for securing bicycles in convenient locations at parks, parking lots throughout the City, trailheads and other staging areas. Funding should be supported and provided where available.
- **Policy 2.59:** Ensure that public access-ways meet consistent design standards Citywide.
- **Policy 5.16:** Off-street parking shall be provided for all new development in accordance with the policies of the LUP to assure there is adequate public access to coastal resources. A modification in the required parking standards through the variance process shall not be approved unless the City makes findings that the provision of fewer parking spaces will not result in adverse impacts to public access.

City of Solana Beach Climate Action Plan

The City of Solana Beach Climate Action Plan (CAP) includes policies related to transportation that reduce VMT from new development and are designed to improve fuel efficiency of labor force vehicles. The CAP estimates that implementation of all transportation measures would reduce GHG emissions by 19,643 metric tons of carbon-dioxide equivalence. The following policies from the CAP would be applicable to the proposed project as it relates to transportation:

- Measure T-3, Reduce average commuter trip distance by one mile.
- Measure T-11, Promote alternative work schedule to achieve participation from 1 percent of the labor force.

Comprehensive Active Transportation Strategy

The City of Solana Beach Comprehensive Active Transportation Strategy (CATS) was adopted in June 2015 to analyze existing bicycle and pedestrian infrastructure and to propose new or improved bicycle and pedestrian improvements for the City of Solana Beach until 2030. The focus of the plan is on improving safety for existing facilities, providing recommendations for efficient new facilities, establishing priority for new or improved pedestrian and bicycle infrastructure, and increasing connectivity to key land uses, including recreational resources, schools, and commercial areas. The CATS does not propose bicycle-lane infrastructure on Genevieve Street or the segment of Marine View Avenue adjoining the project site; the closest roadways with a proposed residential bicycle boulevard would be San Andres Drive to Solana Drive, approximately 700 feet north of the entrance to the site. However, the CATS does propose a pedestrian and traffic-calming focus along the length of Marine View Avenue. The proposed bicycle and pedestrian infrastructure near the project site is identified as third priority of three possible priorities.

5.12.3 Methodology

Level of Service

As allowed pursuant to recently amended CEQA Guidelines Section 15064.3(c), this DEIR uses the "level of service" methodology to analyze the potential impacts of the proposed project on traffic in the affected area. A level of service (LOS) is a standard performance measurement used to describe the operating characteristics of an intersection or street segment in terms of the level of delay or congestion experienced by motorists. Service LOS can range from A through F, that is, from the best traffic conditions (uncongested, free-flowing conditions) to the worst (total breakdown with stop-and-go operation), as shown in Table 5.12.2 below.

Intersection Level of Service

The methodology used to assess the operation of signalized intersections is based on the Highway Capacity Manual 2000 (HCM 2000). The intersection LOS analysis uses traffic volumes observed during the peak hour conditions. Per the HCM 2000 methodology, overall average intersection delay at signalized intersections was calculated, and the worst-case approach delay was calculated at unsignalized intersections. Table 5.12-2

describes the operating conditions expected under each LOS for signalized and unsignalized intersections. The HCM 2000 methodology presents LOS in terms of control delay at intersections (in seconds per vehicle).

Table 5.12-2 Intersection Level of Service Descriptions

LOS	Description	Average Delay per Vehicle (seconds)	
		Signalized	Unsignalized
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.01 to 55.00	25.01 to 35.00
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.01 and up	50.01 and up

Source: Highway Capacity Manual, Transportation Research Board, 2000.

Street Segment Level of Service

The methodology used to assess the operation of street segments is based on the significance criteria identified in the SANDAG CMP. The level of service for a roadway segment is calculated by dividing the design vehicle capacity of a roadway (volume) by the amount of traffic measured or calculated to be on that roadway segment. Expressed as volume/capacity (V/C) ratios, Table 5.12-3 correlates the resulting calculations with a description of conditions expected by the motorist.

Table 5.12-3 Relationship between V/C Ratios and Levels of Service: Street Segments

Level of Service	Volume/Capacity Ratio	Description of Conditions
A	0.00 to 0.41	Free Flow
B	0.41 to 0.62	Free to Stable Flow
C	0.63 to 0.79	Stable Flow
D	0.80 to 0.92	Approaches Unstable Flow
E	0.93 to 1.00	Extremely Unstable Flow
F	> 1.00	Forced Flow with Heavy Congestion/Gridlock

Source: SANDAG Congestion Management Program.

5.12.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project could:

T-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

T-2 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.

T-3 Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

T-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

T-5 Result in inadequate emergency access.

T-6 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

T-7 Result in inadequate parking capacity.

The Initial Study, included as Appendix 2-1, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold T-3
- Threshold T-4

Impacts to Threshold T-3 will not be addressed in the following analysis. Based on a response to the Notice of Preparation and Initial Study (see Appendix 2-2), Threshold T-4 will be further analyzed in this section.

5.12.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts could occur from project implementation. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.12-1: Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? [Threshold T-1] [Less Than Significant]

Impact Analysis:

Project-Generated Traffic

The proposed project would result in an increase in traffic volumes on the streets in the vicinity of the project site because the site is currently vacant. Under current conditions, Genevieve Street receives approximately 34 ADT and Marine View Avenue approximately 232 ADT. The trip generation rates and anticipated traffic volumes from proposed project implementation are shown in Table 5.12-4.

Table 5.12-4 Project Trip Generation

ITE Land Use	Trip rate	Size and Units	ADT	AM Peak				PM Peak			
				Rate	Split	In	Out	Rate	Split	In	Out
Assisted Living	2.66/Bed	99 Beds	263	0.18/Bed	0.67/0.33	12	6	0.35/Bed	0.47/0.53	16	18

Source: ITE 9th Edition Trip Generation, 2012. ADT=Average Daily Traffic; Split-percent inbound and outbound.

The trip generation rate for the proposed residential senior care facility for the elderly represents values from the *Trip Generation Manual* (Institute of Transportation Engineers, 9th edition) for the Assisted Living land use category. Although the trip generation rates and traffic volumes shown in the table are based on the number of beds at the proposed facility, the data represent the total number of vehicle trips generated by the site, including staff vehicles, drop-off/pick-up activities, visitors, and deliveries. As shown in Table 5.12-4, the project would result 263 ADT with 18 AM peak hours trips (12 inbound and 6 outbound), and 34 PM peak hour trips (16 inbound and 18 outbound).

When the project trip generation is established, the need for a traffic study can be determined. Determination for the need of a traffic study was based on the SANTEC/ITE *Guidelines for Traffic Impact Studies in the San Diego Region*, March 2000. The SANTEC guidelines state:

> A TIS [Traffic Impact Study] should be prepared for all projects which generate traffic greater than 1,000 total average daily trips (ADT) or 100 peak-hour trips. If a proposed project is not in conformance with the land use and/or transportation element of the general or community plan, use threshold rates of 500 ADT or 50 peak-hour trips.

Since the project traffic is calculated to be less than the lower 500 ADT threshold and the peak hours are calculated to be less than the lower 50 peak hour trips, the project would not require a traffic study based on the SANTEC/ITE guidelines.

However, at the direction of the City, the three roadways providing access to the project were analyzed to determine if the roadway capacity would be exceeded or adversely affected with the proposed project.

Site Access and Surrounding Roadways

Overall travel to the project site is anticipated to come from Lomas Santa Fe Drive and Las Banderas via San Andres Drive and Marine View Avenue. From these streets, the site would be accessed by Genevieve Street. According to the Traffic Assessment Letter (LOS 2016), nominal project traffic would occur on other residential streets south and east of the site due to their orientation and circuitous network.

Traffic Impact Analysis

As shown in Table 5.12-4, above, the project would result in an increase in 263 average daily trips to Marine View Avenue and Genevieve Street. The City of Solana Beach Circulation Element identifies Marine View Avenue and Genevieve Street as "Local Roads" and lists a capacity of 2,000 vehicles per day for a Local Road. The Circulation Element states "Design capacity of 2,000 vehicles per day determined not by the physical capacity of the road but rather the acceptable level of service which will not affect the quality of life in residential areas."

Based on the City of Solana Beach classification and capacity, the addition of project traffic will not exceed the capacity of Marine View Avenue or Genevieve Street. In addition to these local streets, the City requested that current counts be provided for Las Banderas to verify existing volumes. The design capacity of Las Banderas, a Collector Street, is 10,000 vehicles per day and the existing volume of 4,016 per day is below the 10,000 vehicles per day design capacity. Tables 5.12-5 and 5.12-6 show the addition of proposed project traffic to the existing roadway network.

Table 5.12-5 Existing (Average) + Project Traffic Volumes and Capacity

Segment	Roadway Classification	Existing (Average)			Project	Existing (Average) + Project			
		Daily Volume	Roadway Capacity	Within Capacity	Daily Volume	Daily Volume	Roadway Capacity	Percent Remaining Capacity	Within Capacity
Marine View Avenue									
From San Andres Dr. to Solana Drive	Local	1,078	2,000	Yes	263	1,341	2,000	33	Yes
From Los Caballitos to Genevieve Street	Local	232	2,000	Yes	263	495	2,000	75	Yes
Genevieve Street									
From Marine View Avenue to I-5 (cul-de-sac)	Local	34	2,000	Yes	263	297	2,000	85	Yes
Las Banderas									
From Lomas Santa Fe to San Andres Drive	Collector	4,016	10,000	Yes	263	4,279	10,000	57	Yes

Daily volume is a 24-hour volume.

Table 5.12-6 Existing (Highest) + Project Traffic Volumes and Capacity

Segment	Roadway Classification	Existing (Average)			Project	Existing (Average) + Project			
		Daily Volume	Roadway Capacity	Within Capacity	Daily Volume	Daily Volume	Roadway Capacity	Percent Remaining Capacity	Within Capacity
Marine View Avenue									
From San Andres Dr. to Solana Drive	Local	1,330	2,000	Yes	263	1,593	2,000	20	Yes
From Los Caballitos to Genevieve Street	Local	304	2,000	Yes	263	567	2,000	72	Yes
Genevieve Street									
From Marine View Avenue to I-5 (cul-de-sac)	Local	37	2,000	Yes	263	300	2,000	85	Yes
Las Banderas									
From Lomas Santa Fe to San Andres Drive	Collector	4,095	10,000	Yes	263	4,358	10,000	56	Yes

Daily volume is a 24-hour volume.

The City of Solana Beach General Plan Circulation Element states "Design capacity of 2,000 vehicles per day [for local roads were] determined not by the physical capacity of the road but rather the acceptable level of service which will not affect the quality of life in residential areas." Based on the City of Solana Beach General Plan Circulation Element, the proposed project, with existing average volume, would not exceed the

design capacity of 2,000 vehicles on any roadway; therefore, traffic impacts are considered less than significant.

Impact 5.12-2: Would the project 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 T-2] [Less than Significant]

Impact Analysis: In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by the Federal Highway Administration requirements to ensure the region's continued compliance with the federal congestion management process. The closest CMP freeway to the site is the I-5 freeway, adjacent to the project site. As noted in Table 5.12-6, the proposed project would not exceed the capacity of the adjacent roadways. Since the adjacent roadways did not exceed any capacities, and the project does not generate more than 50 PM peak-hour trips at any intersection that would require preparation of a traffic impact analysis, impacts to I-5 would be less than significant.

Impact 5.12-3: Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? [Threshold T-4] [Less than Significant]

Impact Analysis: Other than to provide street improvements along Genevieve Street and Marine View Avenue, which include road excavation for undergrounding of utilities and repaving the disturbed asphalt, the proposed project would not alter any roadways. The roadway improvements would be constructed to City standards and designed to allow for pedestrian travel and for channeling of storm drainage. Traffic associated with the assisted-living facility will be limited to employees, services and deliveries, and visitors. According to the National Survey of Residential Care Facilities, of a survey of approximately 733,000 adults living in residential care facilities, approximately 4.5 percent were current drivers; therefore, it is anticipated that the majority of residents of the proposed project would not drive or have access to a personal vehicle (CDCP 2011). In addition, the proposed project includes a shuttle van that will be driven by staff and would be typically used to drive residents to doctor's appointments two days a week, and for regular outings such as shopping, services, etc. two days a week and be available for other uses as needed. Table 5.12-6 shows that traffic associated with the project would not exceed the capacity of area roadways.

Primary access to the project is anticipated to be from Lomas Sante Fe Drive to Marine View Avenue to Genevieve Street. This route provides the most direct access to shopping and services in the City, and to I-15. As shown in Figure 3-3, *Aerial Photograph*, Marine View Avenue makes a 90-degree turn between Solana Drive and Los Caballitos Drive. This existing turn, coupled with slope of the roadway and overgrown foliage along the edge of the road, may limit drivers' views of people walking on the road. Marine View Avenue is constructed to a rural standard lacking a sidewalk and a parking lane for much of its length, including the frontage of the proposed project site.

While the project would result in a less than significant impact to traffic hazards, the City Council may wish to require additional community enhancements to reduce vehicular speeds and improve walkability in the

vicinity of the site to result in a beneficial impact. As discussed in Chapter 4, *Project Description*, City staff conducted a field review of the surrounding area and provided options for community enhancements for roadways in the vicinity of the project site (see Appendix 5.12-3 to this DEIR). Some measures may include adding:

- Bike sharrows to Marine View Avenue and Highland Drive
- Striping, bike lanes, and buffers to Las Banderas Drive
- Bike sharrow markings, edge pavement markings, and buffered bike lane on Marine View Avenue at Solana Drive
- Pavement edge markings at the intersection of Highland Drive and Avocado Place
- Edge and bike sharrow markings
- Buffered bike lane with parking restrictions (see Appendix 5.12-3).

These community enhancements would result in a beneficial impact to roadway and sidewalk safety in the vicinity of the project site and could be approved in addition to the project.

Furthermore, because the proposed project does not propose any change in the design of the existing roadway and the amount of traffic added to Genevieve Street and Marine View Avenue would be less than significant, (Impact 5.12-1), the proposed project will not substantially increase hazards due to design features or incompatible uses. Furthermore, in accordance with the City's Neighborhood Traffic Management Program, if there is a traffic concern identified by either a resident in an affected area, City staff, the Traffic Technical Action Committee (TTAC), the Public Safety Commission, or City Council, a Community Action Request form can be filled and provided to the City. The request would be provided to the TTAC to evaluate the traffic concern, and provide recommendations for measures on how to alleviate or resolve the traffic issue (Solana Beach 2004).

Impact 5.12-4: Would the project result in inadequate emergency access? [Threshold T-5] [No Impact]

Impact Analysis:

Roadway Improvements

The project includes construction of a new private roadway on the western portion of the project site and public improvements to Genevieve Street. The new private roadway would be 24 feet wide and approximately 240 feet long and would lead to a turnaround with a 36-foot radius near the center of the proposed building (see Figure 5.11-1). The curb along the western portion of the new roadway and around the turnaround would be a designated fire lane. The northern portion of the site along Genevieve Street would be improved with new walkway, curb, and gutter and would result in a roadway width of 26 feet on Genevieve Street.

Code Compliance

Section 503.2.1, Dimensions, of the 2017 Consolidated Fire Code for San Diego County requires that fire apparatus access roads have an unobstructed improved width of not less than 24 feet. In addition, according to Section 503.2.5, Dead Ends, the minimum unobstructed radius width for a cul-de-sac in a residential area is

36 feet paved, or as approved by the fire official. Therefore, because the access roadway would be 24 feet, the proposed cul-de-sac on the western roadway and the cul-de-sac at the western portion of Genevieve Street would have a turning radius of at least 36 feet, and because the site plans were approved by the SBFD Fire Marshal, there would not be a significant impact associated with emergency access onto the site.

Impact 5.12-5: Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? [Threshold T-6] [Less than Significant Impact]

Impact Analysis:

Pedestrian and Bicycle Facilities

Pedestrian and bicycle facilities in the City of Solana Beach are within the Comprehensive Active Transportation Strategy Planning Area. The CATS does not propose bicycle-lane infrastructure on Genevieve Street or the segment of Marine View Avenue adjoining the project site; the closest roadways with a proposed residential bicycle boulevard would be San Andres Drive to Solana Drive, approximately 700 feet north of the entrance to the project site. The CATS proposes a pedestrian and traffic-calming focus along the length of Marine View Avenue. However, the proposed bicycle and pedestrian infrastructure near the project site are identified as third priority of three possible priorities. Therefore, the proposed project would not result in impacts to the City CATS plan.

Additionally, due to the size and nature of the proposed project, the project would not generate a significant increase in pedestrian or bicycle trips. The senior care residents would live at the facility 24/7 and because of their age and related conditions are not anticipated to generate a significant number of pedestrian or bicycle trips. As shown on Figure 4-1, *Site Plan*, the plan for the facility includes on-site walking paths and outdoor areas to encourage residents to remain on the property.

The proposed project includes two pedestrian access points into the facility and includes bicycle parking near the entrance to the site on Genevieve Avenue in accordance with the policy recommendations of the General Plan (Policies C-8.3, 9.6, and 10.4) and the LCP LUP (Policy 2.50). Some facility staff may opt to walk or bike to the residential senior care facility instead of drive; however, it cannot be speculated as to the number of employees that would drive, walk, or bike to work because the facility is not in operation.

Private Shuttle Van

The proposed project includes a shuttle van that will be driven by staff and would be typically used to drive residents to doctor's appointments two days a week, and for regular outings such as shopping, services, etc. two days a week and be available for other uses as needed. The 7- to 15-passenger van would occupy one of the proposed 62 available parking spaces.

Public Transit

Several transit districts operate routes in the vicinity of the project site. The closest bus stop to the project site is at the Flower Hill Promenade, approximately 0.5 mile south of the project site, and is serviced by the

NCTD Breeze line 308. The nearest Coaster station is at the Solana Beach Station, at 105 North Cedros Avenue, approximately 1 mile west of the project site.

Project improvements would occur on the project site and would not directly impact existing mass transit facilities. The proposed driveway turnaround would accommodate passenger pick-ups and drop-offs by NCTD FLEX vehicles. Additionally, the construction traffic management plan would address any potential temporary road closures needed during construction. Therefore, project implementation would be consistent with applicable policies, plans, and programs that have been established for alternative transportation and are considered less than significant.

Impact 5.12-6: Would the project result in inadequate parking capacity? [Less than Significant with Mitigation Incorporated]

Impact Analysis: The proposed development would include a basement parking garage with 32 stalls and two surface parking areas: one visitor parking lot in the northeast portion of the site with 19 stalls, and the other along the western driveway with 11 stalls. The development would have a total of 62 off-street parking stalls, including 3 ADA accessible stalls and 2 van-accessible stalls. The proposed development would also have 1 motorcycle space, 6 bicycle spaces, and 1 loading space.

SBMC § 17.60.100(D)(4) requires a residential care facility to provide 1 parking space per employee plus 1 space per 7 beds (Solana Beach 2016). The proposed Specific Plan requires the same off-street parking standard. The corresponding development plan proposes 62 off-street parking stalls—19 spaces in the western lot, 11 spaces in the eastern lot, and 32 spaces in a basement garage.

The applicant estimates hiring a maximum of 65 staff; however, due to the nature of the facility and shifts that employees would work, only 45 staff would be onsite at any one time, and the project would therefore need to accommodate the parking demand for 45 staff. The Specific Plan also identifies operation of up to 99 beds; accordingly, 15 off-street stalls would be required. The proposed project would require a total of 60 off-street parking stalls which is two less than the 62 provided by the proposed project and shown on the site plan.

The proposed project, however, may have an increased parking demand during holidays (e.g., Mother's Day, Father's Day) or when other events are held at the proposed facility. While these occasions would be infrequent, they may increase the parking demand and require additional parking.

Marine View Avenue currently does not allow for parking on either side of the street. The southern portion of Genevieve Street along the project frontage and the northern portion near the turnaround have approximately 280 feet available for parking. The proposed project would remove the parking along the southern side of Genevieve Street, but would maintain parking near the turnaround on the northern side of Genevieve Street at the northwestern portion of the site. Assuming a parking space length of 20 feet, this segment of roadway would allow for two on-street parking spaces in addition to the two spaces on-site that are in excess of the code requirement; four total additional on- and off-street parking spaces would be available for special events. Although the on-site parking proposed for the project exceeds the standards required by the SBMC, and the subsequent roadway improvements on Genevieve Street will provide overflow

parking for special events, special events may incur a higher parking demand than provided with the four excess vehicle spaces. Mitigation measure TRAF-1 would implement a parking management plan for special events (i.e., Father's/Mother's day, Christmas, etc.), which would provide a valet service to provide additional parking via stacking at the site, as needed.

TRAF-1 Prior to certificate of occupancy, the applicant shall prepare a parking management plan that establishes a list of dates of special events throughout the calendar year that the applicant considers to have potential for increased parking needs that may exceed available parking on- or offsite. The list of special events shall be reviewed and approved by City staff prior to certificate of occupancy.

The applicant shall establish a contract with a contract-valet/parking service to provide valet service to visitors for the first two special events within the calendar year after the senior care facility is open. If after two special events it is determined that the valet service is not necessary because the site is able to accommodate parking needs during special events, the applicant may cease the valet/parking contract. The applicant shall re-establish a contract with a valet/parking service if they are notified by visitors or nearby residents that there are limitations related to availability of parking during special events.

Level of Significance After Mitigation

With implementation of mitigation measure TRAF-1, impacts associated with parking for special events would be mitigated to less than significant.

5.12.6 Cumulative Impacts

The cumulative traffic impacts associated with the proposed project include projects in the cumulative projects list included in Table 3-1 to this EIR. The existing conditions scenario assumes additional traffic from ambient regional growth and traffic from developments in the project region; therefore, as identified in the analysis, above, cumulative traffic impacts are less than significant. The impacts of the proposed project, combined with related projects, would not significantly impact regional transportation facilities or physically increase roadway hazards. Traffic and transportation impacts would not be cumulatively considerable.

5.12.7 References

Centers for Disease Control and Prevention (CDCP). 2011. 2010 National Survey of Residential Care Facilities - Survey Methodology, Documentation, and Data Files. http://www.cdc.gov/nchs/nsrcf/nsrcf_questionnaires.htm.

LOS Engineering Inc., Traffic and Transportation. 2016, March 14. Traffic Assessment Letter: 959 Genevieve Street Senior Care Housing Project.

San Diego County. 2017 Consolidated Fire Code. http://www.sandiegocounty.gov/pds/docs/cosd-fire-code.pdf.

Solana Beach, City of. 2018, December 12. Solana Beach Municipal Code. (SBMC). http://www.codepublishing.com/CA/SolanaBeach.

_____. 2017, July 12. City of Solana Beach Climate Action Plan. https://www.ci.solana-beach.ca.us/vertical/Sites/%7B840804C2-F869-4904-9AE3-720581350CE7%7D/uploads/City_of_Solana_Beach_Climate_Action_Plan(1).pdf.

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_____. 2004. City of Solana Beach Neighborhood Traffic Management Program. https://www.ci.solana-beach.ca.us/?SEC=ADE0506B-4835-4013-A1A0-06FA09BF43C1.

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5.13 TRIBAL CULTURAL RESOURCES

This section of the DEIR evaluates the potential for the Solana Beach Senior Care Specific Plan (Specific Plan) Project to impact tribal cultural resources (TCR). This section has been added to the EIR based on AB 52 regulations adopted by the California Natural Resources Agency and approved by the Office of Administrative Law on September 29, 2016. These regulations will appear in the California Code of Regulations.[1]

Impacts to cultural resources, including historical, and paleontological resources are discussed in Section 5.4, *Cultural Resources*. The analysis in this section is based in part on the following information:

- *Department of Parks and Recreation (DPR) Form for 959 Genevieve Street*, Ronald V. May, RPA, and Kiley Wallace, March 2016 (historical resources record; see Appendix 5.4-1)
- *959 Genevieve Street/Residential Care Facility Cultural Resources Study Addendum*, Helix Environmental Planning, January 29, 2016 (see Appendix 5.4-2)
- *Addendum to Residential Care Facility*, 959 Genevieve Street: Archaeology (Affinis Job No. 2428), Affinis Environmental Services, December 16, 2011 (see Appendix 5.4-2)

Terminology

Local Register of Historical Resources means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution (PRC Section 5020.1[k]).

Tribal Cultural Resources (TCR) are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are any of the following:

- Included or determined to be eligible for inclusion in the CRHR; or
- Included in a local register of historical resources; or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, and considering the stated importance to the tribe, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1 of the CRHR.

5.13.1 Environmental Setting

The project site is located between two areas with archaeological and cultural sensitivity: the San Dieguito River Valley to the south and San Elijo Lagoon to the north. The lagoon margins were centers of habitation and resource gathering/processing due to the abundance of natural resources. The proximity to riverine, lagoon,

[1] Copies of the rulemaking materials can be found at http://resources.ca.gov/ceqa/.

marsh, open coast, and upland habitats gave inhabitants access to a variety of plant and animal resources, and water would have been available in seasonal drainages.

Based on a South Coastal Information Center (SCIS) records search, 17 cultural resources were recorded within a one-mile radius of the site (see Appendix 5.4-2). These include 2 sites described as artifact scatters, 1 of which also had fire-affected rock; 1 shell scatter with no artifacts; 2 shell scatters with limited artifacts; 1 shell and artifact scatter; 1 site that included bedrock milling features; 4 habitation sites with shell and artifacts; 2 sites consisting of historic foundations; 1 isolated lithic artifact; 2 isolated shell fragments; and 1 site for which no information is available other than map location. With the exception of the shell scatter with no artifacts, none of the recorded archaeological sites are closer to the project site than about half a mile.

The project site had extensive disturbance during freeway construction and relocation of the house. Based on a surface examination and excavation tests, the site is not culturally important because it lacks artifacts, unique elements, and integrity. It has been heavily disturbed by a dirt road; the movement of large, potted palm trees; an irrigation system; and erosion associated with a former nursery, house (constructed in 1957 and moved to its present location in 1964), greenhouse, and utility buildings.

5.13.2 Regulatory Setting

5.13.2.1 STATE

Senate Bill 18

SB 18 requires a city or county to consult with the NAHC and any appropriate Native American tribe prior to the adoption, revision, amendment, or update of its general plan. Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, the Final Tribal Guidelines advises that SB 18 requirements extend to specific plans as well, because state planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code § 65453).

Assembly Bill 52

The Native American Historic Resource Protection Act (AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to TCRs into the CEQA process. It requires TCRs to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. Projects that require a Notice of Preparation (NOP) of an EIR or Notice of Intent to adopt an ND or MND are subject to AB 52. A significant impact on a TCR is considered a significant environmental impact and requires feasible mitigation measures.

TCRs must have certain characteristics:

1) Sites, features, places, cultural landscapes (must be geographically defined), sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. (Public Resources Code [PRC] § 21074[a][1])

2) The lead agency, supported by substantial evidence, chooses to treat the resource as a TCR. (PRC § 21074[a][2])

The first category requires that the TCR qualify as a historical resource according to PRC Section 5024.1. The second category gives the lead agency discretion to qualify that resource—under the conditions that it support its determination with substantial evidence and consider the resource's significance to a California tribe. The following is a brief outline of the process (PRC §§ 21080.3.1–3.3).

1) A California Native American tribe asks agencies in the geographic area with which it is traditionally and culturally affiliated to be notified about projects. Tribes must ask in writing.

2) Within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it.

3) A tribe must respond within 30 days of receiving the notification if it wishes to engage in consultation.

4) The lead agency must initiate consultation within 30 days of receiving the request from the tribe.

5) Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a TCR, OR a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached.

6) Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on TCRs and discuss feasible alternatives or mitigation that avoid or lessen the impact.

Native American Historic Resource Protection Act

Public Resources Code Sections 5097 et seq. codify the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. Section 5097.9 states that no public agency or private party on public property shall "interfere with the free expression or exercise of Native American Religion." The code further states that:

> No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine… except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, expect for parklands larger than 100 acres.

Human Remains

California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into 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 to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority

and recognizes or has reason to believe the human remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

5.13.2.2 LOCAL

Solana Beach General Plan

The Conservation and Open Space Element of the City's General Plan contains policies regarding the protection of cultural and historic resources in the City.

Goal 3.1: To Protect and Conserve the City's Natural and Cultural Resources

- **Policy 4.a:** The City shall use the environmental review procedures established by the California Environmental Quality Act (CEQA) to ensure that potential adverse effects upon natural and cultural resources are identified.
- **Policy 4.b:** The City shall not permit land uses that would have unavoidable significant adverse impacts upon natural or cultural resources unless a statement of overriding considerations is adopted by the Solana Beach City Council.
- **Policy 6.a:** The City shall complete an inventory of local historic resources and cultural landmarks and shall establish a list of significant resources to be preserved.
- **Policy 6.b:** The City shall require that sites proposed for future development are to be evaluated by certified archaeologists and/or paleontologists in accordance with the California Environmental Quality Act. Where potentially significant adverse impacts are identified, the city shall require appropriate mitigation measures such as in situ preservation or professional retrieval.
- **Policy 6.c:** The City shall implement the objectives and policies established in the community design element of the general plan which promote the preservation of historic landmarks, focal points, and special features.
- **Policy 6.d:** The City shall encourage and support the acquisition of significant cultural resources by private and/or public entities interested in preserving such resources.
- **Policy 6.e:** The City shall establish a historic preservation section within its zoning ordinance.

City of Solana Beach Municipal Code

SBMC 17.60.160 Historic/Cultural Landmark Designations.

The provisions of this section of the SBMC is to establish a procedure for the designation of historic, cultural, archaeological, or architectural landmarks, herein referred to as historic/cultural landmarks.

A. City Council Action. The City Council shall have jurisdiction over the designation of historic/cultural landmarks. If the City Council finds that the building, structure, site, or collection of buildings or sites has historic, cultural, archaeological or architectural values

significant in the history of the City, the City Council may initiate the hearings to designate such building, structure, or site as a historic/cultural landmark. Designation of historic/cultural landmarks may include sites listed on the National Register of Historic Sites or sites listed as California Registered Landmarks; however, the City may designate sites which are not listed on federal or state registers.

G. Development Review Permit Required. No building or grading permit shall be issued for the construction or alteration of any building or structure, or site (nor shall any person construct or alter a building, structure, or site) which has a historic/cultural landmark designator applied to the building, structure, or site until a development review permit has been submitted and approved in accordance with SBMC 17.68.040 (Development Review Permits) and the criteria and procedures established by this section. A development review permit is not required for alterations to the interior of a structure which the planning director finds do not degrade or detract from the historic, cultural, archaeological or architectural resource values which qualify the structure as a designated historic/cultural landmark.

I. Development Review Criteria. The general criterion of the development review is that the proposed construction, alteration, demolition, or relocation of any building, structure, or site shall enhance, the maximum extent feasible, and not interfere with, detract from or degrade the historic, cultural, architectural, or archaeological resource values of the designated historic/cultural landmark.

J. Demolition or Relocation of Designated Historic/Cultural Landmarks.

1. No person shall demolish, destroy, or move all or any part of a designated historic/cultural landmark, nor shall any permit be issued for such demolition, moving or earth movement, unless a conditional use permit has been approved by the City Council in accordance with SBMC 17.68.010.

2. A conditional use permit for demolition or moving of a designated historic/cultural landmark shall not be approved unless the City Council finds that one or more of the following conditions exist:

    a. A structure is a hazard to the public health or safety, and repairs or stabilization are not physically possible.

    b. The site is required for a public use which will be of more benefit to the public than the historic/cultural landmark and there is no alternative location for the public use.

    c. Retention of such landmark or structure thereon would cause undue financial hardship to the owner.

3. A conditional use permit for demolition of a designated historic/cultural landmark shall not be approved unless the structure or object cannot be moved or relocated.

4. A conditional use permit for the relocation of a designated historic/cultural landmark shall not be approved unless the relocation will not destroy the historical, cultural, archaeological or architectural values of the historic/cultural landmark, and the relocation is part of a definitive series of actions which will assure the preservation of the historic/cultural landmark.

Local Coastal Program

Chapter 5, New Development, of the LCP contains policies regarding to impacts to archaeological resources, including tribal cultural resources, as a result of new development.

- **Policy 5.51:** Identify and mitigate potential impacts of development on archaeological, paleontological and historic resources.
- **Policy 5.52:** New development shall protect and preserve archaeological, historical and paleontological resources from destruction, and shall avoid, and minimize impacts to such resources.
- **Policy 5.53:** Where development would adversely impact historical, archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.
- **Policy 5.54:** The City shall coordinate with appropriate agencies to identify archaeologically sensitive areas. Such information should be kept confidential to protect archaeological resources.
- **Policy 5.55:** CDPs for new development within archaeologically sensitive areas shall be conditioned upon the implementation of the appropriate mitigation measures.
- **Policy 5.56:** New development on sites identified as archaeologically sensitive shall include on-site monitoring of all grading, excavation, and site preparation that involve earth moving operations by a qualified archaeologist(s), and appropriate Native American consultant(s).
- **Policy 5.57:** The establishment of a museum/visitor center to display local archaeological and/or paleontological artifacts, and to provide public educational information on the cultural and historic value of these resources shall be encouraged.

5.13.3 Methodology

Tribal Consultation

In a letter received on December 23, 2015, the Viejas Band of Kumeyaay Indians determined that the project site would have cultural significance or ties to the Viejas tribe. The Viejas Band requested that a Kumeyaay Cultural Monitor be onsite for ground-disturbing activities to inform the tribe of any new development such as inadvertent discovery of cultural artifacts, cremation sites, or human remains.

The City received a tribal consultation request to be notified about projects from the Mesa Grande Band of Mission Indians. The City of Solana Beach notified the Mesa Grande Band of Mission Indians about this

project via certified mail on June 29, 2017; therefore, the City initiated consultation with the Mesa Grande Band of Mission Indians in accordance with AB 52. The following outlines the AB 52 process conducted for the proposed project to date:

1) A California Native American tribe asks public agencies in the geographic area with which it is traditionally and culturally affiliated to be notified about projects.
   - One tribe contacted City of Solana Beach and requested to be notified. The Mesa Grande Band of Mission Indians requested formal consultation for projects within the Mesa Grande Band of Mission Indians Tribe's Geographic Area on June 19, 2017.

2) Within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it.

3) With the completion of the project scope, on June 29, 2017, the District formally notified the Tribe via a certified mail copy of the NOP for the proposed project's EIR. No response has received from the Mesa Grande Band of Mission Indians. A tribe must respond within 30 days of receiving the notification if it wishes to engage in consultation.
   - The Mesa Grande Band of Mission Indians did not respond within 30 days of notification nor has it responded as of the issuance of this EIR.

In addition, on June 23, 2017, a Notice of Preparation of an Environmental Impact Report was sent to the Mesa Grande Band of Mission Indians; no response to the NOP was received.

4) The lead agency must initiate consultation within 30 days of receiving the request from the tribe.
   - As no response has been received, the process has been completed, and the District has met is obligations in accordance with AB 52. The District will include the Mesa Grande Band of Mission Indians as a recipient of all notices concerning the proposed project.

5.13.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would 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:

TCR-1 Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

TCR-2 A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1,

the lead agency shall consider the significance of the resource to a California Native American tribe.

5.13.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study identified potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.13-1:	Would the proposed 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)? [Threshold TCR-1] [No impact]

Impact Analysis: No sacred lands have been identified on the project site by the NAHC or a California Native American Indian tribe, and no objects with cultural value to a Native American Indian tribe have been identified on the project site.

According to the cultural resources study, the project site is not currently listed on historic resource lists/databases, including the National Register of Historic Places, California State Historical Landmarks, California Points of Historical Interest, and California Register of Historic Resources.

The house on the project site was constructed in 1957. Based on a historical analysis (see Appendix 5.4-1 of the DEIR), the house does not sufficiently reflect the city's early development, and it does not reflect special elements of the city's development to a greater extent than other typical structures of that era. No significant associations or connections with historical persons were found. Therefore, the house does not qualify for state, local, or national designation due to important individuals or events. The house is not a good example of the Minimal Traditional style due to lack of original integrity because of alterations and because it was moved to its current location in 1964. Lastly, the home's architect is unknown and therefore is not a notable work by a known master architect (May 2016).

There are no known tribal cultural resources listed or eligible for listing in the California Register of Historical Resources, in a local register of historical resources, or of cultural value to a California Native American tribe on the project site.

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Impact 5.13-2:	Would the proposed 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. [Threshold TCR-2] [Less than Significant with Mitigation Incorporated]

Impact Analysis: The project's Department of Parks and Recreation historical resource evaluation form evaluated whether the project site and the structures on the property qualify as historical resources based on PRC Section 5024.1(c). Based on an evaluation of the history of Solana Beach of documentation of the single-family residence on the site, the assessment concluded that the building and the property itself do not meet the criteria listed in PRC Section 5024.1(c) to qualify them as historical cultural resources. Section 5.4, *Cultural Resources,* of the EIR and Appendix 5.4-1 further discuss this determination.

However, it is known that Native American tribes accessed the San Diego region prior to the urbanization of the region. The City notified interested tribes of the project in accordance with AB 52. The City notified the Mesa Grande Band of Mission Indians about this project but did not receive a response within the 30-day notice, nor did the City receive a response to the Notice of Preparation that was sent to their mailing address. If a tribe does not request consultation within 30 days of receiving the public agency's notice, the AB 52 process ends, and no consultation is required. Therefore, the City has complied with AB 52 and can move forward with the project. Additionally, because of substantial previous site disturbance, the City has no substantial evidence that TCRs exist on the project site.

Outside of the AB 52 process, the Viejas Band of Kumeyaay Indians did not request consultation but requested that a Kumeyaay monitor be present for ground-disturbing activities. As noted in the cultural resources study, excavation for the proposed building foundations and footings may encounter undisturbed soils, and it is possible that construction-related earthwork may inadvertently uncover buried tribal cultural artifacts. Therefore, project implementation could result in the discovery of subsurface tribal resources and cause a substantial adverse change in the significance of the resources if not mitigated.

Mitigation Measure

TCR-1 In addition to implementing Mitigation Measure CUL-1, which requires a registered professional archaeologist (RPA) to monitor ground-disturbing activities for the discovery of potential historical or archaeological resources, the RPA shall also monitor for potential tribal cultural resources. If tribal cultural resources are recovered, the RPA shall contact the liaisons for the local Native American tribes, including their Native American monitors, to assess the find and as appropriate return the artifact to the appropriate tribe(s).

Level of Significance After Mitigation

With implementation of mitigation measure TCR-1, impacts associated with subsurface cultural resources would be less than significant.

5.13.6 Cumulative Impacts

The project and cumulative study area for TCRs is the geographic area of any tribe requesting consultation under AB 52. For this project, the cumulative area is the geographic area with which the Mesa Grande Band of Mission Indians is traditionally and culturally affiliated, which covers approximately 1,800 acres in eastern San Diego County. Cumulative impacts to TCRs would occur when the impacts of the Specific Plan, in conjunction with other projects and development in the Mesa Grande Band of Mission Indian's traditional lands, result in multiple and/or cumulative impacts to TCRs. No prehistoric resources have been recorded on the project site or within a quarter-mile radius of the site, and no sacred sites are documented on or adjacent to the project site, and therefore the likelihood of discovering tribal cultural resources is very low. However, it is possible that TCRs could be present within the traditional lands, and the City of Solana Beach and other lead agencies are required to notify and potentially consult with the Mesa Grande Band of Mission Indians under AB 52. Implementation of Mitigation Measure TCR-1 would ensure that any tribal cultural resources discovered during excavation would be handled appropriately. In consideration of these factors, the project's contribution to cumulative TCR impacts is less than significant, and therefore project impacts would not be cumulatively considerable.

5.13.7 References

Helix Environmental Planning. 2016, January 29. 959 Genevieve Street/Residential Care Facility Cultural Resources Study Addendum. (EIR Appendix 5.4-2)

May, Ronald V., and Kiley Wallace. 2016, March. Department of Parks and Recreation (DPR) Form for 959 Genevieve Street, Solana Beach, California, for the City of Solana Beach. (EIR Appendix 5.4-1)

5.14 UTILITIES AND SERVICE SYSTEMS

This section of the DEIR evaluates the potential for implementation of the proposed project to impact utilities and services systems, which include stormwater drainage facilities, wastewater (sewage) conveyance and treatment, water supply, water treatment and distribution systems, and solid waste collection and disposal.

The proposed project's potential impact on solid waste collection and disposal was found to be less than significant in the Initial Study, included as Appendix 2-1 of this DEIR, and is therefore not analyzed further in this DEIR.

5.14.1 Wastewater Treatment and Collection

5.14.1.1 ENVIRONMENTAL SETTING

Wastewater Treatment

Wastewater treatment in the City of Solana Beach is under the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB) (Region 9). The Santa Fe Irrigation District (SFID) provides wastewater treatment for Solana Beach and is a part of the San Elijo Joint Powers Authority (SEJPA), which owns and operates a Title 22 water recycling facility in Cardiff-by-the-Sea, the San Elijo Water Reclamation Facility (WRF). This facility has the capacity to treat 5.25 million gallons of wastewater per day (mgd), and current flows are 3 mgd, with peak flows of up to 6 mgd (SEJPA 2015). Thus, the San Elijo WRF has a remaining treatment capacity of approximately 2.25 mgd.

Wastewater Generation

The project site encompasses 2.91 acres (126,875 square feet) and contains a vacant residential building constructed prior to 1957, a greenhouse, and a shed. About 124,000 square feet (or 98 percent) of the property is undeveloped and covered with grasses, shrubs, and palm trees. There is no existing water demand or wastewater generation onsite since the site is vacant and inactive.

5.14.1.2 REGULATORY SETTING

Federal, State and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

Federal Clean Water Act

The federal Clean Water Act (CWA), United States Code, Title 33, Sections 1251 et seq. establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters. Under the CWA, the U.S. Environment Protection Agency (EPA) is authorized to set wastewater standards for industry and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under this program, permits are required for all new developments that generate discharges that go directly into Waters of the United States. Additionally, Sections 1251 et seq. of the CWA require wastewater treatment of all effluent before it is discharged into surface waters.

Sewer System Management Plan

The State Water Resources Control Board adopted policies in December 2004 that require sewage collection providers to report sanitary sewer overflows and to prepare and implement a sewer system management plan. The plan requires dischargers to provide adequate capacity in the sewer collection system, regulate sewer overflows, and identify infrastructure deficiencies. Sewage treatment providers must also report sanitary sewer outflows to the RWQCB so that the RWQCB can construct an annual report for the region.

5.14.1.3 REGIONAL

San Diego Regional Water Quality Control Board

The San Diego RWQCB has developed policies, rules, and procedures and has been granted the authority to implement and enforce the laws and regulations that control water quality. Any person or entity proposing to discharge waste that could impact the waters of the State must submit a report of waste discharge.

The project site is within the jurisdiction of the San Diego RWQCB (Region 9) and is subject to the waste discharge requirements of the NPDES Permit No. CAS0109266 and the San Diego Regional MS4 Permit (Order No. 9-2013-0001), as amended by Order No. R9-2015-0100. Waste discharge requirements pursuant to NPDES regulations for the San Elijo WRF treating wastewater from the project site are in San Diego RWQCB Order No. R9-2018-0003 (SWRCB 2018). These orders set discharge prohibitions—e.g., high-level radiological wastes or discharges degrading water supplies—effluent limitations, and discharge specifications for the water reclamation facility.

5.14.1.4 LOCAL

Solana Beach General Plan

The Circulation Element of the City of Solana Beach General Plan Element provides policies pertaining to public facilities.

- **Goal 12:** Efficient, High Quality Public Infrastructure, Facilities, and Services and Assurance that New, Upgraded, or Expanded Facilities and Services are Phased in Conjunction with the Development they are Intended to Service.
    - **Policy 12.1:** Establish and maintain a development strategy relating economic growth and logical land use and circulation patterns with the provision of public services and utilities.
    - **Policy 12.3:** Develop and implement methods for ensuring that new development does not create an adverse economic impact on the City, or a need for additional or different public facilities which have not been provided by the City.
    - **Policy 12.4:** Require new development and redevelopment to provide fair share contributions toward the costs of the public facilities, services, and infrastructure necessary to serve the development, including, but not limited to, transportation, water, sewer and wastewater treatment, solid waste, flood control and drainage, schools, fire and law enforcement protection, and parks and recreation.

- **Policy 12.5:** Ensure that development impact fees reflect the costs of improvements.
- **Policy 12.6:** Update the capital improvement program for the improvement of existing public facilities and the development of new facilities, as needed, and plan for the equitable distribution of infrastructure improvements and public facilities.

The Economic Development Element provides policies on ensuring adequate facilities to serve residents' needs in the City.

- **Goal 3.3:** To Assure Continued Delivery of Adequate Public Services and Facilities to City Residents and Organizations, Within the Limits Posed by Fiscal Resources.
  - **Policy 2.b:** The City shall establish a development monitoring program to track development activities as they relate to the need for expanded public services and facilities.
  - **Policy 2.c:** The City shall continue a developer fee structure for providing development services.

City of Solana Beach Municipal Code

SBMC 11.04.040 Public Improvements Required.

A. Any person who constructs, or causes to be constructed, any building in the city shall construct all necessary improvements in accordance with city specifications upon the property and along all street frontages adjoining the property upon which such building is constructed, unless adequate improvements already exist or as exempted by subsection B of this section. In each instance, the city manager, or the manager's official designee, shall determine whether or not the necessary improvements exist and are adequate. Each building permit application shall be so endorsed at the time it is issued.

B. Curb, gutter or sidewalk improvements are not required for individual detached single-family homes in residential zones, except: (1) high residential (HR) zones; (2) commercial zones; (3) where the property adjoins a property with curb, gutter and/or sidewalk improvements; (4) where the city engineer determines drainage improvements are necessary. The city may require correction of existing street improvements such as damaged sidewalks.

SBMC 11.04.050 Public Utility Relocations.

In the event the city manager determines that the contemplated construction of improvements, as required by this chapter in individual cases, will necessitate the relocation or alteration of public utility facilities, including but not limited to gas, electricity, telephone and water, he may require the person requesting the building permit to produce satisfactory evidence that such person has made arrangements with such public utility company for the relocation or modification of such public utility facilities.

SBMC 11.20.295 Utility Facility Encroachment

C. Development Regulations Which Qualify.

1. Construction or alteration of utility facilities in, on, over, upon, across, and along the public streets and public rights-of-way within the City of Solana Beach shall require approval of a utility facility encroachment permit by the City engineer in the following circumstances: a) the cabinet is larger than 40 cubic feet, or b) the facility is a surface-mounted cabinet with a dimension (width, height, or length) greater than 36 inches, or c) the facility is a cabinet of any size being located closer than 100 feet to another cabinet of any size. Exempt from this requirement are facilities placed underground. The applicant shall comply with the "Guidelines for the Placement of Utility Facilities in the Public-Rights-of-Way."

SBMC 11.20.340 Exemptions from Permits.

Work by public utilities, including cable television companies, on poles, wires, lines or other facilities located above the ground, which work does not have a duration of more than one day, shall be exempt from the requirements for obtaining a permit. This exemption shall not relieve the public utility of any of the responsibilities or liabilities imposed under this chapter other than the requirement for obtaining a permit.

SBMC 14.08 Sewer Connection Fees and Sewer Service Charges

This chapter provides information on sewer connection and capacity fees and sewer service charges for development within the City.

SBMC 14.16 Sewer Construction Requirements

This chapter specifies some of the City's requirements relating to sewer construction, such as:

- Requiring that sewer utility holes be accessible by City maintenance vehicles;
- Ensuring that all excavations for building sewer installation lines be adequately guarded with barricades, lights, and signage so as to protect the public from hazard.

SBMC 15.40.040 Permits Required.

A. Except as provided in this section, no person shall do any grading without first having obtained a grading permit from the city engineer. A grading permit is not required for the following unless the provisions of this chapter specifically provide otherwise:

4. Excavations for wells or tunnels or utilities.

SBMC 15.40.240 Responsibility of Permittee.

C. Protection of Utilities. During grade operations, the permittee shall be responsible for the prevention of damage to public utilities or services.

SBMC 17.72.020 Public Facilities Fees

This section establishes public facilities fees associated with all City services for new development:

A. A public facilities fee is hereby established to pay for improvements related to new development within the city and are not otherwise financed by any fee, charge or tax on development, or are not installed by a developer as a condition of a building permit, land use permit (pursuant to SBMC Chapter 17.68), or subdivision or zoning approval.

B. The amount of the fee shall be set by city council resolution. C. As a condition of project approval the applicant shall be required to pay the public facilities fee. The fee shall be paid before issuance of building permits for the project (Ordinance 185 Section 2). The City's public facilities fee applies to all City.

Local Coastal Plan

The LCP contains policies pertaining to wastewater for new development and wastewater infrastructure.

- **Policy 5.41:** A water conservation and wastewater recycling program should be developed by the City in coordination with the applicable water purveyors for respective water service areas.
- **Policy 5.42:** All new development shall comply with the City's water conservation and wastewater regulations.
- **Policy 5.43:** The installation of reclaimed water lines to provide irrigation for approved landscaping or fuel modification areas for approved development may be permitted, if consistent with all policies of the LUP.
- **Policy 5.44:** The use of reclaimed water in lieu of fresh water supplies for the maintenance of public lands and other non-consumptive uses shall be encouraged and supported provided such use can be found to be consistent with all applicable policies of the LCP.
- **Policy 7.28:** Additional water storage facilities and/or new pipelines may be allowed in the City to replace deteriorated or undersized facilities and/or to ensure an adequate source of domestic and fire protection water supply during outages or pipeline interruptions provided such facilities are designed and limited to accommodate existing or planned development and can be found to be consistent with all applicable policies of the LCP.

5.14.1.5 METHODOLOGY

This section describes the CEQA impact analysis relating to potential project impacts to the water and wastewater systems serving the project site. The analysis compares the potential project impact against the available capacity of the systems to accommodate the proposed improvements and identifies the project's estimated demand on utilities and service systems.

5.14.1.6 THRESHOLDS OF SIGNIFICANCE

A project would normally have a potentially significant effect on the environment if the project:

U-1 Would exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

U-2 Would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

U-3 Would result in a determination by the wastewater treatment provider which serves or may serve the project that is has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

The Initial Study, included as Appendix 2-1, substantiates that impacts associated with the following threshold would be less than significant:

- Threshold U-2

Therefore, this impact is not addressed in the following DEIR analysis.

5.14.1.7 POTENTIAL ENVIRONMENTAL IMPACTS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.14-1: Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? [Threshold U-1] [Less than significant]

Impact Analysis:

Short Term Construction Impacts

Construction of the project would not generate sewage. During construction, portable restrooms would be used for construction workers and will be maintained in accordance with state regulations. Therefore, construction of the proposed project would result in a less than significant impact.

Long Term Operational Impacts

The project site is within the jurisdiction of the San Diego RWQCB (Region 9) and is subject to the waste discharge requirements of the NPDES Permit No. CAS0109266 and the San Diego Regional MS4 Permit (Order No. 9-2013-0001), as amended by Order No. R9-2015-0100. Discharge limits for concentrations of hazardous materials discharged into sanitary sewers are set by sewage treatment agencies. Sewage treatment facilities can treat sanitary domestic sewage that meets these discharge limits.

While the project would introduce a new use to the site, it would generate similar pollutant loads as the surrounding residences (generally consisting of residential pollutants such as house cleaners and human waste via toilets and sinks) and would not change the nature of pollutant loads in a way that would conflict with San Diego RWQCB regulations or permitted treatment requirements. Similar to all new construction projects in the SDRWQCB boundary, the proposed project would be required to comply with the SDRWQCB's sewage discharge standards in accordance with SBMC Section 13.10, Storm Water Management. I

Impact 5.14-2: Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments? [Threshold U-3] [Less than significant]

Impact Analysis:

Short Term Construction Impacts

The existing site is not serviced by sewer and would not generate wastewater until after construction of the proposed improvements. Therefore, construction of the proposed improvements would not result in an impact to wastewater treatment.

Long Term Operational Impacts

The wastewater generation factor for a senior care facility is estimated to be 75 gallons per bed, per day.[1] The proposed project would have a maximum of 99 beds; therefore, wastewater generation would be approximately 7,425 gallons per day[2]. The San Elijo WRF has the capacity to treat 5.25 mgd, and current, average dry-weather flows are about 3 mgd (SEJPA 2015). Thus, the San Elijo WRF has about 2.25 mgd remaining treatment capacity. The increase in sewage generation of 7,425 gallons per day from the proposed residential senior care facility would be approximately 0.3 percent of the available sewage treatment capacity[3].

The San Elijo WRF can process the wastewater generated by the proposed project and there are no existing deficiencies in the conveyance facilities that will serve the proposed project (Greenstein 2015). Therefore, the potential impacts of the project on wastewater treatment facilities would be less than significant.

5.14.2 Water Supply

5.14.2.1 ENVIRONMENTAL SETTING

Water Supply

The Santa Fe Irrigation District (SFID) provides potable water to the City of Solana Beach and the communities of Rancho Santa Fe and Fairbanks Ranch. On average, the SFID water sources are 65 percent imported and 35 percent local. The SFID's 16-square-mile service area is supplied by four water sources: imported treated

[1] Wastewater generation was estimated using the factor in the L.A. CEQA Thresholds Guide (Los Angeles 2006).
[2] 75 gallons per bed per day x 99 beds = 7,425 gallons per day.
[3] 7,425 gallons per day / 2.25 million gallons per day = 0.0033 = 0.33 percent.

water, imported raw water, local surface water, and recycled water (SFID 2015). The SFID obtains its potable water supply from the following sources:

- **Local surface water from Lake Hodges.** In an average year, SFID obtains approximately 29 percent of its water from Lake Hodges and the San Dieguito Reservoir.
- **Imported raw water.** SFID relies primarily on imported raw water from northern California via the California Aqueduct and from the Colorado River; imported water is purchased from the San Diego County Water Authority. Approximately 62 percent of the District water supply is imported raw water.
- **Imported treated water**: SFID's water supply includes, on average, approximately 5 percent treated water from the San Diego County Water Authority.
- **Recycled Water:** SFID uses approximately 4 percent recycled water from its service area.

The SFID established estimates in 2015 for the minimum water supplies it would need for the years 2016, 2017, and 2018. These estimates are not based on the expected annual supply but reflect the availability of water sources assuming the same hydrology as a historical multiple-dry-year period. The minimum supply needed for the year 2018 was estimated to be 10,582 acre-feet per year (afy) purchased water and 500 afy recycled water, for a total of 11,082 afy for the year (SFID 2015).

Water Demands

According to its 2015 Urban Water Management Plan (UWMP), the SFID service area population is projected to be 20,106 by the year 2020, and its projected demands for potable and recycled water will be 10,978 afy. Table 5.14-1 shows the projected water demands for the SFID from the year 2020 to the year 2040.

Table 5.14-1 Solana Beach Forecast Water Demands

	2020	2025	2030	2035	2040
Potable and Raw Water	10,478	10,828	10,888	10,994	11,527
Recycled Water Demand	500	500	500	500	500
Total Water Demand	10,978	11,328	11,388	11,494	12,027

Source: SFID 2015.
Note: Units shown in acre-feet per year (afy).

SFID's 2015 UWMP states that the existing entitlements to water supplies for the SFID, which includes the City of Solana Beach, would be sufficient to meet demands through the year 2040. Forecast water supplies are shown in Table 5.14-2.

Table 5.14-2 Forecast Water Supply for SFID

	2020	2025	2030	2035	2040
Water Authority Purchases	7,210	7,560	7,620	7,726	8,259
Local Surface Water	3,268	3,268	3,268	3,268	3,268
Recycled Water	500	500	500	500	500
Supply Totals	10,978	11,328	11,388	11,494	12,027

Source: SFID 2015.
Note: Units shown in acre-feet per year (afy)

The demand estimates are based on computer models by the San Diego County Water Authority (SDCWA) and take into account population growth projections and land use changes derived from the San Diego Association of Governments and based on local General Plan land use patterns.

5.14.2.2 REGULATORY SETTING

Urban Water Management Planning Act

The California Urban Water Management Planning Act of 1983 requires that each urban water supplier providing water for municipal purposes directly or indirectly to more than 3,000 customers or supplying more than 3,000 afy must prepare a UWMP at least every five years. The UWMP includes information on existing water supplies and demand, projected water supplies and demand, conservation, implementation strategy, and milestones for completion.

Assembly Bill 3030, California Groundwater Management Act

Assembly Bill 3030, the Groundwater Management Act (California Water Code §§ 10750 et seq.), provides guidance for applicable local agencies to develop a voluntary groundwater management plan in state-designated groundwater basins.

Senate Bill 610, Water Supply Planning

Senate Bill 610 (2001) amended the Urban Water Management Planning Act to mandate that a city or county approving certain projects subject to CEQA: 1) identify any public water system that may supply water for the project and 2) request those public water systems to prepare a water supply assessment.[4] A water supply assessment is not required for the proposed project because it does not meet the criteria to be classified as a project under the California Water Code section 10912.

[4] Under Water Code Section 10912(a)(7), SB 610 applies to a CEQA project that "would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project." Additional criteria are listed in Section 5.14.2.4, *Cumulative Impacts*..

2012–2017 California Drought: Executive Orders and Emergency Regulations

The state of California is no longer in a drought as of 2017. Governor Brown issued Executive Order B-40-17 on April 17, 2017, which lifted the drought emergency for most of the state, while asking Californians to make water conservation a way of life (OGC 2017).

Solana Beach General Plan

- **Goal 3.1:** To Protect and Conserve the City's Natural and Cultural Resources
  - **Policy 2.a:** The City shall require all new developments to incorporate water conservation measures into project design to the greatest extent possible. Such measures may include, but are not limited to, the use of plumbing fixtures which reduce water usage (in accordance with Title 24 of the California Administrative Code) and xeriscape landscaping which maximizes the use of drought-tolerant plant species and drip irrigation systems.
  - **Policy 7.a:** The City shall require new developments to incorporate energy conservation measures and promote alternative energy systems.
- **Goal 3.3:** To Assure Continued Delivery of Adequate Public Services and Facilities to City Residents and Organizations, Within the Limits Posed by Fiscal Resources.
  - **Policy 2.b:** The City shall establish a development monitoring program to track development activities as they relate to the need for expanded public services and facilities.
  - **Policy 2.c:** The City shall continue a developer fee structure for providing development services.

The Circulation Element of the City of Solana Beach General Plan Element provides policies pertaining to public facilities.

- **Goal 12:** Efficient, High Quality Public Infrastructure, Facilities, and Services and Assurance that New, Upgraded, or Expanded Facilities and Services are Phased in Conjunction with the Development they are Intended to Service.
  - **Policy 12.1:** Establish and maintain a development strategy relating economic growth and logical land use and circulation patterns with the provision of public services and utilities.
  - **Policy 12.3:** Develop and implement methods for ensuring that new development does not create an adverse economic impact on the City, or a need for additional or different public facilities which have not been provided by the City.
  - **Policy 12.4:** Require new development and redevelopment to provide fair share contributions toward the costs of the public facilities, services, and infrastructure necessary to serve the development, including, but not limited to, transportation, water, sewer and wastewater treatment, solid waste, flood control and drainage, schools, fire and law enforcement protection, and parks and recreation.

- **Policy 12.5:** Ensure that development impact fees reflect the costs of improvements.
- **Policy 12.6:** Update the capital improvement program for the improvement of existing public facilities and the development of new facilities, as needed, and plan for the equitable distribution of infrastructure improvements and public facilities.
- **Policy 12.7:** Leverage federal and state funds to support public works projects, as appropriate.

City of Solana Beach Municipal Code

7.56.100 Water Conservation Plan

The water efficient landscape worksheet required by SBMC 17.56.070 shall be prepared by a licensed landscape architect, licensed civil engineer, licensed architect, or other landscape professional licensed by the state to do this work and shall contain the following:

A Information on the plant factor, irrigation method, irrigation efficiency, and area associated with each hydro-zone. Calculations shall be made to show that the evapotranspiration adjustment factor (ETAF) for the landscape project does not exceed a factor of 0.55 for residential areas and 0.45 for non-residential areas, exclusive of special landscape areas. The ETAF for a landscape project is based on the plant factors and irrigation methods selected. The maximum applied water allowance is calculated based on the maximum ETAF allowed (0.55 for residential areas and 0.45 for non-residential areas) and expressed as annual gallons required. The estimated total water use (ETWU) is calculated based on the plants used and irrigation method selected for the landscape design. ETWU must be below the MAWA.

B. Water budget calculations, which shall meet the following requirements:

1. The calculations for the ETWU and MAWA shall be prepared and submitted on the city's standard form.

2. A plan graphic shall be provided defining all hydro-zones and numbered to correspond to the hydro-zones on the ETWU calculation form.

3. The plant factor used shall be identified for each plant species used in the planting plan and shall be from WUCOLS or from horticultural researchers with academic institutions or professional associations as approved by the California Department of Water Resources (DWR). The plant factor is 0.1 for very low water use plants, 0.3 for low water use plants, 0.6 for moderate water use plants and 1.0 for high water use plants. A plan that mixes plants in a hydro-zone that require a different amount of water shall use the plant factor for the highest water using plant in the hydro-zone.

4. Temporarily irrigated areas shall be included in the low water use hydro-zone. Temporarily irrigated as used in this chapter means the period of time when plantings only receive water until they become established.

5. The surface area of a water feature, including swimming pools, shall be included in a high water use hydro-zone.

6. The calculations shall use the formula for the MAWA in SBMC 17.56.130 and for the ETWU in SBMC 17.56.140.

7. Each special landscaped area shall be identified on the worksheet and the area's water use calculated using an ETAF not to exceed 1.0.

SBMC 11.04.040 Public Improvements Required.

A. Any person who constructs, or causes to be constructed, any building in the city shall construct all necessary improvements in accordance with city specifications upon the property and along all street frontages adjoining the property upon which such building is constructed, unless adequate improvements already exist or as exempted by subsection B of this section. In each instance, the city manager, or the manager's official designee, shall determine whether or not the necessary improvements exist and are adequate. Each building permit application shall be so endorsed at the time it is issued.

B. Curb, gutter or sidewalk improvements are not required for individual detached single-family homes in residential zones, except: (1) high residential (HR) zones; (2) commercial zones; (3) where the property adjoins a property with curb, gutter and/or sidewalk improvements; (4) where the city engineer determines drainage improvements are necessary. The city may require correction of existing street improvements such as damaged sidewalks.

SBMC 11.04.050 Public Utility Relocations.

In the event the city manager determines that the contemplated construction of improvements, as required by this chapter in individual cases, will necessitate the relocation or alteration of public utility facilities, including but not limited to gas, electricity, telephone and water, he may require the person requesting the building permit to produce satisfactory evidence that such person has made arrangements with such public utility company for the relocation or modification of such public utility facilities.

SBMC 11.20.295 Utility Facility Encroachment

C. Development Regulations Which Qualify.

1. Construction or alteration of utility facilities in, on, over, upon, across, and along the public streets and public rights-of-way within the City of Solana Beach shall require approval of a utility facility encroachment permit by the City engineer in the following circumstances: a) the cabinet is larger than 40 cubic feet, or b) the facility is a surface-mounted cabinet with a dimension (width, height, or length) greater than 36 inches, or c) the facility is a cabinet of any size being located closer than 100 feet to another cabinet of any size. Exempt from this requirement are facilities placed underground. The applicant shall comply with the "Guidelines for the Placement of Utility Facilities in the Public-Rights-of-Way."

SBMC 11.20.340 Exemptions from Permits.

Work by public utilities, including cable television companies, on poles, wires, lines or other facilities located above the ground, which work does not have a duration of more than one day, shall be exempt from the

requirements for obtaining a permit. This exemption shall not relieve the public utility of any of the responsibilities or liabilities imposed under this chapter other than the requirement for obtaining a permit.

SBMC 15.40.040 Permits Required.

A. Except as provided in this section, no person shall do any grading without first having obtained a grading permit from the city engineer. A grading permit is not required for the following unless the provisions of this chapter specifically provide otherwise:

4. Excavations for wells or tunnels or utilities.

SBMC 15.40.240 Responsibility of Permittee.

C. Protection of Utilities. During grade operations, the permittee shall be responsible for the prevention of damage to public utilities or services.

17.56.240 Water Waste Prevention.

A. No person shall use water for irrigation such that, due to runoff, low head drainage, overspray or other similar condition, water flows onto adjacent property, non-irrigated areas, structures, walkways, roadways or other paved areas.

B. No person whose landscape is subject to a landscape approval pursuant to this chapter shall apply water to the landscape in excess of the MAWA.

C. No person shall fail to maintain the irrigation system installed as part of a city approved landscape documentation package as required by this section.

D. The City may administer programs that may include water use analysis, irrigation surveys, and irrigation audits to evaluate water use. The city may use such information to provide recommendations to reduce the landscape water use for landscapes installed prior to the adoption of the ordinance codified in this chapter that are over an acre in size and have been identified as high water users.

SBMC 17.72.020 Public Facilities Fees

This section establishes public facilities fees associated with all City services for new development:

A. A public facilities fee is hereby established to pay for improvements related to new development within the city and are not otherwise financed by any fee, charge or tax on development, or are not installed by a developer as a condition of a building permit, land use permit (pursuant to SBMC Chapter 17.68), or subdivision or zoning approval.

B. The amount of the fee shall be set by city council resolution. C. As a condition of project approval the applicant shall be required to pay the public facilities fee. The fee shall be paid before issuance of building permits for the project (Ordinance 185 Section 2). The City's public facilities fee applies to all City.

Local Coastal Program

- **Policy 5.42:** All new development shall comply with the City's water conservation and wastewater regulations.
- **Policy 5.43:** The installation of reclaimed water lines to provide irrigation for approved landscaping or fuel modification areas for approved development may be permitted, if consistent with all policies of the LUP.
- **Policy 5.44:** The use of reclaimed water in lieu of fresh water supplies for the maintenance of public lands and other non-consumptive uses shall be encouraged and supported provided such use can be found to be consistent with all applicable policies of the LCP.
- **Policy 7.28:** Additional water storage facilities and/or new pipelines may be allowed in the City to replace deteriorated or undersized facilities and/or to ensure an adequate source of domestic and fire protection water supply during outages or pipeline interruptions provided such facilities are designed and limited to accommodate existing or planned development and can be found to be consistent with all applicable policies of the LCP.

5.14.2.3 METHODOLOGY

This section describes the CEQA impact analysis relating to potential project impacts to the water supply serving the project site. The analysis compares the potential project impact against the available supply of water to accommodate the proposed improvements and identifies the project's estimated demand on utilities and service systems.

5.14.2.4 THRESHOLDS OF SIGNIFICANCE

A project would normally have a potentially significant effect on the environment if the project:

U-4 Would not have sufficient water supplies available to serve the project from existing entitlements and resources, and new and/or expanded entitlements would be needed.

5.14.2.5 POTENTIAL ENVIRONMENTAL IMPACTS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.14-3: Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or would new and/or expanded entitlements would be needed? [Threshold U-4] [Less than significant]

Impact Analysis:

Short Term Construction

Construction of the proposed improvements would require temporary increase in water use for typical construction practices such as tool washing, concreting, dust suppression measures, tool washing, and grouting and drilling. However, as provided in further detail below, the SFID has enough supplies to meet projected demands until the year 2040 (SFID 2015). Water consumption during construction of the improvements would be temporary and would not exceed water demands of the proposed project during its operation. Therefore, no significant impact would occur to water supplies during construction of the project.

Long-Term Operation

Operation of the project site in its existing condition does not generate a water demand. Water demands by the proposed project would be provided by SFID. The SFID water use estimates for Solana Beach are based on population estimates generated by the San Diego Association of Governments, and future population estimates are based on the City's General Plan land use designations. The project site encompasses 2.91 acres, and its current zoning designation, Estate Residential 2 (ER-2), allows up to two single-family estate homes (dwelling units) per acre. Under the ER-2 allowable density, the project site could have up to six single-family units (rounding up the acreage slightly to 3). The Department of Finance 2017 population and housing estimates for Solana Beach estimate an average of 2.35 persons per household (DOF 2017). Therefore, under existing conditions, the estimated population of the project site would be approximately 14 residents. The six single-family estate homes would generate a water demand of approximately 2,100 gallons per day.[5]

The 99 beds of the proposed residential senior care facility for the elderly would generate a water demand of approximately 9,281 gallons per day.[6] Additionally, the garden areas would require water for irrigation. Therefore, the water demand of the proposed project would be greater than the maximum estimated demand assumed in the SFID water estimates, which are based on the uses allowed by the City's General Plan and zoning designations.

Although the project would increase water demands at the project site from existing conditions, the demand from the proposed project represents a negligible percentage of the estimated 2020 demand for the SFID service area (approximately 0.09 percent of demand[7]), and there would be adequate supplies to meet the project

[5] Water use is based on 125 percent of sewage generation rates, and the wastewater generation factor for the maximum uses allowed by the ER-2 zone is estimated to be 280 gallons per resident per day (Los Angeles 2006).
Water demand calculation: 2.91 acres x 2 dwelling units/acre = 5.82 dwelling units. 5.82 dwelling units is rounded up to 6 dwelling units. 6 dwelling units x 280 gallons of sewage per day/dwelling unit = 1,680 gallons of sewage per day. 1,680 gallons of sewage per day x 125% = 2,100 gallons per day of water demand.
[6] 99 beds x 75gallons of sewage per day per bed = 7,425 gallons of sewage per day x 125% = 9,281 gallons per day of water demand (Los Angeles 2006).
[7] 1 afy = 892.15 gallons per day. 9,281 gallons per day / 892.15 gallons = 10.4 afy.
10.4 afy / 10,978 afy = 0.0009 or 0.09 percent.

demand. Therefore, the proposed 99 residents of the senior care facility can be accommodated by SFID. Impacts on water supply would be less than significant.

5.14.3 Storm Drainage Systems

5.14.3.1 ENVIRONMENTAL SETTING

The project site consists almost entirely of pervious surfaces. Due to the elevated topography of the surrounding areas, stormwater drains toward the site and discharges into the drainage swale along the western boundary, adjacent to the I-5 embankment. A second drainage swale—perpendicular to I-5—crosses the site approximately 300 feet south of Genevieve Street. A ridgeline runs across the north end of the site, parallel to Genevieve Street. Drainage north of the ridgeline flows to the existing offsite storm drain inlet in the Caltrans I-5 right-of-way; offsite runoff does not enter this part of property. Offsite and onsite runoff south of the ridgeline enters a small drainage swale south of the vacant residence and flows west across the site before flowing into the concrete drainage swale in the I-5 right-of-way and into the storm drain system.

Stormwater currently enters the site from properties to the east and south and from Marine View Avenue. After entering a storm drain inlet adjacent to the site, it is conveyed through the storm drain and discharged near the mouth of the San Dieguito River, then to the Pacific Ocean.

5.14.3.2 REGULATORY SETTING

Clean Water Act

The federal Water Pollution Control Act (or Clean Water Act) regulates direct and indirect discharge of pollutants; sets water quality standards for all contaminants in surface waters; and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions.

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code §§ 13000 et seq.) is the basic water quality control law for California. Under this act, the State Water Resources Control Board (SWRCB) has ultimate control over state water rights and water quality policy. In California, the EPA has delegated authority to issue National Pollution Discharge Elimination System (NPDES) permits to the SWRCB. The state is divided into nine regions related to water quality and quantity characteristics. The City of Solana Beach is in the San Diego Basin, Region 9, in the Upper Santa Ana Watershed. The Water Quality Control Plan for the San Diego Basin (9) was updated in 2016. This Basin Plan gives direction on the beneficial uses of the state waters in Region 9; describes the water quality that must be maintained to support such uses; and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.

Storm Water Pollution Prevention Plans

Pursuant to the CWA, in 2001, the SWRCB issued a statewide general NPDES Permit for stormwater discharges from construction sites (NPDES No. CAS000002). Under this Statewide General Construction

Activity permit, discharges of stormwater from construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater discharges or to be covered by the General Permit. Coverage by the General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). Each applicant under the General Construction Activity Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must estimate sediment risk from construction activities to receiving waters; list Best Management Practices (BMPs) to be implemented on the construction site to protect stormwater runoff; and contain a visual monitoring program, a chemical monitoring program for "nonvisible" pollutants to be implemented if there is a failure of BMPs, and a monitoring plan if the site discharges directly to a water body listed on the state's 303(d) list of impaired waters.

Water Quality Improvement Plan

The Municipal Separate Storm Sewer System (MS4) Permit for the part of San Diego County in the San Diego RWQCB region (Order No. R9-2013-0001) as amended by Order No. R9-2015-0100, provides a pathway for the co-permittees on the MS4 Permit to select and address the highest priority water quality issues. This process is incorporated in watershed-specific water quality improvement plans. The San Diego RWQCB region is divided into nine watershed management areas. The water quality improvement plans are developed through a collaborative effort by the co-permittees in each watershed management area and other key stakeholders, including the RWQCB. The water quality improvement plans include descriptions of the highest-priority pollutants or conditions in a specific watershed, goals and strategies to address those pollutants or conditions, and schedules for those goals and strategies.

5.14.3.3 LOCAL

City of Solana Beach Best Management Practices Design Manual

The City of Solana Beach Best Management Practices Design Manual (BMP Manual) addresses updated requirements for onsite, post-construction stormwater and provides updated procedures for planning, preliminary design, selection, and design of permanent stormwater BMPs based on the performance standards in the MS4 Permit. The BMP Manual classifies BMPs in the following categories:

- **Source Control Requirements**: Source control BMPs avoid and reduce pollutants in stormwater runoff. Everyday activities, such as recycling, trash disposal, and irrigation, generate pollutants that can drain to the stormwater conveyance system. Source control BMPs are defined as an activity that reduces the potential for stormwater runoff to contact pollutants. An activity could include an administrative action, design of a structural facility, usage of alternative materials, and operation, maintenance, and inspection of an area. Examples include protection of materials stored outdoors and trash storage areas and storm drain system signage.

- **Site Design Requirements**: Site design BMPs (also called low impact development [LID] BMPs) are intended to reduce the rate and volume of stormwater runoff and associated pollutant loads. Site design BMPs minimize surface soil compaction, reduce impervious surfaces, and/or provide flow pathways "disconnected" from the storm drain system, such as by routing flow over pervious surfaces. Site design

BMPs may incorporate interception, storage, evaporation, evapotranspiration, infiltration, and/or filtration processes to retain and/or treat pollutants in stormwater before it is discharged from a site.

Solana Beach General Plan

The Circulation Element of the City of Solana Beach General Plan Element provide policies pertaining to public facilities.

- **Goal 12:** Efficient, High Quality Public Infrastructure, Facilities, and Services and Assurance that New, Upgraded, or Expanded Facilities and Services are Phased in Conjunction with the Development they are Intended to Service.
  - **Policy 12.1:** Establish and maintain a development strategy relating economic growth and logical land use and circulation patterns with the provision of public services and utilities.
  - **Policy 12.3:** Develop and implement methods for ensuring that new development does not create an adverse economic impact on the City, or a need for additional or different public facilities which have not been provided by the City.
  - **Policy 12.4:** Require new development and redevelopment to provide fair share contributions toward the costs of the public facilities, services, and infrastructure necessary to serve the development, including, but not limited to, transportation, water, sewer and wastewater treatment, solid waste, flood control and drainage, schools, fire and law enforcement protection, and parks and recreation.
  - **Policy 12.5:** Ensure that development impact fees reflect the costs of improvements.
  - **Policy 12.6:** Update the capital improvement program for the improvement of existing public facilities and the development of new facilities, as needed, and plan for the equitable distribution of infrastructure improvements and public facilities.
  - **Policy 12.7:** Leverage federal and state funds to support public works projects, as appropriate.

City of Solana Beach Municipal Code

11.04.040 Public Improvements Required

A. Any person who constructs, or causes to be constructed, any building in the city shall construct all necessary improvements in accordance with city specifications upon the property and along all street frontages adjoining the property upon which such building is constructed, unless adequate improvements already exist or as exempted by subsection B of this section. In each instance, the city manager, or the manager's official designee, shall determine whether or not the necessary improvements exist and are adequate. Each building permit application shall be so endorsed at the time it is issued.

B. Curb, gutter or sidewalk improvements are not required for individual detached single-family homes in residential zones, except: (1) high residential (HR) zones; (2) commercial zones; (3) where the property adjoins a property with curb, gutter and/or sidewalk improvements; (4) where the city engineer

determines drainage improvements are necessary. The city may require correction of existing street improvements such as damaged sidewalks.

11.04.050 Public Utility Relocations.

In the event the city manager determines that the contemplated construction of improvements, as required by this chapter in individual cases, will necessitate the relocation or alteration of public utility facilities, including but not limited to gas, electricity, telephone and water, he may require the person requesting the building permit to produce satisfactory evidence that such person has made arrangements with such public utility company for the relocation or modification of such public utility facilities.

11.20.295 Utility Facility Encroachment

C. Development Regulations Which Qualify.

1. Construction or alteration of utility facilities in, on, over, upon, across, and along the public streets and public rights-of-way within the city of Solana Beach shall require approval of a utility facility encroachment permit by the city engineer in the following circumstances: (a) the cabinet is larger than 40 cubic feet, or (b) the facility is a surface-mounted cabinet with a dimension (width, height, or length) greater than 36 inches, or (c) the facility is a cabinet of any size being located closer than 100 feet to another cabinet of any size. Exempt from this requirement are facilities placed underground. The applicant shall comply with the "Guidelines for the Placement of Utility Facilities in the Public Rights-of-Way."

11.20.340 Exemptions from Permits.

Work by public utilities, including cable television companies, on poles, wires, lines or other facilities located above the ground, which work does not have a duration of more than one day, shall be exempt from the requirements for obtaining a permit. This exemption shall not relieve the public utility of any of the responsibilities or liabilities imposed under this chapter other than the requirement for obtaining a permit.

SBMC 15.40.040 Permits Required.

A. Except as provided in this section, no person shall do any grading without first having obtained a grading permit from the city engineer. A grading permit is not required for the following unless the provisions of this chapter specifically provide otherwise:

4. Excavations for wells or tunnels or utilities.

SBMC 15.40.240 Responsibility of Permittee.

C. Protection of Utilities. During grade operations, the permittee shall be responsible for the prevention of damage to public utilities or services.

SBMC 17.72.020 Public Facilities Fees

This section establishes public facilities fees associated with all City services for new development:

A. A public facilities fee is hereby established to pay for improvements related to new development within the city and are not otherwise financed by any fee, charge or tax on development, or are not installed by a developer as a condition of a building permit, land use permit (pursuant to SBMC Chapter 17.68), or subdivision or zoning approval.

B. The amount of the fee shall be set by city council resolution. C. As a condition of project approval the applicant shall be required to pay the public facilities fee. The fee shall be paid before issuance of building permits for the project (Ordinance 185 Section 2). The City's public facilities fee applies to all City.

Local Coastal Program

- **Policy 3.78:** Plans for new development and redevelopment projects shall incorporate BMPs during construction, as well as, post-construction BMPs that will reduce to the maximum extent practicable the amount of pollutants generated and/or discharged into the City's storm drain system and surrounding coastal waters. BMPs should be selected based on their efficacy at mitigating Constituents of Concern (COC) associated with respective development types/uses and the surrounding watershed (see the San Diego RWQCB Permit No. 2007-0001 or the current municipal stormwater permit applicable to Solana Beach for guidance on BMP selection). For design purposes, post-construction structural BMPs (or suites of BMPs) should be designed to treat, infiltrate or filter storm water runoff from each storm up to and including the 85th percentile storm event. Volume based BMPs shall be designed to treat, infiltrate, or filter storm water runoff volume from a 24-hour 85th percentile storm event. Flow-based BMPs shall be designed to treat, infiltrate or filter storm water runoff produced by an 85th percentile hourly rainfall intensity with an appropriate safety factor (i.e., 2 or greater). All new developments and significant redevelopment projects as defined in the City's SUSMP must comply with regulations contained in the City's adopted SUSMP, as approved by the RWQCB.

  For construction taking place on the beach, the permittee shall not store any construction materials or waste where it will be, or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored, or otherwise located in the intertidal zone at any time except for the minimum necessary to construct the development.

- **Policy 3.98:** Storm drain stenciling and signage shall be provided for new storm drain construction in order to discourage dumping into drains. Signs shall be provided at creek public access points to similarly discourage creek dumping.

5.14.3.4 METHODOLOGY

This section describes the CEQA impact analysis relating to potential project impacts to storm drainage systems serving the project site. The analysis compares the potential project impact against the available capacity of the systems to accommodate the proposed improvements and identifies the project's estimated demand on utilities and service systems.

5.14.3.5 THRESHOLDS OF SIGNIFICANCE

A project would normally have a potentially significant effect on the environment if the project:

U-3 Would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

5.14.3.6 POTENTIAL ENVIRONMENTAL IMPACTS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.14-4: Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? [Threshold U-3] [Less than significant]

Impact Analysis: The project site is a permeable surface that allows stormwater to infiltrate rather than flow off the site. Project development would increase impermeable services potentially increasing the rate and amount of runoff generated from the site. The following site stormwater drainage improvements are included in the design of the proposed project and will be required as conditions of approval if the project is allowed to proceed. Figure 5.8-3, *Project Drainage Map,* shows the proposed improvements described below:

- An underground pipe stormwater retention system would be constructed under the driveway along the western property line. The system would have the capacity to contain the increased runoff volume created by the development (see Appendix 5.8-1, *Preliminary Hydrology Study*).
- The site would also include a number of landscaped drainage swales, catch basins, brow ditches, landscaped areas, and retention areas to retain and treat stormwater runoff.
- A new 18-inch diameter underdrain would be constructed on the south side of Genevieve Street. Runoff from the northern portion of the site would discharge into this new underdrain and be conveyed to an existing concrete drainage channel in the Caltrans I-5 right-of-way before entering the public storm drain system.
- Offsite runoff that currently enters the southeast area of the site, and new runoff generated by the impervious areas of the development, would be collected by a new storm drain inlet on the southeast property line and conveyed by a new 1.5-feet by 4-feet box culvert. The culvert would run east to west under the breezeway of the building and driveway cul-de-sac, and similar to the underdrain, runoff would discharge into the public storm drain system in the Caltrans I-5 right-of-way.

The site currently contains 98 percent pervious surfaces. Project development would construct about 66,206 square feet of impervious surfaces onsite, or 51.94 percent of the project site, and 48.06 of the site would be pervious. The proposed project would be constructed and operated in accordance with the San Diego County MS4 Permit (Order No. R9-2015-0100). The MS4 Permit requires new development projects to ensure that post-development run peak stormwater run-off values do not exceed existing values. The Low Impact

Development (LID) Handbook (San Diego County 2014) provides the guidance on how development projects can meet these on-site retention requirements through the use of stormwater quality control measures. A system of on-site retention and low impact design features ensure that the proposed project meets the MS4 requirements (see Section 5.8, *Hydrology and Water Quality*). According to the hydrology study included as Appendix 5.8-1 to this DEIR, the combination of storm drainage improvements, stormwater retention pipes, and surface low-impact-development improvements would not result in an increase in peak runoff from the site due to a 100-year, 6-hour storm. Project development would not generate an increase in runoff that would adversely affect existing drainage systems.

Further, as required under San Diego County Order No. R9-2015-0100, individual projects are required to implement LID BMPs in accordance with the MS4 Permit and the San Diego County LID Standards Manual. The use of LID BMPs in project planning and design is intended to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. LID BMPs help to offset these losses by introducing structural and nonstructural design components that restore these water quality functions into a project's land plan; project LIDs include pervious pavers, landscaping, and biofiltration areas. Prior to approval of the proposed project, the project-specific hydrology study and Water Quality Management Plan would be reviewed by the Solana Beach Engineering and Public Works Department for compliance with the requirements of the City of Solana Beach Storm Water Management and Discharge Control Ordinance (Ord. 472 § 1, 2017; Ord. 379 § 1, 2008). Additionally, the proposed project includes a Storm Water Management Plan, which includes pollutant control, hydromodification, temporary, structural, and permanent stormwater BMPs, prepared by a registered professional engineer in accordance with SBMC Chapter 13.10 (see Appendix 5.8-2), which would reduce stormwater runoff impacts to a level of less than significant.

5.14.3.7 CUMULATIVE IMPACTS

Water and Wastewater Treatment

Impacts from other development projects in Solana Beach (see Table 3-1, *Related Cumulative Projects*) were, or will be, considered by the San Diego RWQCB during their approval process and will also be required to comply with discharge requirements. Individual projects will be evaluated for their cumulative impact to the San Diego RWQCB. There are no plans to expand the proposed facility beyond the maximum capacity of 99 beds, and there would be no future sewer demand beyond what is shown in impact analysis 5.14-1, above, which determined that the project would not exceed wastewater treatment requirements by the San Diego RWQCB. Therefore, individual project impacts would not be cumulatively considerable with other development projects in Solana Beach.

It is expected that wastewater treatment facilities and regional systems for wastewater flows will continue to be upgraded as a result of the expected regional population growth in accordance with the SEJPA 2015 Facility Plan.[8] The future expansion and upgrades of wastewater facilities would ensure the ability of such facilities to accommodate the expected increase demand for wastewater treatment. Any future expansions and upgrades of

[8] According to the San Diego Association of Governments, the City's population is projected to increase to 15,194 by 2035 and to 15,942 by 2050 (SANDAG 2010).

facilities would not be a result of the proposed residential senior care facility for the elderly, since most residents of the care facility would already be residents in the area and therefore already generating wastewater. In consideration of these factors, the project's contribution to cumulative wastewater treatment impacts is less than significant, and therefore project impacts would not be cumulatively considerable.

Water Supply

The area considered for cumulative impacts to water supply is the SFID service area, which provides potable water to the City of Solana Beach and the communities of Rancho Santa Fe and Fairbanks Ranch. The 2015 service area population for SFID was 19,603, of which two-thirds is in the Solana Beach planning area. The SFID service area population is projected to grow to an estimated 21,569 in 2040.

According to the 2015 UWMP, SFID ensures adequate water supply to meet annual changes in demand through water purchase agreements from the SDCWA; and there are adequate water supplies to support planned developments in the SFID service area. The proposed project would construct a new residential senior care facility with water-efficient features, and the proposed increase of 99 residents would result in a negligible increase in annual water demand in the service area. The anticipated water demand from the proposed project and other planned developments in the service area boundaries falls within the 2015 UWMP's projected water supplies for average weather years as well as multiple dry years. In consideration of these factors, the project's contribution to cumulative water supply impacts is less than significant, and therefore project impacts would not be cumulatively considerable.

Storm Drainage

New projects in Solana Beach would create new impervious surfaces and thus could affect the amount of runoff in the watershed. Therefore, the projects would be required to implement LID BMPs in accordance with the MS4 Permit and the San Diego County LID Standards Handbook. Compliance with regulations as described above ensure that the proposed project would not significantly increase runoff. In consideration of these factors, the project's contribution to cumulative wastewater treatment impacts is less than significant, and therefore project impacts would not be cumulatively considerable.

5.14.4 References

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5.15 ENERGY

In accordance with Appendix F of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the potential energy implications of the proposed project. This section of the Draft EIR represents a summary of the proposed project's anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the project's energy implications, are discussed in greater detail elsewhere in this Draft EIR, including Chapter 4, *Project Description*, and Sections 5.2, *Air Quality*, 5.6, *Greenhouse Gas Emissions*, and 5.12, *Transportation and Traffic*. This section also relies on the results of a CalEEMod estimation of fuel for construction found in Appendix 5.2-1 of this EIR. Operation-related transportation fuel and energy use calculations are included as Appendix 5.15-1 of this EIR.

5.15.1 Environmental Setting

Electricity

Electricity is quantified using kilowatts (kW) and kilowatt-hours (kWh). A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the California Energy Commission's (CEC) "Tracking Progress" regarding statewide energy demand, total electric energy usage in California was 285,701 gigawatt hours in 2016 (CEC 2017). A gigawatt is equal to one billion (10^9) watts or 1,000 megawatts (1 megawatt = 1,000 kW).

The electricity supply for the city is provided by the Solana Energy Alliance (SEA) and by San Diego Gas and Electric (SDG&E), which provide electricity to a population of 3.6 million through 1.4 million electric meters in San Diego and southern Orange counties in a 4,100-square-mile service area. SDG&E provided over 87,729 megawatt-hours of electricity in the City in 2013; approximately 49 percent was used by residential uses, and 51 percent was commercial and industrial (CAP). SDG&E was the first utility provider to achieve California's renewables goal of 33 percent, five years ahead of target. In 2017, around 45 percent of the energy delivered to their customers came from renewable energy-related projects.

Most new development projects in the City are required to participate in the SEA, including the "SEA Green" program, which is a 100 percent renewable program, to the maximum extent feasible.

Natural Gas

Gas is typically quantified using "therms," which is a unit of heat energy equal to 100,000 British thermal units (Btu), and is the energy equivalent of burning 100 cubic feet of natural gas. SDG&E also provides natural gas to the project site. SDG&E operates 873,000 natural gas meters in San Diego and Orange Counties and over 117,000 miles of transmission lines within their 4,100-square-mile service area. SDG&E provided approximately 2.87 MMTherms (one MMTherm is the equivalent of 10,000,000 therms) of natural gas to the City in 2013 (the most recent year for which data were available); approximately 72 percent was used by residential uses and 28 percent was commercial and industrial (CAP). There are 2-inch natural gas lines on Genevieve Street and Marine View Avenue.

5.15.2 Regulatory Setting

5.15.2.1 FEDERAL

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the energy efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The Act sets increased corporate average fuel economy standards; the renewable fuel standard; appliance energy-efficiency standards; building energy-efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and carbon sequestration.

5.15.2.2 STATE

Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill (SB) 1078 and was amended in 2006, 2011, and was most recently amended as SB 100 on September 10, 2018. The RPS program requires investor-owned utilities, electricity service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. SB 100 revised the goal of the program to achieve 50 percent renewable resources by December 31, 2016, to achieve a 60 percent target by December 31, 2030, and to achieve the 100 percent standard by December 31, 2045

State Alternative Fuels Plan

Assembly Bill 1007 requires the CEC to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with the California Air Resources Board (CARB) and in consultation with other federal, state, and local agencies to reduce petroleum consumption, increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen), reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels, result in significant improvements in the energy efficiency of vehicles, and reduce trips and vehicle miles traveled through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (Assembly Bill 118, Statutes of 2007) proactively implements this plan (CEC 2007).

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations (California Code of Regulations [CCR], Title 20, Parts 1600–1608) contain energy performance, energy design, water performance, and water design standards for appliances that are offered for sale in California (e.g., refrigerators, vending machines, water heaters, boilers, pool equipment, plumbing fittings). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.

Building Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CCR Part 6) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The CEC adopted the 2008 changes to the Building Energy Efficiency Standards in order to (1) "Provide California with an adequate, reasonably-priced, and environmentally-sound supply of energy" (CEC 2008) and (2) Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.

Most recently, the CEC adopted the 2016 Building and Energy Efficiency Standards, which went into effect on January 1, 2017. The 2016 standards improve upon the 2013 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2016 standards do not achieve zero net energy, but they get closer to the state's goal and take important steps toward changing residential building practices in California. The 2019 standards are anticipated to take the final step to achieve zero net energy for electricity use in newly constructed residential buildings throughout California (CEC 2018).

Green Building Standards

The California Green Building Standards Code (24 CCR Part 11), also known as CALGreen, has mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. In short, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impacts during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency (ICC 2017).

5.15.2.3 LOCAL

Solana Beach General Plan

The City of Solana Beach Conservation and Open Space Element of the General Plan includes the following policy on energy:

- **Goal 3.1:** To Protect and Conserve the City's Natural and Cultural Resources
  - **Objective 7:** Reduce the City's demands upon conventional, non-renewable sources of energy.
    - **Policy 7.a:** The city shall require new developments to incorporate energy conservation measures and promote alternative energy systems.

The Land Use Element of the General Plan provides policies pertaining to energy consumption and sources.

- **Goal 3.0:** To Be a Leader in Efforts to Reduce Greenhouse Gas Emissions.
  - **Policy 3.4:** To reduce energy consumption and emissions from new buildings and significant remodels, encourage building placement, design, and construction techniques that minimize energy consumption; require the installation of EnergyStar appliances and/or high efficiency facilities; and promote other green building practices, including obtaining LEED (Leadership in Energy and Environmental Design) certification, where feasible.
  - **Policy 3.6:** Promote the use of solar panels, solar hot water heaters, and other green energy sources in conjunction with new development and retrofits to existing structures.
  - **Policy 3.7:** Consistent with the California Public Utilities Commission's California Long Term Energy Efficiency Strategic Plan, strive to achieve zero net energy use for new residential development by 2020 and zero net energy use for new commercial development by 2030.
- **Goal 5.0:** To Ensure that Long-term Protection of the Environment is Given the Highest Priority in the Consideration of Development Proposals and in the Implementation of this General Plan.
  - **Policy 5.18:** Demonstrate the cost savings of energy efficiency, water conservation, and other sustainable practices.

City of Solana Beach Municipal Code

SBMC 15.12.010 Electrical Code

The Solana Beach Municipal Code (SBMC) Chapter 15.12.010 adopts the 2016 California Electrical Code by reference. The municipal code also includes other standards related to utility easements, undergrounding utilities (including cable, video, and telecommunications service providers), and solar energy system regulations. The code also has provisions for electric vehicle charging systems (SBMC Chapter 15.54), which includes installation requirements and regulations to streamline permitting for electric vehicle charging stations.

SBMC 15.22 Energy Code

This chapter adopts and incorporates the California Energy Code, Part 6, Title 24 of the California Code of Regulations as the City Energy Code. All construction of buildings where energy will be utilized shall be in conformance with 2016 California State Code.

SBMC 17.56 Water Efficient Landscape Regulations

This chapter states that landscapes that are planned, designed, installed, managed, and maintained should minimize energy use by reducing irrigation water requirements, and planting climate-appropriate shade trees in urban areas.

Solana Beach Local Coastal Program

The Solana Beach Local Coastal Program (LCP) Land Use Plan (LUP) includes Policy 5.12, which requires that new development in the City achieve maximum energy efficiency and utilize alternative energy sources, reads as follows:

- **Policy 5.12:** Encourage that new development be designed and oriented with the objective of maximizing the opportunities for solar energy use and energy conservation. The use of alternate energy systems (e.g., solar and architectural and mechanical systems) in both commercial and residential development is encouraged.

City of Solana Beach Climate Action Plan

The City adopted its climate action plan (CAP) in July 2017 (Solana Beach 2017). The Solana Beach CAP meets the criteria in CEQA Guidelines Section 15183.5 for streamlining GHG emissions analyses but is not considered a "qualified CAP". The CAP serves as the City's community-wide GHG reduction strategy to achieve the state's GHG reduction targets for year 2020, 2030 and 2050 that can be used to mitigate and streamline the analysis of future project-level GHG impacts. The CAP sets a target of 15 percent reduction below baseline (2010) for 2020 and a target of 50 percent below baseline for year 2035. The interim year 2035 reduction target is used as an indicator to determine the City's progress in meeting the state's long-term 2050 target of reducing GHG emissions statewide to 80 percent below 1990 levels. To achieve these reduction targets, the CAP identifies four strategies:

- Strategy 1: Transportation
- Strategy 2: Renewable Energy and Buildings
- Strategy 3: Waste and Water
- Strategy 4: Carbon Sequestration (Urban Tree Planting)

The CAP includes measures to increase the use of electric vehicles, reduce vehicle miles travelled, and increase the use of transit.

Solana Energy Alliance

As the first Community Choice Aggregation (CCA) in San Diego County, the SEA helps Solana Beach lead the way in reducing greenhouse gas emissions, improving quality of life, and meeting the City's CAP goals. CCA, also known as Community Choice Energy, is a program that enables city and county governments to pool (or aggregate) the electricity demand of their communities for the purpose of supplying electricity. A CCA buys and/or develops power on behalf of the residents, business, and government electricity users in its jurisdiction. The electricity continues to be distributed and delivered over the existing electricity lines by the incumbent public utility—which is SDG&E in San Diego County. SEA is the new, locally controlled electricity provider in the City of Solana Beach. SEA supplies power to businesses and residences at a higher renewable energy content as the baseline service with an opportunity to opt up to 100 percent renewable energy. The SEA began serving customers in Solana Beach in June 2018.

5.15.3 Methodology

The impact analysis focuses on the four sources of energy that are relevant to the proposed project: electricity, natural gas, transportation fuel for vehicle trips associated with new development, and the fuel necessary for project construction. The analysis of electricity/natural gas usage is based on California Emissions Estimator Model (CalEEMod) GHG emissions modeling, which quantifies energy use for occupancy (see Appendix 5.2-1).

The amount of operational fuel use was estimated using CARB's Emissions Factor 2019 (EMFAC2019) computer program, which provides projections for typical daily fuel usage in San Diego County. The results of EMFAC2019 modeling and operational fuel estimates are included in Appendix 5.15-1.

5.15.4 Thresholds of Significance

In accordance with State CEQA Guidelines, the potential effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix F of the State CEQA Guidelines, the proposed project would have a significant impact related to energy consumption if it would:

- Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.

5.15.5 Potential Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study prepared for the proposed project disclosed potentially significant energy-related impacts.

Impact 5.15-1:	Would the project develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements during construction? [Less than Significant]

Impact Analysis: Construction of the proposed project would require the use of construction equipment for demolition, clearing, grading, hauling, and building activities. Equipment proposed for these types of activities is listed in Table 5.2-6, Construction Equipment, in Section 5.2, *Air Quality*. Electricity use during construction would vary during different phases of construction—the majority of construction equipment during demolition, clearing, and grading would be gas powered or diesel powered, and the later construction phases would require electrically powered equipment, such as for interior construction and architectural coatings. Construction emissions also include the vehicle emissions associated with construction workers traveling to and from the project site and haul trucks for the export of materials from site clearing and demolition and the export and import of soil for grading and import of construction materials to the project site.

As this project is an urban infill project, the surrounding area is fully developed and is already served by electrical and natural gas infrastructure provided by the SEA via SDG&E distribution and transmission infrastructure. The proposed project would connect to these existing lines on Genevieve Street and Marine View Avenue. Adequate infrastructure capacity in the vicinity of the site would be available to accommodate the electricity and natural gas demand for construction activities and would not require additional or expanded infrastructure.

The construction contractors are also expected to minimize idling of construction equipment during construction as required by state law (see Section 5.2, *Air Quality*), which would reduce gas and diesel energy consumption. The construction contractors would also reduce construction and demolition waste by recycling and compliance with the City's Construction and Demolition Debris Recycling Ordinance (SBMC 6.36.020), which would reduce energy because it typically requires less processing energy to recycle waste into usable materials (AGI 2019). These required practices would limit wasteful and unnecessary electrical and gas energy consumption. Furthermore, the construction contractor would encourage practices to reduce energy consumption during construction such as using electric powered equipment whenever feasible, encouraging employee carpooling or use of public transit, or using locally sourced and/or recycled construction materials when feasible. Construction electricity usage related to the proposed project would be minimal relative to the project's overall energy consumption. Therefore, the proposed short-term construction activities would not result in inefficient, wasteful, or unnecessary fuel consumption.

Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and the travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary lasting only during the project construction phase. The majority of construction equipment during demolition and grading would be gas powered or diesel powered, and the later construction phases would require electrically powered equipment. Impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Therefore, impacts would be less than significant.

Impact 5.15-2: Would the project develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation? [Less than Significant]

Impact Analysis: The project site does not currently demand or generate electricity or natural gas energy. The proposed improvements would result in construction of a new residential senior care facility for the elderly that would require the use of natural gas and electricity during its operation.

Electricity

Project operation would result in an increase electricity demand of approximately 749,831 kWh or 0.75 Giga-watt hour (GWh) at the project site, as shown in Table 5.15-1, *Estimated Project Electricity Demands*, below. Total electricity demand in SDG&E's service area is forecast to be 22,185 GWh for their service area, and 10,175 GWh for commercial uses (CEC 2019). Therefore, energy demand as a result of operation of the

improvements would be less than 0.01 percent of the annual service area and commercial sector demand.[1] In addition, because the proposed project would be subject to the more stringent 2016 Title 24 standards, as well as participation in the Solana Beach SEA, and would exceed energy efficiency code requirements through project design, the project's electricity demand could potentially be lower than the calculations presented in Table 5.15-1, below. Project development would not require SDG&E to obtain new or expanded electricity supplies, and impacts would be less than significant.

Table 5.15-1 Estimated Project Electricity Demands

Land Use	Square Feet	Electricity Demands, kWh/yr	
		Per square foot	Total
Proposed Project[2]			
Living Units	39,974 (99 units)	18.4[1]	735,521.6
Parking Lot and Paved Areas	16,335	0.876[2]	14,309.5
		Total	749,831.1

[1] U.S Energy Information Administration. Commercial Buildings Energy Consumption Survey (CBESCS).
[2] CalEEMod v.2013.2. Appendix A calculation Details for CalEEMod

Natural Gas

Project operation is estimated to use about 2.51 million cubic feet (Mcf) per year. SDG&E's forecast demand is expected to decrease at an average rate of 0.58 percent per year from 116 billion cubic feet (Bcf) in 2017 to 105 Bcf in 2035 (CGEU 2018). SDG&E sold approximately 115 Bcf in 2017, or approximately 314 Mcf per day. Therefore, the annual gas needs for operation of the proposed improvements would be less than 0.01 percent of the daily gas demand for the SDGE service area.[2] Therefore, project development would not require SDG&E to obtain new or expanded gas supplies, and impacts would be less than significant and no mitigation is required.

Renewable Energy

As described above, the project would participate in the Solana Beach SEA, and project development would support achievement of the 60 percent Renewable Portfolio Standard set by SB 100 for 2030 or the 100 percent standard for 2045. These goals apply to the SEA, SDG&E, and other electricity retailers. As electricity suppliers reach these goals, emissions from end user electricity use will decrease from current emission estimates.

[1] 0.75 GWh (project demand) / 22,185 GWh (SDGE service area demand) = 0.00003 = 0.003 percent
0.75 GWh (project demand) / 10,175 GWh (commercial sector demand) = 0.00007 = 0.007 percent.
[2] 2.51 Mcf per day / 365 days = 0.0068 Mcf / 314 Mcf = 0.00002 = 0.002 percent.

Table 5.15-2 Estimated Project Natural Gas Demands

Land Use	Square Feet	Natural Gas Demands, cubic feet/yr	
		Per square foot	Total
Proposed Project[2]			
Living Units (99 units)	39,974	62.8[1]	2,510,367.2
Parking Lot and Paved Areas	16,335	0[2]	0
		Total	2,510,367.2

[1] U.S Energy Information Administration. Commercial Buildings Energy Consumption Survey (CBESCS).
[2] Operation of the parking areas would not use natural gas.

Transportation

Transportation energy use depends on the type and number of trips, vehicle miles traveled (VMT), fuel efficiency of vehicles, and travel mode. Transportation energy used during operation of the site would come from delivery, employee, and visitor vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would be temporary and would fluctuate throughout the lifespan of the project. According to the Traffic Assessment Letter prepared for the proposed project (see Appendix 5.12-1), the project would generate 263 average daily trips, with 18 AM peak hour and 34 PM peak hour trips.

The CalEEMod program estimates average trips associated with commercial and employment land uses. The VMT estimate ranges from 7.3 to 10.8 miles for commercial-customer and commercial-work trips. CARB publishes the EMFAC2019 Web Database, which was used to calculate fuel consumption for the project-generated VMT. The database search was limited to San Diego County and assumed the 2019 calendar year and light-duty private vehicles with a range of model years and fuel types. Table 5.15-3, *Operation-Related Vehicle Fuel and Energy Usage*, shows the calculated VMT and fuel consumption based on the project-generated trips.

Table 5.15-3 Operation-Related Vehicle Fuel and Energy Usage

Year	Gas		Diesel		CNG		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	Gallons	VMT	kWh
Proposed Project	688,871	28,341	44,070	4,744	1,345	390	6,324	2,120
Total	688,871	28,341	44,070	4,744	1,345	390	6,324	2,120

Notes: The full calculations are in Appendix 5.15-1 of the DEIR.

The gas consumption estimates in Table 5.15-3 would be a conservative figure, because as fuel efficiency in passenger cars increases and electric vehicle use expands, fuel usage will decrease. The calculated fuel use represents less than 0.001 percent of the total fuel usage for light vehicles in the region over the same year in 2019 (1.39 billion gallons) (see Appendix 5.15-1). This increase in fuel usage represents a conservative estimate, with the real use likely being less than calculated. The 0.001 percent increase in VMT associated with this project is considered negligible when compared to the region as a whole.

5.15.6 Cumulative Impacts

The proposed project is anticipated to have a stable energy demand over time and, as shown in Tables 5.15-1, 5.15-2, and 5.15-3, would not result in significant energy use from construction or operation. Project design and operation would comply with state Building Energy Efficiency Standards, appliance efficiency regulations, and green building standards and participation in the Solana Beach SEA, including potentially the SEA "SEA Green" 100 percent renewable program. Also, as stated in Chapter 5.6 Green House Gas Emissions, while the impact analysis does not result in a significant impact that would lead to a mitigation measure, the City will include the following as a condition of approval for the project that reads "Prior to the issuance of building permits, the project Applicant shall demonstrate to the City Manager that the project has an agreement in place to purchase 100 percent green power (electricity) from the City's Community Choice Aggregation (CCA) program, Solana Energy Alliance (SEA) "SEA Green" product, or, if this program is not in place, any successor CCA program or the San Diego Gas & Electric EcoChoice program. All house meter electricity accounts shall opt in to either the City's SEA Green program (100 percent renewable power) or, if this program is not in place, any equivalent SEA successor program, or the San Diego Gas & Electric EcoChoice program. If the EcoChoice program is the only option, proof of enrollment in the EcoChoice program shall be provided to the City prior to obtaining building permits." Project development would not cause inefficient, wasteful, or unnecessary energy consumption; therefore, impacts from the proposed project would be less than cumulatively considerable and no mitigation measures are required.

5.15.7 References

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6. Alternatives to the Proposed Project

6.1 INTRODUCTION

6.1.1 Purpose and Scope

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" (CEQA Guidelines Section 15126.6). This chapter identifies potential alternatives to the proposed project and evaluates them, as required by CEQA.

Key provisions of the CEQA Guidelines on alternatives are summarized below to explain the foundation and legal requirements for the alternatives analysis in the EIR (Sections 15126.6(a) through (f)).

- "The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (Section 15126.6(b))

- "The specific alternative of 'no project' shall also be evaluated along with its impact." (Section 15126.6(e)(1))

- "The no project analysis shall discuss the existing conditions at the time the Notice of Preparation (NOP) 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." (Section 15126.6(e)(2))

- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." (Section 15126.6(f))

- "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)." (Section 15126.6(f)(1))

- "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." (Section 15126.6(f)(2)(A))

- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (Section 15126.6(f)(3))

For each alternative to the project, this analysis:

- Describes the alterative.
- Analyzes the potential impacts of the alternative compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

Per the CEQA Guidelines Section 15126.6(d), potentially significant effects of the alternatives are discussed in less detail than the significant effects of the project as proposed.

6.1.2 Statement of Project Objectives

The following objectives have been established for the proposed Solana Beach Senior Care Specific Plan project by the applicant, as noted in Chapter 4, *Project Description*, and are intended to aid decision makers in their review of the project and project alternatives.

1. Utilize one of the last remaining undeveloped sites within the City of Solana Beach that is over two acres to approximately double the City's inventory of assisted living and memory care beds to help meet the community's current and increasing demand for such uses. This demand is demonstrated by the projected growth in City of Solana Beach of residents age 70 and over, from 2,200 persons in 2020 to 3,500 persons by 2035.

2. Provide for the development of the site as a state-licensed residential senior care facility for the elderly that is consistent with the City's General Plan and the requirements of the Specific Plan.

3. Provide a residential senior care facility with a size that incorporates the increased standards of the Specific Plan (above the City's zoning code minimum residential senior care facility requirements) for elements that affect day-to-day living. These include rooms with larger sleeping areas, storage areas, and bathroom facilities; substantially increased common indoor areas for living and socialization; and common outdoor open space areas.

4. Provide a residential senior care facility for the elderly to include amenities and services that contribute to a higher quality of life for residents, such as dining facilities, wellness/fitness areas, common living

spaces, transportation, entertainment, and other nonmedical support services as well as environmentally sensitive design and sustainable operations.

5. Provide required parking for the residential senior care facility, and limit the visibility of parking and service loading areas from the existing residential uses to the east by using techniques such as an underground/basement parking structure, screening of surface parking through building placement, grading design, and landscape design.

6. Maintain the character of Marine View Avenue and create a potential amenity for the surrounding neighborhood and the project's future residents by establishing an open, landscaped area with pedestrian connections to the neighborhood adjacent to Marine View Avenue and limiting vehicular driveway access to the site to Genevieve Street only.

6.2 POTENTIALLY SIGNIFICANT IMPACTS OF THE PROJECT

A primary consideration in defining project alternatives is their potential to reduce or eliminate significant impacts and to meet most of the objectives of the proposed project. Pursuant to CEQA Guidelines Section 15126.6[b], alternatives to the proposed project include those that are capable of avoiding or substantially lessen 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.

Based on the analysis contained in Chapter 5, *Environmental Analysis*, the proposed project would result in potentially significant environmental effects, prior to mitigation, on the topics of:

- Air Quality;
- Biological Resources;
- Cultural Resources;
- Noise; and
- Tribal Cultural Resources

Following the implementation of required mitigation measures, however, impacts to these topics would be avoided or reduced to less than significant levels for the proposed project.

The impact analysis in Chapter 5 of this Draft EIR did not identify any potentially significant and unavoidable adverse impacts after implementation of regulatory requirements and mitigation measures.

6.3 ALTERNATIVES CONSIDERED AND REJECTED DURING THE PLANNING PROCESS FOR THE PROPOSED PROJECT

The City and applicant considered numerous design alternatives during its planning process. The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this EIR.

Per CEQA Guidelines Section 15126.6(c), among the factors that a Lead Agency may use to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, and (iii) inability to avoid significant environmental effects.

6.3.1 Alternative 1, Alternative Project Site

Under Alternative 1, the proposed residential senior care facility for the elderly would be constructed at another site in Solana Beach. Although the configuration of the building may differ from the proposed project to fit within the dimensions and setback requirements at a different site, the operating capacity and number of rooms would remain unchanged.

Conclusion

Alternative 1, Alternative Project Site, was determined to be infeasible for the following reason:

- The City of Solana Beach is generally built out, and there are no other vacant sites of two or more acres that would allow for the construction of a senior care facility that could support the proposed building size, bedroom capacity, and program operations.

Additionally, Alternative 1 fails to meet the following project objectives:

- Utilize one of the last remaining undeveloped sites within the City of Solana Beach that is over two acres to approximately double the City's inventory of assisted living and memory care beds to help meet the community's current and increasing demand for such uses.

- Provide a Residential Care Facility with a size that incorporates the increased standards of the Specific Plan (above the City's zoning code minimum residential care facility requirements) for elements that affect day to day living.

- Provide required parking for the Residential Care Facility use, and limit the visibility of parking and service loading areas from the existing residential uses to the east, by using techniques such as an underground/basement parking structure, screening of surface parking through building placement, grading design, and landscape design.

- Maintain the character of Marine View Avenue and create a potential amenity for the surrounding neighborhood and the project's future residents by establishing an open, landscaped area with pedestrian connections to the neighborhood adjacent to Marine View Avenue and limiting vehicular driveway access to the site from only Genevieve Street.

6.3.2 Alternative 2, No Project/Existing General Plan Alternative

In the No Project/Existing General Plan alternative, the proposed project would not be developed. Instead, the site would be built out as permitted by the existing general plan land use designation. The existing general plan designation is Estate Residential, permitting single-family residential development at densities of up to two units per acre. Thus, buildout of the 2.91-acre site would involve development of six or seven single-

family units (rounding up the acreage slightly to 3). The average household size in Solana Beach in 2017 is estimated as 2.28 persons (CDF 2017). Thus, population onsite at buildout is estimated at between as 14 and 16 persons.

Conclusion

Alternative 2, No Project/Existing General Plan alternative, was determined to be infeasible for the following reason:

- Although feasible from the allowable density range and lot size, based on the existing lot sizes and configurations construction of six or seven homes would not be able to comply with the City's development standards.

In addition, Alternative 2 fails to meet all of the project objectives.

- Utilize one of the last remaining undeveloped sites within the City of Solana Beach that is over two acres to approximately double the City's inventory of assisted living and memory care beds to help meet the community's current and increasing demand for such uses.
- Provide for the development of the site as a state-licensed Residential Care Facility for the Elderly that is consistent with the City's General Plan and the requirements of the Specific Plan.
- Provide a Residential Care Facility with a size that incorporates the increased standards of the Specific Plan (above the City's zoning code minimum residential care facility requirements) for elements that affect day to day living.
- Provide a Residential Care Facility for the Elderly to include amenities and services that contribute to a higher quality of life for residents, such as dining facilities, wellness/fitness areas, common living spaces, transportation, entertainment, and other nonmedical support services, as well as environmentally sensitive design and sustainable operations.
- Provide required parking for the Residential Care Facility use, and limit the visibility of parking and service loading areas from the existing residential uses to the east.
- Maintain the character of Marine View Avenue and create a potential amenity for the surrounding neighborhood and the project's future residents by establishing an open, landscaped area with pedestrian connections to the neighborhood adjacent to Marine View Avenue.

6.4 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS IN THE EIR

Based on the criteria listed in Section 6.1.1, above, the following two alternatives have been determined to represent the range of reasonable alternatives to the project that have the potential to feasibly attain most of the basic objectives of the project but which may avoid or substantially lessen any of the significant effects of the project. These alternatives are analyzed in detail in the following sections.

- Alternative A - No Project/No Development Alternative
- Alternative B - Four Single-Family Residences
- Alternative C – Reduced Intensity Alternative

An EIR must identify an "environmentally superior" alternative, and where the No Project Alternative is identified as environmentally superior, the EIR is required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the significant impacts of the proposed project and determined to be environmentally superior, similar, or inferior. No project impacts were found to be significant and unavoidable under the proposed project. Section 6.7 identifies the Environmentally Superior Alternative.

The proposed Solana Beach Senior Care Specific Plan Project is analyzed in detail in Chapter 5 of this DEIR.

6.5 ALTERNATIVE A - NO PROJECT/NO DEVELOPMENT ALTERNATIVE

In the No Project/No Development alternative, the proposed project would not be developed and the project site would remain in its current condition. The site is vacant except for a residence, greenhouse, and shed, all of which are in the northwest part of the site. The site is overgrown/vegetated with grasses, small shrubs, and ornamental palm trees. This alternative would not meet any of the project's objectives which include development of the site consistent with the City's General Plan and provision of increased assisted-living housing available for elderly adults in Solana Beach.

6.5.1 Aesthetics

This alternative would not change the appearance of the site. The existing appearance of the site, with three vacant buildings and undeveloped land, is not a positive contribution to the appearance of the surrounding area. The project site is considered blighted and the remaining structures covered in graffiti creating an attractive nuisance for the neighborhood and is also visible from the I-5 freeway.

While development of the proposed project would change the appearance of the site with construction of a new residential senior care facility for the elderly, that impact is identified as less than significant in Section 5.1, *Aesthetics,* of this DEIR. Aesthetics impacts would be reduced by this alternative.

6.5.2 Air Quality

This alternative would not emit air pollutants from construction or operation and would reduce air quality impacts compared to those of the proposed project. Construction and operational emissions of the proposed project are each identified as less than significant in Section 5.2, *Air Quality*, of this DEIR. Exposure of sensitive receptors to substantial pollutant concentrations during construction is identified as less than significant with mitigation incorporated; therefore, impacts to air quality would be reduced by this alternative.

6.5.3 Biological Impacts

In this alternative the existing ornamental and weedy vegetation would remain onsite, and no impacts to biological resources would occur. Development of the proposed project would not involve clearance of vegetation from the whole site. Because no development would occur, biological resources impacts would be reduced by this alternative.

6.5.4 Cultural Resources

This alternative would not demolish the three vacant buildings onsite or involve ground disturbance onsite. Development of the proposed project would involve demolition of the buildings and ground disturbance on the entire site. The vacant buildings were determined not to be historically significant (see Section 5.4, *Cultural Resources*, of this DEIR), and impacts of the proposed project to historic resources would be less than significant. Impacts of the proposed project to archaeological resources are identified as less than significant, and impacts to paleontological resources are identified as less than significant after mitigation. Cultural resources impacts would be reduced by this alternative.

6.5.5 Geology and Soils

This alternative would not build and operate a 99-bed assisted living facility and therefore would not disturb the existing geology and soils of the project site. Geology and soils impacts of the proposed project were determined to be less than significant (see Section 5.5, *Geology and Soils*, of this DEIR). Geology and soils impacts would be reduced in this alternative.

6.5.6 Greenhouse Gas Emissions

The No Project/No Development alternative would not generate GHG emissions from construction and operation of the proposed project. GHG emissions impacts of the proposed project are identified as less than significant (see Section 5.6, *Greenhouse Gas Emissions*, of this DEIR). GHG emissions impacts would be reduced by this alternative.

6.5.7 Hazards and Hazardous Materials

This alternative would not involve demolition and removal of the existing structures or soil disturbance onsite. The vacant structures and surrounding soils could contain asbestos-containing materials (ACM) and/or lead-based paint (LBP). Construction of the proposed project would involve demolition of the structures and soil disturbance that could expose persons and/or the environment to ACM and/or LBP. ACM and LBP would be contained, abated, and disposed of during demolition, and their impacts would be less than significant (see Section 5.7, *Hazards and Hazardous Materials*, of this DEIR). This alternative would not remove ACM and/or LBP potentially onsite from the site. Construction and operation of the proposed project would also involve use of hazardous materials; impacts of such use would be less than significant. Hazards and hazardous materials would be reduced somewhat by this alternative.

6.5.8 Hydrology and Water Quality

This alternative would not change existing drainage conditions onsite; drainage would remain by surface flow. This alternative would not involve development of an onsite drainage system as the proposed project would.

This alternative would not generate water pollutants from construction and operation as the proposed project would, but it would also not develop swales and bioretention areas onsite as the proposed project would. The swales and bioretention areas would reduce water quality impacts of the proposed project. This alternative would reduce hydrology and water quality impacts compared to those of the proposed project, which would be less than significant.

6.5.9 Land Use and Planning

This alternative would not require voter approval of a Specific Plan and would not propose a new use of the land onsite. This alternative would not involve any change in the existing conditions, zoning or General Plan designation of the project site and, therefore, would reduce land use and planning impacts compared to those of the proposed project, which would be less than significant.

6.5.10 Noise

This alternative would not generate noise for construction or long-term operation of the site. This alternative would reduce noise impacts compared to those of the proposed project.

6.5.11 Public Services

This alternative would not generate increased demands for fire protection and emergency medical services because no development would occur. Construction and operation of the proposed project could generate a very slight increase in demands for fire protection, and project operation is expected to generate some increase in demand for emergency medical services. Development of the proposed project would not require construction of a new or expanded fire station, and public services impacts of the proposed project would be less than significant. This alternative would reduce public services impacts compared to those of the proposed project.

6.5.12 Transportation and Traffic

This alternative would not generate any increase in trips as the proposed project would, would not increase vehicle miles traveled and would not affect alternative modes of travel such as public transit, bicycling or walking. Transportation and traffic impacts of the proposed project would be less than significant (see Section 5.12, *Transportation and Traffic*, of this DEIR). Nonetheless, this alternative would reduce transportation and traffic impacts compared to those of the proposed project.

6.5.13 Tribal Cultural Resources

This alternative would not involve ground disturbance onsite. No cultural resources onsite have been determined to be eligible for listing on the California Register of Historic Resources. One tribe has requested notifications of projects by the City of Solana Beach pursuant to Assembly Bill 52. The City notified that tribe of the proposed project in writing and has not received a response. There are no known tribal cultural resources on the project site, and such impacts of the proposed project would be less than significant. This alternative would reduce tribal cultural resources impacts compared to those of the proposed project.

6.5.14 Utilities and Service Systems

This alternative would not generate water demands or wastewater as the proposed project would. Utilities and service systems impacts of the proposed project would be less than significant; this alternative would reduce such impacts compared to those of the proposed project.

6.5.15 Energy

This alternative would not result in construction of improvements at the site. Therefore, this alternative would not generate energy demands for construction or operation of the site and would reduce energy impacts compared to those of the proposed project.

6.5.16 Conclusion

Overall, Alternative A, No Project/No Development Alternative, would not involve any change in the existing conditions and thus would not create any new significant environmental impacts at the project site. As provided above, this would result in a reduction in impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use, noise, public services, transportation and traffic, tribal cultural resources, and utilities and service systems compared to the proposed project. However, this alternative would not provide any of the benefits of the proposed project and would not meet any of the project objectives set forth in Section 6.2 above.

6.6 ALTERNATIVE B, FOUR SINGLE-FAMILY RESIDENCES

In the Four Single-Family Residences alternative, the proposed project would not be developed. Instead, the project would involve the construction of two single-family residences on the site with two accessory dwelling units (ADU), consistent with the existing zoning and site development standards. This alternative would require the subdivision of the property. This alternative would not require a change in density or Floor Area Ratio (FAR).

6.6.1 Aesthetics

This alternative would develop two residences and two accessory dwelling units on-site, changing the appearance of the site. The existing vacant site with three vacant buildings is not a positive contribution to

the appearance of the surrounding area. This alternative would not substantially degrade the appearance of the site. It is assumed that the single-family residences would be one story in height and would therefore not reduce westward views from Marine View Avenue or eastward views from I-5. Additionally, single-family residences would be more consistent with the visual character of the surrounding residences. Aesthetics impacts of this alternative would be environmentally superior to those of the proposed project.

6.6.2 Air Quality

This alternative would involve the construction of two residences and two accessory dwelling units on the project site. Because the individual residences would have a less square footage total than the proposed project, and because the single-family homes would take less time to construct than the proposed project, construction of this alternative would result in a less than significant impact to air quality and would be superior to the project. Because the activities associated with the ongoing occupancy of two residences and two accessory dwelling units would generate fewer air emissions than operation of the proposed 99-bed residential care facility, this alternative would have less impact on air quality than the proposed project.

6.6.3 Biological Impacts

This alternative would remove all of the vegetation onsite, as the proposed project would. No significant impacts to sensitive plant or animal species or sensitive habitats are identified in Section 5.3, *Biological Resources,* of this DEIR. There is approximately 0.52 acre of nonnative grassland onsite; impacts to nonnative grassland require mitigation under the North County Multiple Habitat Conservation Program. Impacts to nonnative grassland would be less than significant after mitigation, similar to the proposed project. Additionally, the site contains one young native coast live oak tree, which is protected by the City's Local Coastal Program Native Tree Protection policies; removal of this tree would be a significant impact. Impacts to coast live oak under this alternative would be mitigated to less than significant, similar to the proposed project. Therefore, this alternative would be environmentally similar compared to the proposed project.

6.6.4 Cultural Resources

This alternative would involve demolition of the three vacant structures onsite and soil disturbance on the entire site, as the proposed project would. Potential impacts of this alternative on fossils would be less than significant after mitigation; impacts on historical and archaeological resources would be less than significant. Cultural resources impacts of this alternative would be environmentally similar to those of the proposed project.

6.6.5 Geology and Soils

This alternative would involve development of the entire site, as the proposed project would. Impacts of the proposed project arising from landslides, soil erosion, collapsible soils, lateral spreading, and subsidence were all determined to be less than significant. Impacts of this alternative would be environmentally similar to those of the proposed project.

6.6.6 Greenhouse Gas Emissions

This alternative would involve the construction of two residences and two accessory dwelling units on the project site. The individual residences would have a smaller footprint than the proposed project, and a shorter the length of construction time than the proposed project. The activities associated with the on-going occupancy of two residences and two accessory dwelling units also would generate less GHG emissions than operation of the proposed 99-bed residential care facility. Therefore, construction and operation of this alternative would result in less contributions to greenhouse gas emissions over the lifespan of the project. Therefore, this alternative would be superior to that of the project.

6.6.7 Hazards and Hazardous Materials

This alternative would involve demolition of the three vacant buildings onsite and containment, abatement, and disposal of ACM and LBP, as the proposed project would.

Assuming the two residences and two accessory dwelling units in this alternative would be 4,000 square feet each for the residences and 1,200 square feet for the ADUs in accordance with SBMC Ordinance 470, totaling 10,400 square feet, construction effort in this alternative would be less than that for the 87,256-square-foot assisted living facility in the proposed project. Thus, hazardous materials use by construction of this alternative would be less than by the proposed project.

Operation of this alternative would use less hazardous materials due to both the reduced total building area and the reduced service populations on-site (9-10 residents in this alternative compared to 99 residents and up to 65 staff for the proposed project). Hazards and hazardous materials impacts of this alternative would be reduced compared to those of the proposed project, which would be less than significant.

6.6.8 Hydrology and Water Quality

It is assumed here that the amount of impervious surfaces to be developed by this alternative would be comparable to the 47 percent of the project site that would be developed by the proposed project. This alternative would be required to implement best management practices (BMPs) for water quality protection—including low-impact development and treatment BMPs—similar to those required for the proposed project. Therefore, drainage impacts of this alternative are estimated to be similar to those of the proposed project. Overall, hydrology and water quality impacts of this alternative would be environmentally similar to those of the proposed project, and less than significant for both.

6.6.9 Land Use and Planning

Proposed development in this alternative would comply with development standards in the existing General Plan and zoning designations for the site. The proposed project consists of an assisted living facility exceeding the maximum permitted floor area onsite. The proposed project thus requires a Specific Plan that must be approved by Solana Beach voters. Land use and planning impacts of this alternative would be reduced compared to those of the proposed project.

6.6.10 Noise

The proposed development under this alternative would result in a similar amount of construction noise during grading and site preparation. However, construction of the improvements would likely take less time than the proposed project and would result in less exposure to construction noise. Nonetheless, like the proposed project, construction would be required to comply with the City of Solana Beach Municipal Code Noise Ordinance. Operationally, the residences would be equipped with smaller, individual HVAC systems, and the dominant source of noise would be from human voices and passing vehicles, similar to the proposed project. A sound wall would likely need to be constructed to reduce the effects of existing noise sources on the residences in order to make the residences habitable. Because construction and operational noise would be less than that of the project, this alternative is environmentally superior to the proposed project.

6.6.11 Public Services

Residential uses in this alternative would involve two residences and two accessory dwelling units and approximately 9 to 10 occupants. Because there would many fewer residence under this alternative than in the proposed project, this alternative would generate less demand for fire protection and emergency medical services than the assisted living facility to be developed by the proposed project. This alternative would reduce public services impacts compared to those of the proposed project, which would be less than significant.

6.6.12 Transportation and Traffic

Single-family residences are estimated to generate 9.44 daily vehicle trips, 0.74 AM peak hour trips, and 0.99 PM peak hour trips per unit (ITE 2017). Thus, the two residences and two accessory dwelling units are estimated to generate a total 38daily trips, 3 AM peak hour trips, and 4 PM peak hour trips. The proposed project is estimated to generate 263 daily trips. This alternative would reduce transportation and traffic impacts compared to those of the proposed project, which would be less than significant.

6.6.13 Tribal Cultural Resources

This alternative would involve demolition of the three vacant structures onsite and soil disturbance on the entire site, as the proposed project would. No cultural resources onsite have been determined to be eligible for listing on the California Register of Historic Resources. One tribe has requested notifications of projects by the City of Solana Beach pursuant to Assembly Bill 52. The City notified that tribe of the proposed project in writing and has not received a response. There are no known tribal cultural resources on the project site, and such impacts of the proposed project would be less than significant. This alternative would have a similar impact to tribal cultural resources compared to those of the proposed project.

6.6.14 Utilities and Service Systems

This alternative is estimated to generate water demands of about 5,100 gallons per day based on the Santa Fe Irrigation District (SFID)'s 2020 water demand target of 510 gallons per capita per day.[1] Wastewater generation is estimated as 100 percent of indoor water use. Residential water use in SFID's service area is estimated to be 30 percent indoor and 70 percent outdoor (SFID 2017); thus, wastewater generation by this alternative is estimated at approximately 1530 gallons per day. Single-family residences are estimated to generate 10 pounds of solid waste per unit per day (CalRecycle 2017); thus, the two residences and two accessory dwelling units in this alternative would generate about 40 pounds of solid waste per day. The proposed project is estimated to require 9,281 gallons of water and to generate 7,425 gallons of wastewater and 1,584 pounds of solid waste per day.[2] This alternative would reduce utilities and service systems impacts compared to those of the proposed project, which would be less than significant.

6.6.15 Energy

This alternative would involve the construction of two residences and two accessory dwelling units to be occupied by 9 to 10 future residents on the project site. Because the individual residences would have a less square footage and a smaller footprint than the proposed project, a shorter length of construction time, and would involve fewer residents than the proposed project, construction and operation of this alternative would result in less impacts to energy over the lifespan of the project. Therefore, this alternative would continue to be less than significant but would be superior to that of the project.

6.6.16 Conclusion

The Four Single-Family Residences alternative would result in a reduction in impacts to air quality, greenhouse gas emissions, land use, noise, public services, transportation and traffic, and utilities and service systems compared to the proposed project. This alternative would result in similar impacts to aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and tribal cultural resources. However, the Four Single-Family Residences alternative would not meet any of the six objectives for the proposed project.

6.7 ALTERNATIVE C, REDUCED INTENSITY ALTERNATIVE

Under Alternative C, a reduced size and intensity residential care facility that meets the ER-2 zone and FAR requirements was reviewed for potential viability at the project site. This alternative would require construction of similar improvements as the proposed project, including grading and construction of the footings, connections for utilities, and roadway improvements. It is assumed that to reduce the number of beds for this alternative, the second floor (totaling 35,106 square feet) would be removed from the proposed

[1] The water demand target is pursuant to the 20x2020 Water Conservation Plan issued by the Department of Water Resources in 2010 (see SFID 2017).

[2] The wastewater generation factor for the proposed project (75 gallons per bed per day for a senior care facility) used in Section 15.14, *Utilities and Service Systems*, is from the City of Los Angeles, as no factor for an assisted care facility was available from the Santa Fe Irrigation District. The water demand factor for the proposed project is 125 percent of the wastewater generation factor.

design plans and resulting in a loss of 52 beds, from 99 to 47. This alternative also assumes that the first floor would remain the same size (34,672 square feet); therefore, this alternative would also result in a revised floor area ratio of 0.27[3]. Under this alternative, the first floor would have to be reconfigured to include the offices and administrative/marketing area; spa, salon, and library; memory care unit, including beds and common areas; and other facilities that are currently located on the second floor. A graphic representation of a potential layout of a reduced residential senior care facility on the site is included as Figure 6-1, *Alternative C, Reduced-Intensity Residential Senior Care Facility*, to this DEIR.

6.7.1 Aesthetics

The existing appearance of the site, with three vacant buildings and undeveloped land, is not a positive contribution to the appearance of the surrounding area. The project site is considered blighted, and the remaining structures are covered in graffiti, creating an attractive nuisance for the neighborhood that is also visible from the I-5 freeway.

While development of the proposed project would change the appearance of the site with construction of a new residential senior care facility for the elderly, that impact is identified as less than significant in Section 5.1, *Aesthetics,* of this DEIR. This alternative would not change the general design scheme of the site (i.e., materials used, building façade design, etc.). This alternative would slightly reduce impacts to views because the building would be single story. Development of this alternative would be environmentally superior to the proposed project for aesthetic impacts.

6.7.2 Air Quality

This alternative would result in a similar amount of pollutants for construction activities such as grading and footing installation, but construction of one fewer floor would reduce construction compared to the project and generate slightly less air pollutants. Operationally, the project would have less bed capacity and would reduce air quality impacts compared to those of the proposed project. Nonetheless, construction and operational emissions of the proposed project are both identified as less than significant in Section 5.2, *Air Quality*, of this DEIR. Exposure of sensitive receptors to substantial pollutant concentrations during construction is identified as less than significant with mitigation incorporated; therefore, impacts to air quality would be reduced by this alternative. Development of this alternative would be environmentally superior to the proposed project for air quality impacts.

6.7.3 Biological Resources

The project would result in the same disturbance of undeveloped area and would result in the same impacts to biological resources as the proposed project. Mitigation for impacts to the North County Multiple Habitat Conservation Program and coast live oak would be implemented under this alternative to mitigate impacts to a less than significant level. Development of this alternative would result in a similar impact to biological resources.

[3] 34,672 square feet (first floor) / 126,875 square feet (site area) = 0.27 floor area ratio.

6.7.4 Cultural Resources

This alternative would demolish all onsite structures and would result in a similar amount of ground disturbance as the proposed project. The vacant buildings were determined not to be historically significant (see Section 5.4, *Cultural Resources*, of this DEIR), and impacts of the proposed project to historic resources would be less than significant. Impacts of the proposed project to archaeological and paleontological resources are identified as less than significant with mitigation incorporated under the proposed project and under Alternative C. Development of this alternative would result in similar impacts to cultural resources.

6.7.5 Geology and Soils

This alternative would result in a similar amount of ground disturbance as the proposed project and would require similar improvements that consider site-specific geology and soil types. Similar to the proposed project, compliance with the recommendations of the geotechnical report would result in a less than significant impact to geology and soils (see Section 5.5, *Geology and Soils*, of this DEIR). Development of this alternative would result in similar impacts to geology and soils.

6.7.6 Greenhouse Gas Emissions

This alternative would generate similar amounts of pollutants for construction activities such as grading and footing installation, but construction of one less floor would reduce its contribution to greenhouse gas emissions compared to the project. Operationally, the alternative would have less bed capacity and would reduce emissions compared to the proposed project. Nonetheless, construction and operational emissions of the proposed project are each identified as less than significant in Section 5.6, *Greenhouse Gas Emissions*, of this DEIR. This alternative would result in less of an impact to greenhouse gas emissions than the proposed project.

6.7.7 Hazards and Hazardous Materials

This alternative would demolish all onsite structures and would result in a similar amount of soil disturbance as the proposed project. The vacant structures and surrounding soils could contain asbestos-containing materials (ACM) and/or lead-based paint (LBP). Construction of this alternative, similar to the proposed project, would involve demolition of the structures and soil disturbance that could expose persons and/or the environment to ACM and/or LBP. ACM and LBP would be contained, abated, and disposed of during demolition, and their impacts would be less than significant (see Section 5.7, *Hazards and Hazardous Materials*, of this DEIR). Construction and operation of this alternative would also involve use of hazardous materials; impacts of such use would be less than significant. This alternative would be environmentally similar to the proposed project for impacts to hazards and hazardous materials.

6.7.8 Hydrology and Water Quality

This alternative would change the existing drainage conditions onsite to be similar to that of the proposed project. This alternative would generate similar water pollutants as the proposed project and would construct swales and bioretention areas, which would reduce water quality impacts to a less than significant level. This

alternative would be environmentally similar to the proposed project for impacts to hydrology and water quality.

6.7.9 Land Use and Planning

This alternative would require voter approval of a Specific Plan, similar to the proposed project, but would require less FAR (0.27) as part of the Specific Plan compared to the proposed project. This alternative would still exceed the allowable FAR (0.19) at the site and would require voter approval. Therefore, this alternative would be environmentally similar to land use and planning impacts compared to those of the proposed project, which would be less than significant.

6.7.10 Noise

This alternative would result in similar construction equipment at the same distances to sensitive receptors as the proposed project. Although noise impacts during construction would occur for a shorter period of time than those of the proposed project, this alternative would comply with the allowable construction hours as specified in the City of Solana Beach Noise Ordinance (SBMC 7.34). Mitigation for noise impacts from heating ventilation air and cooling systems for the building and from vehicles on I-5 would reduce vehicular noise impacts to a less than significant level. Other operational noise impacts would remain the same as the proposed project. This alternative would be environmentally similar to the proposed project.

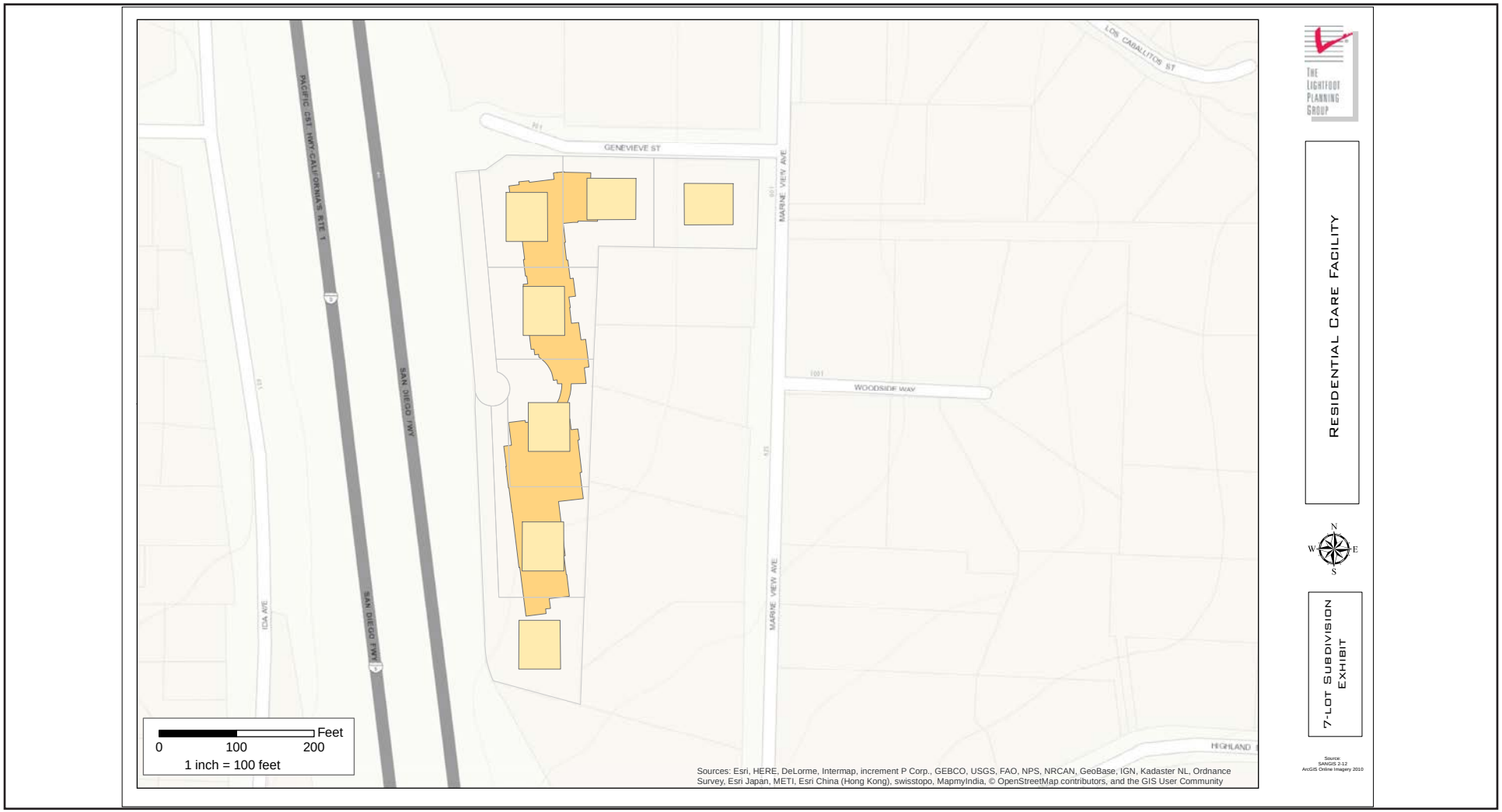
6.7.11 Public Services

This alternative would generate a similar demand for police and fire services during construction as the proposed project. However, because this alternative would have a reduced capacity facility with fewer beds, emergency service calls would be less than for the proposed project. This alternative would reduce public services impacts and would be environmentally superior to the proposed project.

6.7.12 Transportation and Traffic

This alternative would generate fewer trips than the proposed project and would require less parking. This alternative would continue to have a less than significant impact to alternative modes of travel such as public transit, bicycling, or walking. Transportation and traffic impacts of this alternative and the proposed project would be less than significant (see Section 5.12, *Transportation and Traffic*, of this DEIR). Because the project would reduce trips to the site, this alternative would be environmentally superior to the proposed project for transportation and traffic impacts.

Figure 6-1 - Alternative C, Reduced-Intensity Residential Senior Care Facility



Source: The Lightfoot Planning Group, 2018

6. Alternatives to the Proposed Project

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6.7.13 Tribal Cultural Resources

This alternative would demolish all onsite structures and would result in a similar amount of ground disturbance as the proposed project. The vacant buildings were determined not to be historically significant (see Section 5.4, *Cultural Resources*, of this DEIR), and impacts of the proposed project to historic resources would be less than significant. Impacts of the proposed project tribal cultural resources are identified as less than significant with mitigation incorporated under the proposed project and under this alternative. Development of this alternative would result in similar impacts to tribal cultural resources.

6.7.14 Utilities and Service Systems

Like the proposed project, this alternative would require connection to water, wastewater, and electricity utilities. Impacts to utilities and service systems under this alternative would remain less than significant, similar to the proposed project. However, this alternative would result in less bed capacity than the proposed project; therefore, water demand and wastewater generation would be less than for the proposed project. Development of this alternative would be environmentally superior to the proposed project.

6.7.15 Energy

This alternative would result in a shorter construction period than the proposed project and would require less material for construction. Operation of this alternative would result in less electricity and gas demand, and would generate fewer VMT than the proposed project. Development of this alternative would be environmentally superior to the proposed project.

6.7.16 Conclusion

Overall, Alternative C, Reduced Intensity Alternative, would reduce impacts associated with the duration of construction and with operation with less capacity. As provided above, this would result in a reduction in impacts to aesthetics, air quality, greenhouse gas emissions, public services, transportation and traffic, utilities and service systems, and energy compared to the proposed project. This alternative would have similar impacts to biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, noise, and tribal cultural resources. However, this alternative may not be financially feasible and would not meet three of the project objectives (objectives 1, 2, and 3) in Section 6.2.

6.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As required by CEQA Guidelines, Section 15126.6, an EIR must identify an "environmentally superior alternative," which is the alternative that has the least impact on the environment or would be capable of avoiding or substantially lessening any significant impacts of the project. Table 6-1, *Summary of Alternatives Compared to the Proposed Project,* shows each alternative's environmental impacts compared to the impacts of the proposed project.

6. Alternatives to the Proposed Project

Table 6-1 Summary of Alternatives Compared to the Proposed Project

	Proposed Project	No Project/No Development (Alternative A)	Four Single-Family Residences (Alternative B)	Reduced Intensity Alternative (Alternative C)
1. Aesthetics	LTS	NI / +	LTS / +	LTS / +
2. Air Quality	LTS-MM	NI / +	LTS / +	LTS / +
3. Biological Resources	LTS-MM	NI / +	LTS-MM / =	LTS-MM / =
4. Cultural Resources	LTS-MM	NI / +	LTS-MM / =	LTS-MM / =
5. Geology and Soils	LTS	NI / +	LTS / =	LTS / =
6. Greenhouse Gas Emissions	LTS	NI / +	LTS / +	LTS / +
7. Hazards and Hazardous Materials	LTS	NI / +	LTS / +	LTS / =
8. Hydrology and Water Quality	LTS	NI / +	LTS / =	LTS / =
9. Land Use and Planning	LTS	NI / +	LTS / +	LTS / =
10. Noise	LTS-MM	NI / +	LTS / +	LTS / +
11. Public Services	LTS	NI / +	LTS / +	LTS / +
12. Transportation and Traffic	LTS	NI / +	LTS / +	LTS / +
13. Tribal Cultural Resources	LTS-MM	NI / +	LTS / =	LTS=MM / =
14. Utilities and Service Systems	LTS	NI / +	LTS / +	LTS / +
15. Energy	LTS	NI/ +	LTS / +	LTS / +
		+ 15	+ 10 = 5	+ 8 = 7

NI Finding of no environmental impact
LTS Finding of less than significant environmental impact
LTS-MM Finding of less than significant environmental impact with mitigation measure
\+ Alternative is superior (reduced impacts compared) to the proposed project
\- Alternative is inferior (greater impacts compared) to the proposed project
= Alternative is environmentally similar to the proposed project or there is not enough information to make a superior or inferior determination.

The alternative that results in the least environmental impact, considering both the frequency and magnitude of the impact, is the environmentally superior alternative. In cases where the No Project Alternative is environmentally superior, the EIR is required to identify the next environmentally superior alternative among the others evaluated. Alternative A is the alternative that results in the least environmental impact.

As shown in Table 6-1, Alternative A, the No Project/No Development Alternative, would be environmentally superior to the proposed project under the 15 resource areas analyzed in the EIR. As required by CEQA, the next environmentally superior alternative is Alternative C, Reduced Intensity Alternative. Therefore, Alternative C would be environmentally superior to the proposed project under 8 resource areas and environmentally similar to the project under 7 resource areas.

Though it is necessary to identify the environmentally superior alternative, decision-makers are free to select the proposed project or any of the alternatives evaluated in this EIR.

6.9 REFERENCES

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7. CEQA Mandated Assessment

Section 15126(b) of the California Environmental Quality Act (CEQA) Guidelines requires an Environmental Impact Report (EIR) to describe any significant impacts of the proposed project, including those which can be mitigated but not reduced to a level of insignificance. Significant impacts of a proposed project that cannot be reduced to a less than significant level are referred to as significant and unavoidable impacts. This chapter provides an overview of the significant and unavoidable impacts of the proposed project, as well as impacts found not to be significant, growth inducement, significant and unavoidable impacts, and significant irreversible changes.

A more detailed analysis of the effects the proposed project would have on the environment, and proposed mitigation measures to minimize significant environmental impacts, are provided in Sections 5.1 through 5.15 of this EIR.

7.1 IMPACTS FOUND NOT TO BE SIGNIFICANT

The Guidelines allow use of an Initial Study to document project effects that are less than significant (Guidelines Section 15063[a]). Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the Draft EIR (DEIR). The Initial Study prepared for the proposed project in June 2017 determined that impacts listed below would have no impact or less than significant impact. Consequently, they are not further analyzed in this DEIR. Impact categories and questions are summarized directly from the CEQA Environmental Checklist in the Initial Study (see Appendix 2-1).

Table 7-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
I. AESTHETICS. Would the project:	
a) Have a substantial adverse effect on a scenic vista?	No Impact
II. AGRICULTURE AND FOREST RESOURCES. Would the project:	
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No Impact

7. CEQA Mandated Assessment

Table 7-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	
e) Create objectionable odors affecting a substantial number of people?	Less Than Significant Impact
V. CULTURAL RESOURCES. Would the project:	
d) Disturb any human remains, including those interred outside of formal cemeteries?	Less Than Significant Impact
VI. GEOLOGY AND SOILS. Would the project:	
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Less Than Significant Impact
ii) Strong seismic ground shaking?	Less Than Significant Impact
iii) Seismic-related ground failure, including liquefaction?	Less Than Significant Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Less Than Significant Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less Than Significant Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	No Impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	No Impact
IX. HYDROLOGY AND WATER QUALITY. Would the project:	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	Less Than Significant Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	No Impact

Table 7-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	No Impact
j) Inundation by seiche, tsunami, or mudflow?	Less Than Significant Impact
X. LAND USE AND PLANNING. Would the project:	
a) Physically divide an established community?	No Impact
XI. MINERAL RESOURCES. Would the project:	
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	Less Than Significant Impact
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact
XII. NOISE. Would the project:	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	No Impact
XIII. POPULATION AND HOUSING. Would the project:	
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less Than Significant Impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	No Impact
XIV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	
c) Schools?	No Impact
d) Parks?	Less Than Significant Impact
e) Other public facilities?	Less Than Significant Impact
XV. RECREATION.	
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less Than Significant Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Less Than Significant Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No Impact

Table 7-1 Impacts Found Not to Be Significant

Environmental Issues	Initial Study Determination
XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:	
b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less Than Significant Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Less Than Significant Impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?	Less Than Significant Impact

7.2 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

Sections 5.1 through 5.15 of Chapter 5, Environmental Analysis, of this EIR evaluates the significant effects of the proposed Project and provides mitigation for impacts that can be reduced to a less than significant level. Each chapter discusses the significant impact and provides a corresponding mitigation measure. The mitigation measures are summarized in Table 1-1 of Chapter 1, Executive Summary, of this EIR.

7.3 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Pursuant to Section 15126.2(b) of the CEQA Guidelines, this EIR considers the significant environmental effects that cannot be avoided if the proposed project is implemented. The proposed project would not result in significant unavoidable adverse impacts.

7.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL WHICH WOULD BE INVOLVED IN THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

Section 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented.

The following significant irreversible changes would be caused by implementation of the proposed Project:

- Construction of the proposed improvements would require the commitment of nonrenewable and/or slowly renewable energy resources, including gasoline, diesel fuel, electricity, as discussed in Section 5.15, *Energy*, of this EIR. The proposed project will use traditional construction methods and materials that will result in the use of natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, and water.

- Operation of the proposed project would require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water as discussed in Section 5.15, *Energy*, of this EIR.
- Operation of the proposed project will also increase demand for public services. (e.g., police, fire, road, sewer, and water maintenance services) as discussed in Section 5.11, *Public Services*, of this EIR.

The commitment of resources required for the reconstruction and permanent operation of the site as a commercial center would limit the availability of resources for future generations or for other uses during the life of the project.

7.5 GROWTH–INDUCING IMPACTS OF THE PROJECT

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this project remove obstacles to 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 this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

Would this project remove obstacles to 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?

No. The proposed project is on a vacant parcel surrounded by urban development. While infrastructure will be extended along Genevieve Street, the extension will only serve the proposed project. As discussed in Chapter 4 of the DEIR, *Project Description*, the proposed project also includes a Specific Plan that, according to

the Solana Beach General Plan Section 4.3(E)(2), would be subject to voter approval of an initiative. Because the infrastructure will be sized only to accommodate the proposed project, and the adoption of the Specific Plan for the project requires a vote of the people, the proposed project does not remove any obstacle to growth.

Would this project result in the need to expand one or more public services to maintain desired levels of service?

No. Impacts to public services are discussed in Section 5.11, *Public Services*, of this EIR. The project site is within existing public service boundaries, and no new buildings or other physical improvements will be needed to maintain the desired levels of service (see Section 5.11, *Public Services*).

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

No. The proposed project would result assisted-living housing available for elderly adults on a parcel surrounded by existing urban development. There is no potential for additional development near the project site without changes to the General Plan or zoning.

Chapter 4 of this DEIR estimates that the proposed project will have a maximum of 65 staff. The level of care proposed by the project is assisted-living, therefore most of the staff does not need extensive medical training and can be hired from the existing labor force in the region. The May 2018 unemployment rate in the San Diego-Carlsbad Metropolitan Statistical Area is estimated to approximately 3 percent. The California Economic Development Department estimated that between April and May 2018, the Educational & Health Services sector added 4,400 jobs. The estimated number of staff needed by the proposed project represents approximately 1.5 percent of the jobs added in this sector for a single month. Because the staff will likely come from the existing labor force in the region, the development of new housing will not be needed to for the staff.

Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

No. As discussed in Chapter 4 of this DEIR, the proposed project also includes a specific plan that, according to the Solana Beach General Plan Section 4.3(E)(2), would be subject to voter approval of an initiative. Any similar project would also require voter approval, which eliminates the potential for precedent setting actions associated with assisted-living elderly housing development. The proposed project does not remove any obstacle to growth or change any regulatory provision beyond what is discussed in this EIR.

7.6 THE MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS

Mitigation measures linked to significant impacts are discussed in Sections 5.1 through 5.15 of this EIR. The mitigation measures are also summarized in Table 1-1 of Chapter 1, Executive Summary of this EIR.

7.7 ALTERNATIVES TO THE PROPOSED PROJECT

Section 6.0 of this EIR evaluates alternatives to the proposed project.

7. CEQA Mandated Assessment

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8. Organizations/Persons Consulted and Qualifications of Persons Preparing EIR

ORGANIZATIONS AND PERSONS CONSULTED

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Jim Greenstein, Associate Civil Engineer

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EDCO Waste and Recycling Services

Jeff Richie, Vice President

San Diego County Sheriff's Department

Ken Culver, Public Affairs

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QUALIFICATIONS OF PERSONS PREPARING EIR

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